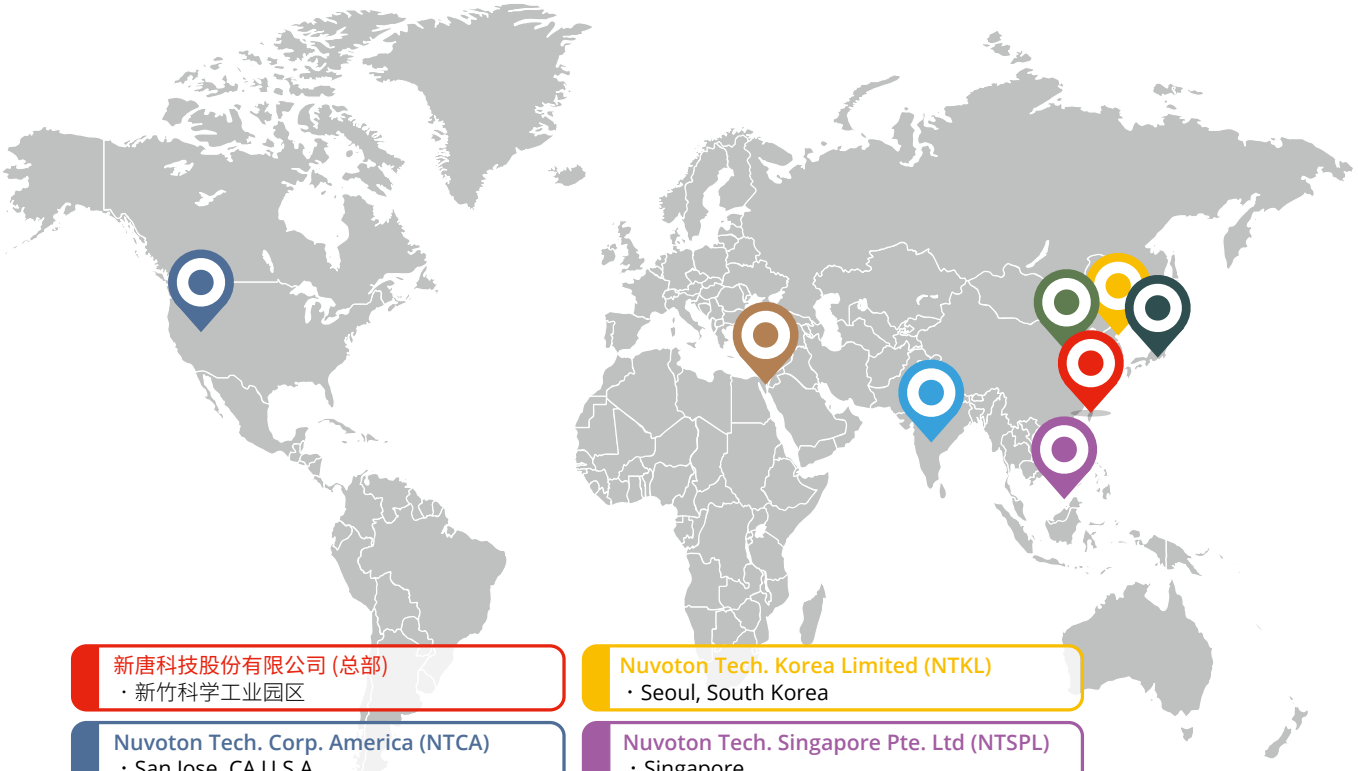
nuvoTon

2022 产品选型手册

Photo by Jeffrey Cheng

新唐科技成立的宗旨是为半导体产业带来创新的解决方案。公司成立于2008年，同年7月受让分割华邦电子逻辑IC事业单位正式展开营运，并于2010年在台湾证券交易所正式上市挂牌。新唐科技专注于开发微控制/微处理、智能家居及云端安全相关应用之IC产品，相关产品在工业电子、消费电子及计算机市场皆具领先地位；此外，拥有一座可提供客制化模拟、电源管理产品制程之6吋晶圆厂，除负责生产自有IC产品外，另提供部份产能作为晶圆代工服务。本公司以灵活之技术、先进之设计能力及数字模拟整合技术能力提供客户高性价比之产品，并重视与客户及合作伙伴的长期关系，致力于产品、制程及服务的不断创新。新唐科技在美国、中国大陆、以色列、印度、新加坡、韩国及日本等地均设有据点，以强化地区性客户支持服务与全球运筹管理。

如需进一步了解新唐科技，请参访公司网站 https://www.nuvoton.com



新唐科技股份有限公司 (总部)
・新竹科学工业园区

Nuvoton Tech. Corp. America (NTCA)
・San Jose. CA,U.S.A.

Nuvoton Tech. Israel Ltd. (NTIL)
・Herzlia, Israel

Nuvoton Tech. Korea Limited (NTKL)
・Seoul, South Korea

Nuvoton Tech. Singapore Pte. Ltd (NTSPL)
・Singapore

Nuvoton Tech. India Private Limited (NTIPL)
・Bangalore, Karnataka, India

芯唐电子科技(上海) (NTSH) / 芯唐电子科技(深圳) (NTSZ) / 芯唐电子科技(香港) (NTHK)
・上海 / 深圳 / 香港

Nuvoton Technology Corporation Japan (NTCJ) / Atfields Manufacturing Technology Corporation (AMTC)
・Japan

nuvoTon

新唐 NuMicro® 微控制器

NuMicro® 生态系统

NuMicro Ecosystem

微控制器产品平台

特色产品推荐 : 车用 / 工业控制 / 安全 / 低功耗 / 光模块 / 智能家电

物联网平台

图形用户界面

开发工具平台

数字平台

NuMicro® 产品选型指南

List of Abbreviations, Acronyms, Codes

NuMicro® 车用微控制器家族

- M0A23 CAN 系列 NEW
- NUC131U CAN 系列

NuMicro® M23 微控制器家族

- M2351 系列
- M2354 系列
- M251 系列
- M252 系列
- M253 系列 NEW
- M254/ M256/ M258 系列 NEW
- M261/ M262/ M263 系列

NuMicro® M0 微控制器家族

- M030G / M031G 系列 NEW
- M031 系列
- M032 系列
- M031BT 系列
- M032BT 系列 NEW
- M071 系列 NEW
- Mini51 系列
- M051 系列
- NUC029 系列
- NUC121 系列
- NUC131/ NUC230/ NUC240 CAN 系列
- Nano100 系列

NuMicro® M4 微控制器家族

- M451 系列
- M460 系列 NEW
- M471 系列 NEW
- M480 系列
- NUC505 系列

NuMicro® Arm9 微处理器家族

- NUC970/ 980 系列
- N9H 系列
- N329 系列

NuMicro® 8051 微控制器家族

- MS51 工业控制系列 (1T)
- ML51 低功耗系列 (1T)
- ML54 低功耗 LCD 系列 (1T)
- ML56 低功耗 LCD + 触摸系 (1T)
- N76E 系列 (1T)
- N76E 系列 (4T)
- 标准型 8051 系列

新唐科技 — 微控制器平台领导厂商

新唐科技提供了一个完整的微控制器生态系统，从微控制器产品选型、开发，到批量生产都提供了丰富的开发资源，缩短合作伙伴的设计周期并大幅加速产品的上市时间。

从NuMicro® 生态系统的核心出发，新唐科技提供了丰富的产品组合，从8051、Cortex-M0/ M23/M4到基于 Arm9 的微控制器，提供超过 600 种型号供客户弹性选型。为了提供更便捷的开发体验，新唐科技提供数种集成开发环境供客户选用。包括可免费使用于NuMicro® M0/ M23 项目开发的 Arm Keil、可免费使用于NuMicro M0/M23/M4 项目开发的NuEclipse，亦支持 IAR Embedded Workbench。另外，新唐科技也提供了丰富的开发工具、开发板所支持的软件开发包(BSP)、开发套件、仿真器与编程器等，促进微控制器应用项目的开发。

新唐科技提供丰富的参考设计和完整的物联网平台，以实现各个领域的创新。新唐科技物联网平台提供多元的云服务及连网选择，并支持多种操作系统。客户可以选用低功耗或物联网安全微控制器，搭配物联网平台的丰富资源，轻松实现物联网节点装置或网关。

NuMicro® 生态系统

NuMicro® 生态系统 — 微控制器平台

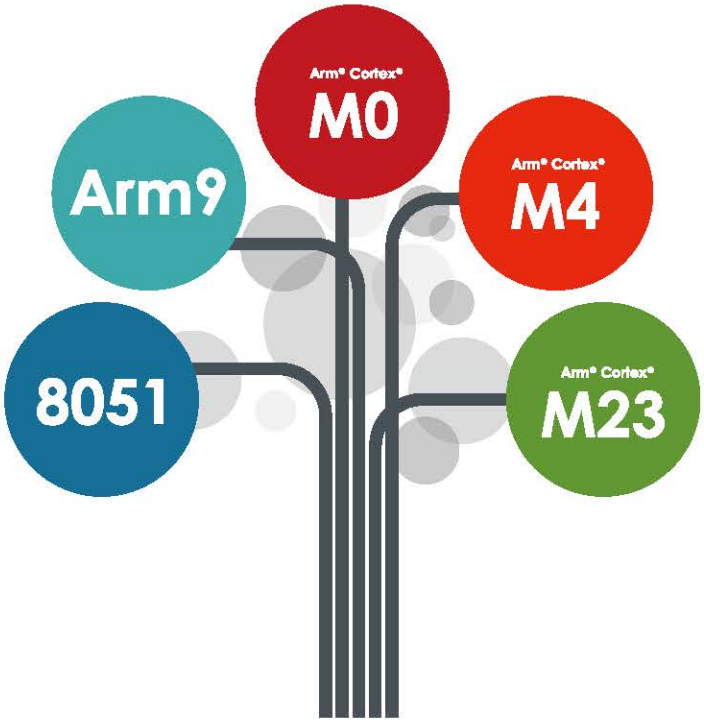
Cortex® M23
物联网安全
低功耗

Cortex® M4
高性能
物联网
安全

Cortex® M0
丰富平台
工业控制
车用

Arm 9™
工业控制
人机界面

8051
工业控制
低功耗



Frequency	8051	Cortex®-M0	Cortex®-M23	Cortex®-M4	Arm9™
300 MHz					NUC970/ NUC980 [E][C][U][L]
192 MHz		NUC029 [2.5-5.5] M032BT [1.8-3.6] M032 [1.8-3.6] [U] M031BT [2.5-3.6] M031G [2.7-3.6] M031 [2.5-3.6] M071 [2.5-5.5]	M2354 [1.8-3.6] [L]	M460 [1.8-3.6] [C][E] M480 [1.8-3.6] [C][E][U] M471 [2.5-5.5] [U] M451/M4521 [2.5-5.5] [U]	N9H [E][C][U][L] N329 [E][U][L]
72 MHz		NUC230 [2.5-5.5] [C] NUC131 [2.5-5.5] [C]	M2351 [1.8-3.6]		
64 MHz		NUC131U [2.5-5.5] [C] NUC123 [2.5-5.5] [X]	M261 [1.8-3.6] M258 [1.8-5.5] [U][T][L] M256 [1.8-5.5] [T][L]		
48 MHz	ML56 [1.8-3.6] [T][L] ML54 [1.8-3.6] [L]	M030G [2.7-3.6] M0A23 [2.5-5.5] [C] M0A21 [2.5-5.5]	M254 [1.8-5.5] [L] M252 [1.8-3.6] [U]		
24 MHz	ML51 [1.8-5.5] MS51 [2.5-5.5] N79E [2.5-5.5]	M051 [2.5-5.5] Nano Mini51	M251 [1.8-3.6]	超过 600 种型号可供选择	
16 MHz	N76E [2.5-5.5]				

工作电压：[1.8V-3.6V] [1.8V-5.5V] [2.5V-5.5V]

连接：[U] USB [C] CAN [E] 乙太网 [L] LCD [T] Touch Key

车用　低功耗　TrustZone

特色产品推荐：**车用控制器**

新唐致力于提升微控制器的质量，NuMicro 汽车微控制器通过AEC-Q100 标准面向汽车应用。此系列微控制器提供内嵌 Cortex-M0 至 M4 不同处理器选项，提供最多达 3 路 CAN，工作频率范围从 48 至 192 MHz，Flash 大小为 32 至 512 KB。

NuMicro 汽车微控制器提供具有安全性和连接性的综合系统解决方案，面相如车身控制、ADAS、网络、汽车照明等应用。

支持多种 IDE，包括免费使用的 Keil MDK Nuvoton Edition、IAR EWARM 和 NuEclipse。

	M0A23	NUC1311	NUC131U	NUC230/240	M453	M483	M487
Core	Cortex-M0	Cortex-M0	Cortex-M0	Cortex-M0	Cortex-M4	Cortex-M4	Cortex-M4
Speed (MHz)	48	50	50	50	72	192	192
Flash (Kbytes)	32	68	68	128	256	256	512
LIN	2	-	3	3			
CAN	1	1	1	2	1	3	2
Operating Temperature (°C)	-40 ~ 125	-40 ~ 105	-40 ~ 105	-40 ~ 105	-40 ~ 105	-40 ~ 105	-40 ~ 105
AEC-Q100	2022 Q1	-	✔	-	-	-	-

特色产品推荐：**工业控制微控制器**

新唐科技是工业控制行业的微控制器领导厂商。通过高质量的微控制器产品和高供货稳定性，成为工业控制客户不可或缺的合作伙伴。

- **十年供货保证：**
  致力于确保长达十年的供应连续性和稳定性。
- **高制造质量：**
  NuMicro 产品由一级制造厂生产，并经过一级封装测试厂之验证，以确保产品之高质量性与稳定性。
- **优于工业级之工作温度：**
  所有微控制器新产品工作温度可从 -40 至 105 °C；微处理器则可涵盖 -40 至 85°C，适于工业应用。
- 提供经实验室认证之Software Test Library (STL)
  以降低 IEC 60730-1 Class B 安全认证之开发难度。

8051 家族
工作主频: 高达 24 MHz
ESD (HBM) : 高达 8 kV / EFT : 高达 4.4 kV

Cortex-M0 家族
工作主频: 高达 72 MHz
ESD (HBM) : 高达 8 kV / EFT : 高达 4.4 kV

Cortex-23 家族
工作主频: 高达 96 MHz
ESD (HBM) : 高达 7 kV / EFT : 高达 4.4 kV

Cortex-M4 家族
工作主频: 高达 192 MHz
ESD (HBM) : 高达 8 kV / EFT : 高达 4.4 kV

Arm9 家族
工作主频: 高达 300 MHz
ESD (HBM) : 高达 4 kV / EFT : 高达 4.4 kV

工业控制应用领域	系列产品推荐（关键特点）
 电池管理系统 BMS	[Arm9] NUC980 (资料采集) [M23] M253 (电动摩托车) [8051] MS51/ ML51 (电动工具) [M4] M480/ M460 (大型储能系统，家用储能系统) [M0] M0A23 (电动脚踏车)
 LED控制	[Arm9] NUC980 (大型LED广告广告牌) [M4] M480/ M460 (Mini LED调光控制I) [M0] NDA102 (DALI) [8051] MS51 (LED控制模块)
 工业连网	[Arm9] NUC980 (以太网 10/100, CAN) [M4] M480 (以太网 10/100, CAN)/ M460 (以太网 10/100, CAN-FD) [M23] M2351/ M2354 (Trustzone, CAN) [M0] M0A23 (CAN)/ M0A21(UART) [8051] MS51 (UART)
 工业自动化	[Arm9] NUC980 (工业交换机) [M4] M480/ M460 (传感器融合) [M0] M0A23 (CAN转换盒)/ M032/ M031 (传感器模块) [8051] MS51/ ML51 (传感器模块)/ M254/ M256/ M258 (段码LCD屏，触控键控制)
 智能电网	[Arm9] NUC980 (数据采集) [M4] M480 (智能断路器) [M4] M471/ M451 (智能电容器) [M23] M2351/ M2354 (AMI 2.0 智能电表) [M23] M253 (USB to UART转换盒) [8051] MS51 (传统断路器)
 智能建筑	[Arm9] NUC980 (消防控制器) [M4] M480 (电子白板) [M23] M254/ M256/ M258 (温控器)/ M2351/ M2354 (智能音箱) [M0] M031BT/ M032BT (BLE5.0) [8051] ML51 (烟雾侦测器)/ ML54/ ML56 (温控器)
 5V 微控制器系列	[M4] M451/ M471 [M23] M251/ M253/ M254/ M256/ M258 [M0] M0A21/ M0A23/ M071/ NUC131/ NUC230/ NUC029/ NUC1262 [8051] MS51/ ML51

特色产品推荐：**安全微控制器**

新唐科技致力于增强微控制器的安全性，NuMicro M2351 系列是世界首颗基于 Cortex®-M23内核同时通过 Arm® PSA Level 1 (Feb. 2019)、Level 2 (Jul. 2020) 认证级别和 PSA Functional API 认证 (Feb. 2019) 的微控制器，展示了新唐科技于物联网安全产品设计上的可靠性。

新唐科技开发了一系列硬件和软件混合技术，从软件执行安全、存储安全与连接安全等面向，全面加强微控制器的安全性，以实现 NuMicro 产品的安全性目标。

M235x IoT Security MCU全系列芯片也支持多种RTOS的移植范例，包含了FreeRTOS、RT-Thread及Mbed OS 6.x等，方便使用者的弹性选择以快速开发能连上不同云端服务器的装置。

目标应用：智能家居、智能城市、智能建筑、智能交通、智能农业、智能电表、环境安全 (CCTV)、移动 POS、物连网终端装置。

Security Technology	Item	NuMicro Series Recommendation				
		M251	M261	M2351	M2354	M480
安全启动 (Secure Boot ROM)	Secure Bootloader (based on ECDSA signature)		✓	✓	✓	✓
	Secure firmware update (OTA)		✓	✓	✓	
	Driver APIs		✓	✓	✓	✓
	Debug Authentication (temporarily unlock)			✓	✓	
安全参考代码 编程代码库 软件工具	TrustZone reference code			✓	✓	
	Key Generation Tool		✓	✓	✓	✓
	Firmware Image Singing Tool		✓	✓	✓	✓
	Key/Certificate provisioning service		✓	✓	✓	
安全隔离 (Isolation)	Peripheral privileged mode			✓	✓	
	TrustZone partition for Cortex-M			✓	✓	
闪存保护	Flash Lock (read protection)	✓	✓	✓	✓	✓
	eXecute Only Memory	✓	✓	✓	✓	✓
	Dual bank (with bank swap)		✓	✓	✓	
	Flash Write Protection		✓	✓	✓	✓
加密处理器	DES/3DES		✓	✓		
	AES-256	✓	✓	✓	✓	✓
	AES CCM, GCM and GMAC				✓	
	ECC (Key generation, ECDH-ECDSA)		✓	✓	✓	✓
	RSA-4096				✓	
	Side Channel Attacks mitigation of AES, RSA, ECC				✓	
	SHA1/SHA2-384		✓	✓	✓	✓
	SHA2-512, HMAC-512				✓	
	SM2/3/4 (Chinese national cryptography standard)				✓	
	TRNG		✓	✓	✓	✓
	Cryptographic key store with chip level Active Shield				✓	
设备唯一标识	Unique ID	✓	✓	✓	✓	✓
	Customer Unique ID	✓	✓	✓	✓	✓
系统层级防窜改机制	Tamper Pin Detection	✓	✓	✓	✓	✓
	RTC backup registers	✓	✓	✓	✓	✓
环境监测传感器	Temperature sensors	✓	✓	✓	✓	✓
	Clock monitor	✓	✓	✓	✓	✓
	Voltage glitch detection				✓	
平台安全	Booting Status Monitor			✓	✓	
	Life Cycle Management			✓	✓	
	Firmware Version Counter			✓	✓	
	Debug Port Management (DPM)			✓	✓	

特色产品推荐：**低功耗微控制器**

功耗是微控制器选择的重要因素，尤其是在以电池供电的物联网设备中，微控制器的功耗表现至关重要。除了不同电源模式下的功耗需要注意，唤醒时间也是另一个重要评价因素，对需要切换功率模式的应用格外重要。

新唐科技致力于为各种应用场景提供合适的低功耗微控制器解决方案，低功耗产品各有其强项：ML51系列具有独特的低功耗运行模式，运行电流可低至 15 μA；ML54/ML56 系列在开启 LCD 模式下仅需 2 μA 的低耗电；Nano100 系列在掉电模式下的电流可低至 1 μA、M480 系列于深度掉电模式的电流可小于 1 μA；M251 系列从快速唤醒掉电模式起电的唤醒时间只需 10 μS；M254/M256/M258 系列在完成 16 信道触控的扫描仅需要不到 2 μA的低耗电。此外，M261 和 M2351 系列额外提供了 DC-DC 模式，可将 LDO 模式下的运行功耗减半。

低功耗应用	NuMicro 系列产品推荐						
	ML51	Nano100	M251	M261/M2351	M480	ML54/ML56	M254/M256/M258
内核	8051	Cortex-M0	Cortex-M23	Cortex-M23	Cortex-M4	8051	Cortex-M23
工作主频 (MHz)	24	32 - 42	48	64	192	24	48
闪存 (Kbytes)	16 - 64	16 - 128	32 - 256	512	128 - 512	64	128
SRAM (Kbytes)	1 - 4	4 - 16	8 - 32	96	64 - 160	4	16
烟雾感应器	○	△	△			○	
血糖仪	△	○	○	○			○
GPS追踪器	△	○	○			○	○
手持式仪表	△	○	○	○	○		○
无线键盘/ 鼠标	△	○	○				○
智能电子锁	○	○	○	○	○	○	○
血氧仪		○	○			○	○

特色产品推荐：**光模块微控制器**

新唐提供一套完整的光模块解决方案，不论是从数通领域到电信领域的应用；从目前通用的光传输场景甚至于新兴的 5G 前传波分复用 (WDM, Wavelength Division Multiplexing) 场景，皆能满足其应用需求。

新唐 NuMicro M030G/M031G 系列皆内建温度传感器、提供 QFN24 及 QFN33 的小封装选择，并且配有两组 I^2C 接口，完全符合通用光模块的需求: (1) 精准检测温度、(2) 体积小、以及 (3) 通常采用 I^2C 接口做沟通。除此之外，为了实现波分复用中以调顶讯号传递 OAM (Operation Administration and Maintenance) 报文的功能，NuMicro M031G 系列更搭载了支持 CRC 的硬件曼彻斯特编解码器，用来调解及调制低扰频讯号，另配有 1 组 DAC 支持自动数据产生功能。

- **硬件曼彻斯特编解码器*:** 调解及调制低扰频讯号
- **DAC 支持自动数据产生功能*：**可于 500 kHz 的频率下产生 32 点平顺的正弦波做为调顶功能输出使用
- **温度传感器：**0°C 至 70°C 的精度为 ± 1.6 °C / -40°C 至 105°C 的精度为 ± 2 °C
- **小封装：**QFN24 3x3 mm / QFN33 4x4 mm
- **I^2C：**支持 1 MHz 从机模式及无时钟拉伸

*仅 M031G 支持

光模块应用	NuMicro 系列产品推荐							
	M030G				M031G			
内核	Cortex-M0				Cortex-M0			
工作主频 (MHz)	48				72			
Flash (KB)	32		64		32		64	
SRAM (KB)	4				8			
硬件曼彻斯特编解码器	-		-		✔		✔	
DAC自动数据产生功能	-		-		✔		✔	
温度传感器	✔		✔		✔		✔	
封装	QFN24	QFN33	QFN24	QFN33	QFN24	QFN33	QFN24	QFN33
应用场景	通用光模块				调顶功能光模块			

特色产品推荐：**智能家电微控制器**

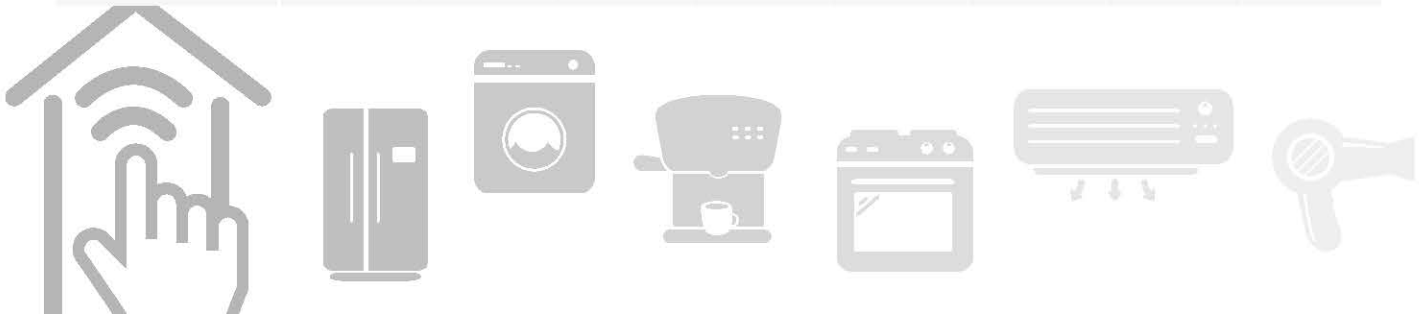
- 智能家电提高生活质量，已成为未来趋势。新唐 MCU 整合了智能家电系统的需求，提供 2.5V ~ 5.5V 宽工作电压、超过 0.5 mm 宽引脚间距的封装、IEC-60730 B 级的 STL 自检和功能安全软件库等关键特性以及针对 ESD（静电放电）和 EFT（电快速瞬变脉冲群）提供更强的抗干扰保护电路。

- 新唐针对智能家电提供丰富的产品组合，产品线包括 8051 的 MS51 和 ML51 系列、Cortex-M0 的 M071 系列、Cortex-M23 的 M251 系列、Cortex-M4 的 M471 系列和 ARM9 的 N9H 系列。

- 新唐 MCU 具多功能的特色，可支持多种周边，满足智能家电各种应用。
  - 单主控的 M071 和 M471 系列
  - 带COM/SEG LCD 显示的 ML54 和 M254 系列
  - 带TFT LCD 显示的 N9H 系列
  - 触控键带COM/SEG LCD 的 ML56, M256 和 M258 系列
  - 无线控制带 CIR（红外接收）的 M471系列
  - 无线控制带 BLE5.0 的 M031BT 及 M032BT 系列
  - 安全性控制带加密引擎的 M261 系列

- 产品应用：智能小家电、白色家电、健康护理家电、智能家居。

家用电器	MS51/ ML51	M251/ M252	M071	M471	ML54/ ML56	M254/ M256/ M258	N9H	M031BT/ M032BT
应用	主控	主控	主控	主控	显示+触控	显示+触控	显示	蓝芽
核心	8051	Cortex-M23	Cortex-M0	Cortex-M4	8051	Cortex-M23	Arm9	Cortex-M0
工作主频 (MHz)	24	48	72	72 / 120	24	48	200/240/300	48
闪存(KB)	16 - 64	32 - 256	32 - 256	64 - 512	16 - 64	64 - 128		64 - 512
SRAM (KB)	1 - 4	8 - 32	8 - 20	32 - 64	1 - 4	16		8 -96
IEC-60730 B级STL	✔	✔	✔	✔	✔	✔	✔	✔
5V 工作电压	✔	✔	✔	✔	✔	✔		
>0.5mm 引脚宽度			✔	✔				
低功耗	✔ 仅 ML51 提供	✔			✔	✔		
显示					✔ COM/SEG LCD	✔ COM/SEG LCD	✔ TFT LCD	
触控键					✔	✔		
BLE 5.0								✔
红外接收				✔				

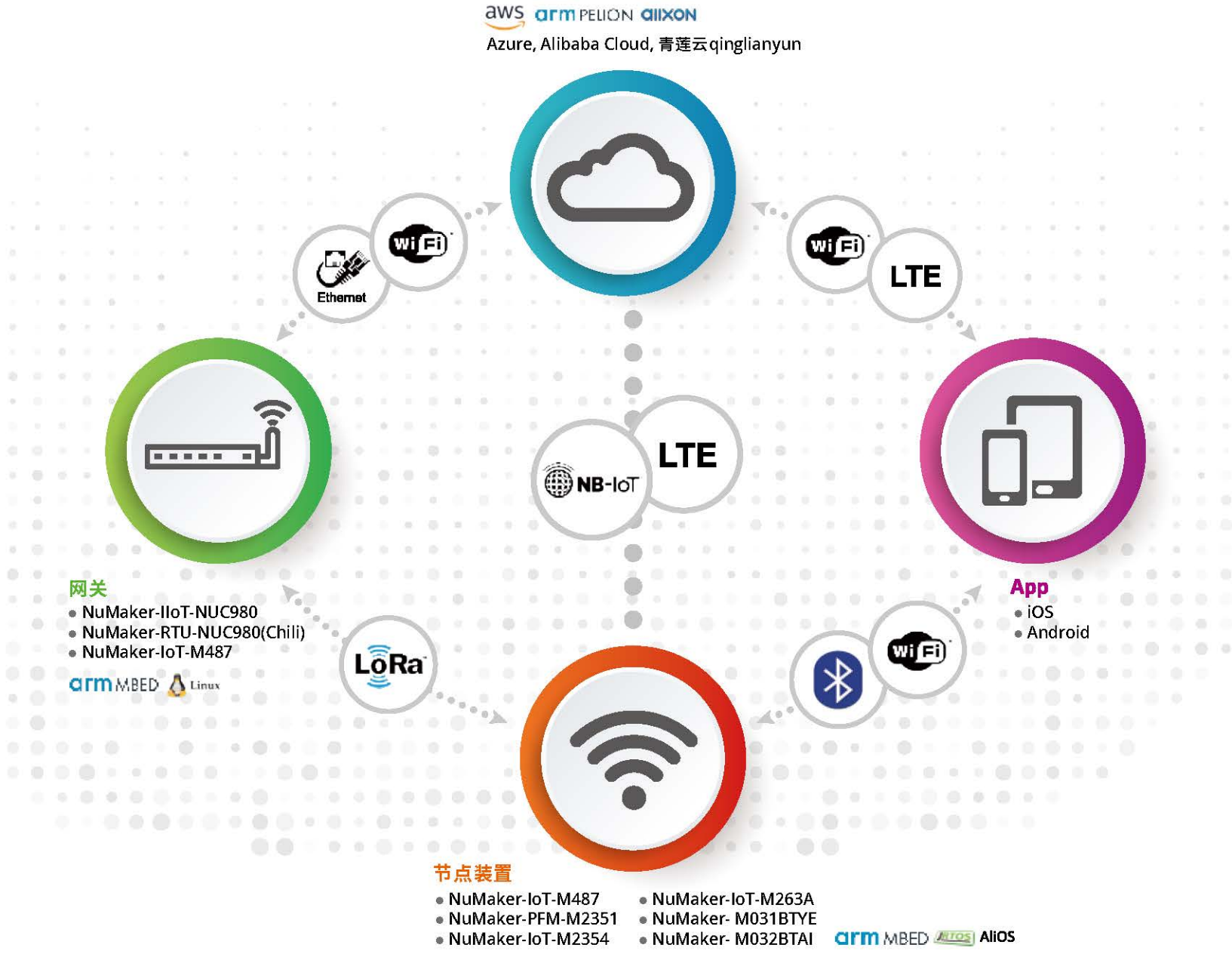


NuMicro 生态系统 - 物联网平台

Support multi-OS with multi-platform; Provide multi-connection to multi-cloud.

新唐科技提供一个全面的物联网平台，支持多元操作系统的开发平台，与多种联网方式以连接云服务。
在新唐科技提供的开发平台中，NuMaker-IoT-M487、NuMaker-PFM-M2351、NuMaker-IoT-M2354和NuMaker-IoT-M263A、NuMaker-M031BTYE、NuMaker-M032BTAI 非常适合作为节点设备。
此外，NuMaker-IIoT-NUC980、NuMaker-RTU-NUC980(Chili) 和 NuMaker-IoT-M487 也很适合用作网关。

新唐科技将物联网平台的各个环节连接起来，以促进物联网的创新。NuMicro 微控制器于 NuMaker 物联网平台上支持多种操作系统，包括 Linux、Arm MbedOS、Amazon FreeRTOS、AliOS Things、Azure RTOS 和 RT-thread。此外，微控制器具备嵌入式加密加速器以提高通信性能并增强连接安全性。NuMaker 平台可以通过各种连接选项，包括以太网、Wi-Fi、LTE 和 NB-IoT 等，连接到各种云服务，例如 Amazon Web Service (AWS)、Pelion Device Management、阿里云、Allxon、青莲云和 Microsoft Azure。



NuMaker Board	OS / RTOS	IP Connectivity					Non-IP Connectivity			Clouds						
		Ether net	Wi-Fi	NB-IoT CAT-M1	NB-IoT	LTE	LoRa (Gateway)	LoRa (Device)	BLE 5 2.4G	Arm Pelion DM	Amazon AWS	Alibaba Cloud	Microsoft Azure	The Things Network (TTN)	Allxon	青莲云/ TinyTEE
				Quectel BG96A	SIMCOM 7020E	Quectel EC21A	SX1301 SX1308	SX1276								
NuMaker-IIoT-NUC980	Linux	✔	✔	✔		✔				✔	✔	✔				
	RT-Thread	✔	✔									✔	✔			
NuMaker-RTU-NUC980(Chili)	Linux	✔	✔	✔		✔				✔	✔	✔			✔*6	
	RT-Thread	✔	✔									✔	✔			
NuMaker-LoRaG-NUC980*1	Linux	✔	✔	✔		✔	✔			✔	✔	✔		✔		
NuMaker-IoT-M487	MbedOS	✔	✔	✔	✔	✔				✔	✔	✔	✔			
	Amazon FreeRTOS	✔	✔	✔							✔					
	AliOS Things	✔	✔									✔				
	RT-Thread	✔	✔									✔	✔			
	Azure RTOS		✔										✔			
NuMaker-IoT-M2354	MbedOS*3		✔	✔	✔	✔		✔		✔	✔	✔	✔			✔
	RT-Thread		✔					✔				✔	✔			✔
	FreeRTOS		✔					✔								
NuMaker-PFM-M2351	MbedOS		✔	✔	✔	✔				✔	✔		✔			✔
NuMaker-IoT-M263A	MbedOS		✔	✔	✔	✔		✔		✔	✔	✔	✔			
NuMkaer-LoRaD-M252*2	MbedOS/Non-OS*4							✔								
NuMaker-M031BTYE	Non-OS								✔							
NuMaker-M032BTAI	Non-OS								✔							
NuStamp-ACK-M031LE	Non-OS		✔								✔*5					

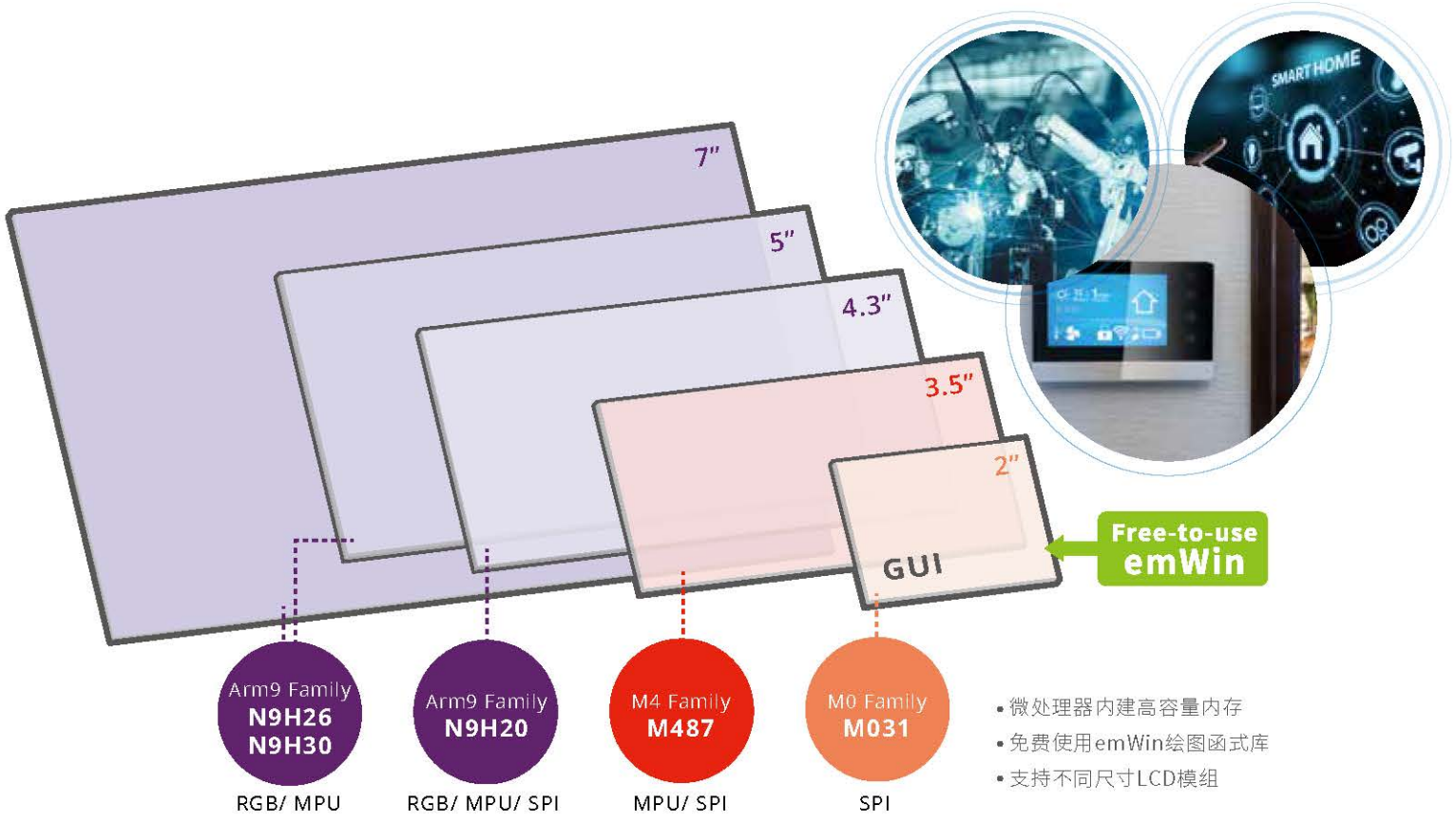
*1 US915/EU868 Bands *2 US915/EU868/CN470 Bands *3 Support on Mbed Studio *4 Non-OS is NuLoRaNode *5 Alexa Connect Kit (ACK) *6 Software as a Service (SaaS)

NuMicro 生态系统 - 图形用户界面平台

新唐提供丰富的GUI平台资源，支持 Qt、LVGL 以及可免费使用 emWin 绘图函式库，协助工程师开发当前的 UI，提供范例加速产品开发，以及线上影片教学及论坛技术资源，加快产品开发时间。

新唐微处理器内建高容量内存，降低电路设计难度及制造成本。
支持单色、灰阶、彩色的 OLED 和 LCD 等多样性显示屏幕，分辨率可达 1024 x 768及显示 1670 万色阶，并内建 2D 图形硬体加速器，以及 H.264、JPEG 硬体编解码器，加快图形处理效能，带来流畅的使用体验。
使用者可选择裸跑、实时操作系统或Linux作为操作系统。

新唐GUI平台适用于工业控制、智慧楼宇、智慧家电、医疗设备、充电桩、手持便携设备等以及各领域的 HMI 需求。



	内核 工作主频 (MHz)	内存大小	显示屏尺及 显示界面寸	硬件加速器	NuMaker 平台推荐	板载显示屏尺寸 (分辨率)	存储	周边
N9H30 系列	Arm9 300MHz	MCP DDR 64 MB	1024x768 Parallel RGB / MPU / SPI	2D GFx JPEG Codec	NK-N9H30	7" (800x480)	SPI NOR/ NAND	Ethernet / UART / RS485 / SD Card / CAN / USB
N9H26 系列	Arm9 240 MHz	MCP DDR 64 MB	1024x768 Parallel RGB / MPU / SPI	2D GFx JPEG Codec H.264 Codec	NK-N9H26	5" (800x480)	SPI NOR	UART / SD Card / USB
N9H20 系列	Arm9 200MHz	MCP DDR 32 MB	1024x768 Parallel RGB / MPU / SPI	2D GFx JPEG Codec	NK-N9H20	4.3" (480x272)	SPI NOR/ NAND	UART / SD Card / USB
M480 系列	Cortex-M4 192 MHz	160 KB	480x272 MPU / SPI		NK-M487D	3.2" (320x240)	SPI NOR	Ethernet / UART / RS485 / SD Card / CAN / USB
M032 系列	Cortex-M0 72 MHz	96 KB	320x240 SPI		NK-M032	2.4" (320x240)	SPI NOR	UART/ RS485

NuMicro® 生态系统 - 开发工具平台

新唐科技提供完整的开发工具平台，协助客户实现快速开发、批量生产以及轻松升级。

开发套件

- **NuMaker Series**

  新唐 NuMaker 开发板是针对物联网应用所设计的入门型开发工具，其管脚与 Arduino 兼容，并支持 Arm Keil MDK、IAR EWARM、NuEclipse 与Arm mbed OS 开发环境。使用者可根据开发需求添加传感器与无线模块，打造物联网应用。

- **NuTiny Series**

  新唐 NuTiny 开发板是最简单易用的开发工具，外形小巧，适合各式各样之产品开发，支持Arm Keil MDK、IAR EWARM 与 NuEclipse 开发环境， 并附带 Nu-Link-Me ICE 调试 / 刻录工具。

开发板所支持的软件开发包 (BSP)

提供丰富的示例代码，包含 Device usage, USB Device Classes, CAN，乙太网等。

新唐科技制定统一的API名称，客户可以轻松开发或移植 NuMicro 开发项目。

集成开发环境 (IDE)

arm KEIL　IAR Embedded Workbench　NuEclipse

为客户提供多种集成开发环境 (IDE)，包括免费用于M0 / M23 项目的 Arm Keil（M4/ M7项目 $385美元/ 年）、IAR Embedded Workbench，以及 NuEclipse，可让使用者在各开发环境下，创建和仿真NuMicro 项目。

仿真器 烧录器

- **Nu-Link2-Pro**

  Nu-Link2-Pro 是新唐开发的调试/ 刻录工具，支持所有 Nu-Link 功能并提高性能，增加嵌入追踪宏单元 (ETM) 功能、多路径桥接通信和信号监控器，可满足高级调试要求。支持 SWD 接口在线/脱机电路编程刻錄 (ICP)，并带有控制总线可搭配自动刻录机台使用。用户可运用 ICP 编程刻錄工具更新微控制器韧体进行量产。

- **Nu-Link-Gang**

  Nu-Link-Gang 刻录器适合用于量产阶段的微控制器韧体刻录，支持新唐 NuMicro 微控制器各种封装，具有灵活的编程设置，例如三种工作电压、可同时刻录多达 4 颗不同微控制器、刻录不同固件，并提供灯号与 LCD 屏方便用户实时查看进度与状态。用户可搭配自动刻录机台进行量产。

开发工具 (NuTool)

- **PinConfig Tool**
  提供开发初期选择管脚功能的规划工具，适用于所有 NuMicro® 家族微控制器。
- **PinView Tool**
  PinView 是一个可视化的管脚状态检视工具。在程序运行或调试时，能直观地显示管脚 IO 状态，并能对一些常见的管脚设定错误给出警告。
- **Clock Configure Tool**
  提供开发初期各模组时钟频率的规划工具，适用于所有 NuMicro® 家族微控制器。
- **ICP Tool**
  具有代码加密功能的量产编程工具，可保护客户的智慧财产。
- **ISP Tool**
  提供用于最终产品固件更新的示例代码。
- **CodeGenerator**
  快速生成 NuMicro M251/ M252/ NUC126 专案之初始程式代码，含初始版本之周边、管脚与时钟设置。

NuMicro® 生态系统 — 数字平台

作为微控制器平台提供商，新唐科技一直致力于通过我们的数字平台为全球客户提供支持。新唐科技的数字平台可以满足产品选型、查找与下载产品资源、产品购买、联系销售与技术支持，以及获取产品知识、教学视频等各种需求。

www.nuvoton.com

公司网站 nuvoton.com 是新唐科技数字平台的核心，从初始的产品选型到专案开发、批量生产等不同阶段，nuvoton.com 为客户提供可随时随地访问的丰富资源。

- 在线产品选型系统
- 产品信息
- 资源下载
  - 开发板所支持的软件开发包 (BSP)
  - 软件工具
  - 产品文件

样品与购买

新唐科技提供多种在线购物渠道，方便客户快速的取得所需型号进行开发。

- **Tmall天猫 - nuvoton 新唐旗舰店**
- **Nuvoton Direct** – 新唐直营网购商城
- **TechDesign** - 合作伙伴销售渠道
- **Digikey** - 代理商销售渠道

知识学习

新唐科技团队致力持续提供优质内容，以不同的语言和形式于各渠道提供参考应用程序、技术文章、教学视频等，让客户快速的了解微控制器产品信息及相关应用。

- **微信** - @nuvoton_mcu
- **Bilibili** - 新唐MCU
- **Facebook** - Nuvoton NuMicro
- **Twitter** - NuvotonMCU
- **YouTube** - Nuvoton NuMicro
- **新唐博主文**

在线支持

新唐科技提供数个在线论坛让客户可以讨论分享。另外，新唐科技也提供销售咨询与技术支持的在线聊天，为客户提供完善的服务。

- **新唐MCU技术论坛 - 21ic 中国电子网** http://bbs.21ic.com/iclist-187-1.html
- **牛卧堂** http://nuvoton-mcu.com
- **NuForum** http://forum.nuvoton.com
- **在线技术支持** https://nuvoton.com

缩写和代码列表

规格简称/ 代码		描述
ACMP		Analog Comparator 模拟比较器控制器
EMAC		Ethernet MAC 以太网控制器
LP UART		Low-power UART 低功耗 UART
OPA		OP Amplifier 运算放大器
PDMA		Peripheral Direct Memory Access 直接存储器存取
QSPI		Quad SPI 全双工同步串行数据通讯接口
RTC		Real-Time Clock 实时时钟
RTC (V_{BAT})		关闭电源或处于掉电模式时，可以通过 V_{BAT} 引脚为实时时钟 (RTC) 供电。
SPI Master		SPI 主机，支持 SPI 主机协议
USB	USB FS	USB Full Speed USB 全速
	USB HS	USB High Speed USB 高速
	O	On-The-Go (OTG)
	D	USB Device USB设备模式
	H	USB Host USB主机模式
	H/D	可作为USB主机或USB设备，但非OTG
PSIO		Programmable Serial I/O 可编程 I/O 串行接口
VAI		Voltage Adjustment Interface 电压调整接口
USCI		Universal Serial Control Interface Controller 通用串行接口，可灵活设置为UART、SPI 或 I²C
XOM		eXecute-Only Memory 仅执行内存

封装代码	封装	管脚	尺寸 (mm)
A	QFN	68	8 x 8
B	MSOP	10	3 x 3
C	WLCSP	-	-
D	TSSOP	14	4.4 x 5.0
E	TSSOP	28	4.4 x 9.7
F	TSSOP	20	4.4 x 6.5
G	QFN	24	3 x 3
H	LQFP	176	24 x 24
I	SOP	8	4 x 5
J	LQFP	144	20 x 20
K	LQFP	128	14 x 14
L	LQFP	48	7 x 7
M	LQFP	44	14 x 14
N	QFN	48	7 x 7
O	SOP	20	300 mil
P	LQFP	32	7 x 7
R	LQFP	64	10 x 10
S	LQFP	64	7 x 7
T	QFN	33	4 x 4
U	SOP	28	300 mil
V	LQFP	100	14 x 14
W	Wafer	-	-
X	QFN	20	3 x 3
Y	QFN	48	5 x 5
Z	QFN	33	5 x 5

NuMicro® 车用微控制器家族

NuMicro CAN/ 车用 微控制器系列是新微控制器产品线，具有高性能，可承受高达 125° C 的环境温度，并通过 AEC-Q100 2 级认证，并具有内置的控制器局域网（CAN）2.0 B 接口。专为汽车应用而设计。
NuMicro CAN/ 车用 微控制器系列是基于 Arm® Cortex® -M0 内核，内建 16~68 KB Flash，支持多路的通讯接口 (如 LIN、UART、SPI、I²C...等)，并带有 DAC、ADC、比较器等丰富仿真接口。

通过 AEC-Q100 grade 2

应用领域：倒车辅助系统、车用灯光、车身控制、抬头显示器

NuMicro® CAN / Automotive 系列 MCU 由以下产品系列组成：
M0A23 系列 : 支持高达 125° C, 48 MHz, 高达 32 KB Flash, CAN/LIN 界面 , PDMA, DAC, ACMP
NUC131U 系列 : 通过 AEC-Q100 grade 2, 50 MHz, 高达 68 KB Flash, CAN/LIN 接口 , 最多支持 6 组 UART

M0A23 系列

NuMicro® M0A21 是专为汽车应用而设计，基于 Arm® Cortex®-M0 内核，提供高达 32 KB 的闪存，提供 CAN/LIN 接口和高稳定性，能够承受高达 125° C 的环境温度。

应用领域：车用、灯光、工业通讯、工业控制、电源控制等

• M0A23 系列

关键特性：硬件除法器、支持最高 125° C、LIN 接口、PDMA、单线式 UART

Part No.	System						Memory					Timer		Analog			Connectivity				Package		Status	Tool		Auto
	Operating Frequency (MHz)	Operating Voltage (min) (V)	Operating Voltage (max) (V)	Operating Temperature (min) (°C)	Operating Temperature (max) (°C)	GPIO	LDROM Flash (KB)	APROM Flash (KB)	Data Flash (KB)	SRAM (KB)	PDMA (ch)	Timer (32-bit)	PWM (16-bit)	ADC (12-bit)	DAC (5-bit)	ACMP	UART	LIN	USCI	CAN	Package Type	Package Size	Mass Production	EVB	MP Programmer	AEC-Q100
M0A23EC1ACU	48	2.4	5.5	-40	125	26	2	32	Configurable	4	5	4	6	17	1	2	2	2	2	1	TSSOP28	4.4x9.7	√	NK-M0A23EC	NLG-M0A21E	√
M0A23OC1ACU	48	2.4	5.5	-40	125	18	2	32	Configurable	4	5	4	6	17	1	2	2	2	2	1	SSOP20	5.3x7.2	√	NK-M0A23OC	NLG-M0A21O	√
M0A23EC1AC	48	2.4	5.5	-40	125	26	2	32	Configurable	4	5	4	6	17	1	2	2	2	2	1	TSSOP28	4.4x9.7	√	NK-M0A23EC	NLG-M0A21E	
M0A23OC1AC	48	2.4	5.5	-40	125	18	2	32	Configurable	4	5	4	6	17	1	2	2	2	2	1	SSOP20	5.3x7.2	√	NK-M0A23OC	NLG-M0A21O	

NUC131U 系列

NuMicro® NUC131SD2AEU 是基于 32 位 Arm® Cortex®-M0 的微控制器，运行速度高达 50 MHz，内建 68 KB Flash，具有内置控制器局域网（CAN）2.0 B 接口，并通过了 AEC-Q100 2 级认证

应用领域：车用、灯光、工业通讯、工业控制、雷达等

• NUC131U 系列

关键特性：硬件除法器、LIN/CAN 接口、6 组 UART、24 路 100 MHz PWM

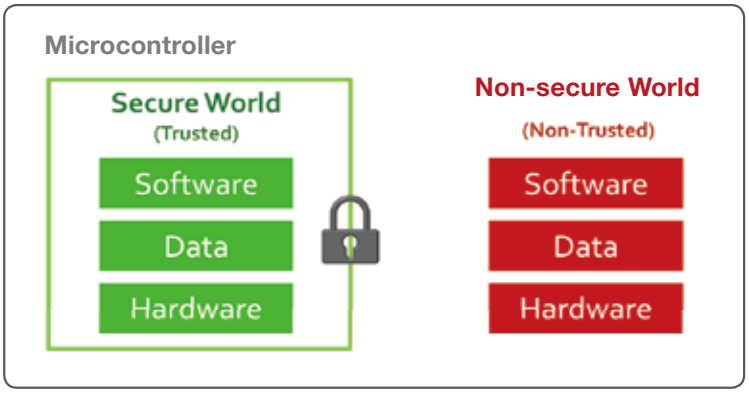
Part No.	System						Memory				Timer		Analog	Connectivity					Package		Status	Tool		Auto
	Operating Frequency (MHz)	Operating Voltage (min) (V)	Operating Voltage (max) (V)	Operating Temperature (min) (°C)	Operating Temperature (max) (°C)	GPIO	LDROM Flash (KB)	APROM Flash (KB)	Data Flash (KB)	SRAM (KB)	Timer (32-bit)	PWM (16-bit)	ADC (12-bit)	UART	LIN	SPI	I²C	CAN	Package Type	Package Size	Mass Production	EVB	MP Programmer	AEC-Q100
NUC131LD2AEU	50	2.5	5.5	-40	105	42	4	68	Configurable	8	4	12	8	6	3	1	2	1	LQFP 48	7x7	√	NK-NUC131U	NLG-NUC131L	√
NUC131SD2AEU	50	2.5	5.5	-40	105	56	4	68	Configurable	8	4	12	8	6	3	1	2	1	LQFP 64	7x7	√	NK-NUC131U	NLG-NUC131S	√

Arm® Corte®-M23 内核为产业带来新一代的安全物连网处理器

Arm® Cortex®-M23 内核是基于 Armv8-M 指令集，可作为微控制器的核心，该核心内含的 TrustZone 技术，可以为甚小的嵌入式装置带来更安全的保障。

NuMicro® 家族基于 M23 内核之微控制器系列产品，把传统以 Cortex-M0，Cortex-M0+ 为内核的微控制器标准推进到更省电，更安全也能实现在小型的微控制器产品上。

除了前面所述关于微控制器的安全和低功耗特色，NuMicro® 家族的 M23 系列微控制器还配备了许多功能特点，包括了增强运行功能的总线配置方法，用以加速相关应用开发。
同时该系列还提供了许多扩展性的解决方案，让微控制器应用的开发人员更轻易地可以开发出具有不同特色兼具安全又低功耗的系统应用产品。
总的来说，Cortex®-M23 是一个能提供小芯片面积，功耗较低适用于各种物联网和通用类嵌入式系统应用产品。
它延伸了微控制器应用装置的运行能力，尽可能实现最小的功耗且提供完善的安全功能，即便在资源分配非常有限的小型微控制器上。

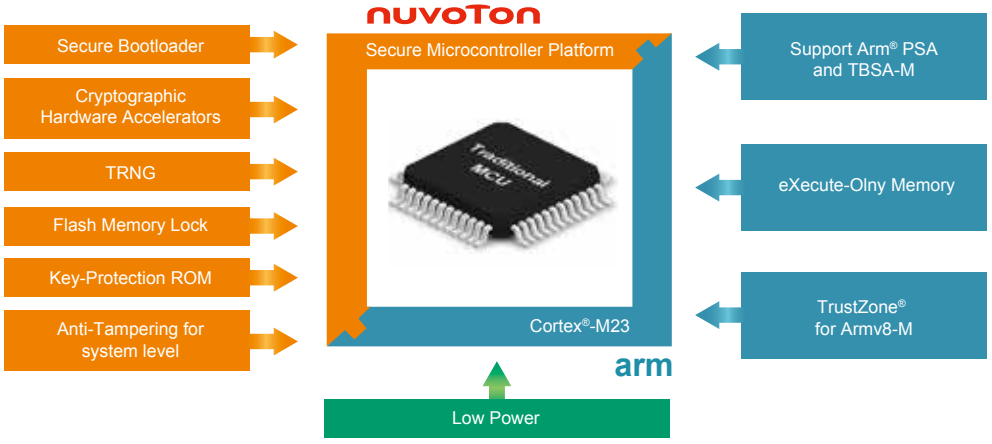


M2351 系列

物联网时代的兴起使人们对物理世界与数字系统整合的认知随之提升，在日常生活的数字化带来效率提升和经济效益的同时，系统开发者也面临了新的挑战。由于安全性和低功耗为物联网应用的关键考虑，新唐科技开发了 NuMicro® M2351 系列，以满足物联网应用于低功耗运行的同时执行安全连网的开发设计需求。

NuMicro® M2351 系列微控制器系列以 Arm® Cortex®-M23 为内核、内建 Armv8-M 架构和 TrustZone® 技术，可将传统的固件安全性提升至更完整的软件安全防护。

M2351 系列微控制器运行频率可高达 64 MHz，内建 512 KB 双区块 (Dual Bank) 架构闪存 (Flash)，可支持 OTA (Over-The-Air) 固件升级，并内建 96 KB SRAM。此外，M2351 系列提供高性能外设接口，如 UART，SPI，I²C，GPIO，USB 和 ISO 7816-3。其安全性与多元的功耗管理模式使得物联网应用的创新更臻便捷。



应用领域：智能电表、软件 IP 保护、智能城市、智能穿戴、医疗装置、物联网安全通讯模块、二次开发协作模式等。

应用领域：智能电表、游戏软件 IP 保护、智能城市、智能穿戴、医疗装置、物联网安全连接装置、二次开发协作模式.....等

关键特性：Armv8-M 架构之 TrustZone® 技术、8 个安全区 / 非安全区内存保护单元、硬件加密加速器、CRC 计算单元、至多 6 个破坏侦测引脚、支持 Arm® 平台安全架构 (PSA) 与微控制器可信基础系统架构 (TBSA-M)、物联网电源管理技术

Part No.	System								Memory					Timer			Analog			Connectivity										Security		Crypto	Package		Status	Tool	
	Operating Frequency (MHz)	Operating Voltage (min) (V)	Operating Voltage (max) (V)	Operating Temperature (min) (°C)	Operating Temperature (max) (°C)	GPIO	ETM	V_{BAT}	LDROM Flash (KB)	APROM Flash (KB)	Secure Flash (KB)	SRAM (KB)	PDMA (ch)	Timer/ PWM	BPWM (16-bit)	EPWM (16-bit)	EADC	DAC (12-bit)	ACMP	LPUART	ISO-7816-3	QSPI	I²C	USCI	SPI/ I²S	CAN	SDHC	USB FS OTG	EBI	TRNG	Tamper	AES/DES/3DS/SHA/ECC	Package Type	Package Size	Mass Production	EVB	MP Programmer
M2351CIAAE	64	1.7	3.6	-40	105	41	-	-	4	512	-	96	16	4	12	12	12	2	2	6	3	1	3	2	3	1	1	1	√	√	-	√	WLCSP 49	3.2x3.2	√	NK-BEDM2351	-
M2351KIAAE	64	1.7	3.6	-40	105	107	√	√	4	512	-	96	16	4	12	12	16	2	2	6	3	1	3	2	4	1	1	1	√	√	6	√	LQFP 128	14x14	√	NK-BEDM2351	NLG-128KX
M2351SFSIAAE	64	1.7	3.6	-40	85	45	-	√	4	512	4096	96	16	4	12	12	16	2	2	6	3	-	3	2	4	1	1	1	√	√	1	√	LQFP 64	7x7	√	NK-M2351SF	NLG-64S
M2351SIAAE	64	1.7	3.6	-40	105	51	-	√	4	512	-	96	16	4	12	12	16	2	2	6	3	1	3	2	4	1	1	1	√	√	1	√	LQFP 64	7x7	√	NK-BEDM2351	NLG-64S
M2351ZIAAE	64	1.7	3.6	-40	105	25	-	-	4	512	-	96	16	4	12	11	10	2	2	6	3	1	3	2	3	1	1	1	-	√	-	√	QFN 33	5x5	√	NK-BEDM2351	NLG-32Z

M2354 系列

新唐科技的 NuMicro M2354 系列是基于 Arm Cortex-M23 内核带 TrustZone 功能适用于安全物联网领域应用的微控制器产品。M2354 系列增进了对微控制器进行物理攻击的防护功能，如物理入侵防护安全密钥存储区、闪存内存数据保护、安全区域规划等。完善的信息安全防护做法将可达到 Arm PSA 认证的第二级别，甚至是第三级别。该系列将能满足未来物联网装置对于高安全性与低功耗的设计需求，对未来日常数字化的生活提升效率并带来经济效益。

推广物联网应用的主要挑战就是联网安全，所以物联网装置在设计上必须能抵御对装置内存数据、信息传递与内部软件程序的恶意攻击。“代码安全”、“数据安全”、“通信安全”是物联网装置安全需求的三大主要目标。

低功耗的 M2354 系列主频可运行最高到 96 MHz，内建 1 Mega Bytes 双区块 (Dual Bank) 架构闪存 (Flash)，可支持安全空中 (Secure Over-The-Air) 固件升级，并内建 256 K SRAM。延续 M2351 系列，本系列也提供高性能外设接口，如 UART、SPI、I²C、GPIOs、USB 和 ISO 7816-3。最重要的，对于密码硬件之侧信道攻击 (Side-Channel Attack) 与电压与时钟故障注入 (Fault Injection) 攻击防护的作法增进了 Arm v8-M TrustZone 的软件安全到实现物理安全。

应用领域：智能电表、软件 IP 保护、智能城市、智能穿戴、医疗装置、物联网安全通讯模块、二次开发协作模式等。

关键特性：物理安全防护密钥存储区、最高可支持 8x40 段式显示屏、Armv8-M 架构之 TrustZone 技术、八个安全区 / 非安全区内存保护单元、硬件加密加速器、CRC 计算单元、至多六个破坏侦测引脚、支持 Arm PSA 安全平台架构，可达到安全等级第二级甚至第三级 (PSA Certified Level 2/ Level 3)

Part No.	System								Memory				Timer			Analog		Connectivity												Security			Crypto	Display	Package		Status	Tool	
	Operating Frequency (MHz)	Operating Voltage (min) (V)	Operating Voltage (max) (V)	Operating Temperature (min) (°C)	Operating Temperature (max) (°C)	GPIO	ETM	V_{BAT}	LDROM Flash (KB)	APROM Flash (KB)	SRAM (KB)	PDMA (ch)	Timer/ PWM	BPWM (16-bit)	EPWM (16-bit)	EADC	DAC (12-bit)	LPUART	ISO-7816-3	QSPI	I²C	USCI	SPI/ I²S	CAN	SDHC	USB FS OTG	EBI	TRNG	Tamper	Key Store	AES/ECC/SRA/ SM2/3/4	ComSeg LCD	Package Type	Package Size	Mass Production	EVB	MP Programmer
M2354KJFAE	96	1.7	3.6	-40	105	106	√	√	16	1024	256	16	4	12	12	16	2	6	3	1	3	2	4	1	1	1	√	√	6	√	√	8x40	LQFP128	14x14	√	NK-BEDM2354	NLG-128KX
M2354LJFAE	96	1.7	3.6	-40	105	40	-	-	16	1024	256	16	4	12	12	11	2	6	3	1	3	2	3	1	1	1	√	√	1	√	√	-	LQFP48	7x7	√	NK-BEDM2354	NLG-48L
M2354SJFAE	96	1.7	3.6	-40	105	50	-	√	16	1024	256	16	4	12	12	16	2	6	3	1	3	2	4	1	1	1	√	√	1	√	√	8X13	LQFP64	7x7	√	NK-BEDM2354	NLG-64S

M251/M252 系列

NuMicro® M251/M252 系列为超低功耗微控制器，基於 Arm® Cortex®-M23 内核和 Armv8-M 架构，支持宽工作电压 1.8V ~ 5.5V，4 K 字节独立 Flash 作为在线系统编程 (In-System Programming) 用途。M251/M252 系列集成具有模拟多样通讯协定 (诸如 UART、SPI、I2C...等) 的可编程串列接口 (PSIO)、RTC、ADC、DAC、比较器、OPA、电压调整接口 (VAI)、USB 2.0 全速设备 (无须外挂晶振)、ISO-7816-3 智能卡接口和丰富外设，并支持多种接口快速唤醒。

应用领域：适合于使用电池供电的设备，诸如穿戴式装置、物联网节点装置、可携式医疗装置、智能家电、安全警报监控系统、行动支付智能读卡机、GPS 数据采集器、无线通讯模块 （Zigbee、LoRa ... 等 ）、电子货架标签、无线射频识别、智能三表 (热表、水表、燃气表) 等

• M251 系列

关键特性：最高支持 8 路可模拟多样通讯协定的可编程串列接口 (PSIO)、超低功耗技术 : 138 μA/MHz (运行模式)、60 μA/MHz (Idle 模式)、2.5 μA (RTC 模式，RAM 数据保持)、1.7 μA (待机模式，RAM 数据保持)

Part No.	System						Memory				Timer				Analog			Connectivity										Security			Package		Status	Tool	
	Operating Frequency (MHz)	Operating Voltage (min) (V)	Operating Voltage (max) (V)	Operating Temperature (min) (°C)	Operating Temperature (max) (°C)	GPIO	LDROM Flash (KB)	APROM Flash (KB)	SRAM (KB)	PDMA (ch)	Timer/ PWM	PWM (16-bit)	BPWM (16-bit)	RTC	EADC	DAC (12-bit)	ACMP	UART	LIN	ISO-7816-3	QSPI	I²C	USCI	SPI/ I²S	PSIO	USB FS Device Crystal-less	TrustZone	XOM	Tamper	Package Type	Package Size	Mass Production	EVB	MP Programmer
M251EC2AE	48	1.75	5.5	-40	105	23	4	32	8	5	4	11	-	-	9	-	-	2	1	1	1	2	1	-	-	-	√	√	-	TSSOP28	4.4x9.7	√	NK-M252SD	NLG-28E
M251FC2AE	48	1.75	5.5	-40	105	15	4	32	8	5	4	9	-	-	7	-	-	2	1	1	1	2	1	-	-	-	√	√	-	TSSOP20	4.4x6.5	√	NK-M252SD	NLG-20F
M251KE3AE	48	1.75	5.5	-40	105	85	4	128	16	8	4	12	12	√	16	-	2	3	1	1	1	2	3	1	8	-	√	√	√	LQFP128	14x14	√	NK-M252KG	NLG-128KX
M251KG6AE	48	1.75	5.5	-40	105	85	4	256	32	8	4	12	12	√	16	1	2	3	1	1	1	2	3	1	8	-	-	√	√	LQFP128	14x14	√	NK-M252KG	NLG-128KX
M251LC2AE	48	1.75	5.5	-40	105	41	4	32	12	5	4	12	12	√	12	-	2	3	1	1	1	2	2	1	4	-	√	√	-	LQFP48	7x7	√	NK-M252SD	NLG-48L
M251LD2AE	48	1.75	5.5	-40	105	41	4	64	12	5	4	12	12	√	12	-	2	3	1	1	1	2	2	1	4	-	√	√	-	LQFP48	7x7	√	NK-M252SD	NLG-48L
M251LE3AE	48	1.75	5.5	-40	105	41	4	128	16	8	4	12	12	√	12	-	2	3	1	1	1	2	3	1	8	-	√	√	-	LQFP48	7x7	√	NK-M252KG	NLG-48L
M251LG6AE	48	1.75	5.5	-40	105	41	4	256	32	8	4	12	12	√	12	1	2	3	1	1	1	2	3	1	8	-	√	√	-	LQFP48	7x7	√	NK-M252KG	NLG-48L
M251SC2AE	48	1.75	5.5	-40	105	54	4	32	12	5	4	12	12	√	16	-	2	3	1	1	1	2	2	1	4	-	√	√	√	LQFP64	7x7	√	NK-M252SD	NLG-64S
M251SD2AE	48	1.75	5.5	-40	105	54	4	64	12	5	4	12	12	√	16	-	2	3	1	1	1	2	2	1	4	-	√	√	√	LQFP64	7x7	√	NK-M252SD	NLG-64S
M251SE3AE	48	1.75	5.5	-40	105	53	4	128	16	8	4	12	12	√	16	-	2	3	1	1	1	2	3	1	8	-	√	√	√	LQFP64	7x7	√	NK-M252KG	NLG-64S
M251SG6AE	48	1.75	5.5	-40	105	53	4	256	32	8	4	12	12	√	16	1	2	3	1	1	1	2	3	1	8	-	√	√	√	LQFP64	7x7	√	NK-M252KG	NLG-64S
M251ZC2AE	48	1.75	5.5	-40	105	26	4	32	8	5	4	12	-	√	10	-	-	2	1	1	1	2	1	-	-	-	√	√	-	QFN33	5x5	√	NK-M252SD	NLG-32Z
M251ZD2AE	48	1.75	5.5	-40	105	26	4	64	12	5	4	12	12	√	10	-	2	3	1	1	1	2	2	1	4	-	√	√	-	QFN33	5x5	√	NK-M252SD	NLG-32Z

• M252 系列

关键特性：支持 USB 2.0 全速设备、并且无须外挂晶振、最高支持 8 路可模拟多样通讯协定的可编程串列接口 (PSIO)、超低功耗技术 : 138 μA/MHz (运行模式)、60 μA/MHz (Idle 模式)、2.5 μA (RTC 模式，RAM 数据保持)、1.7 μA (待机模式，RAM 数据保持)

Part No.	System						Memory				Timer				Analog			Connectivity									Security			Package		Status	Tool	
	Operating Frequency (MHz)	Operating Voltage (min) (V)	Operating Voltage (max) (V)	Operating Temperature (min) (°C)	Operating Temperature (max) (°C)	GPIO	LDROM Flash (KB)	APROM Flash (KB)	SRAM (KB)	PDMA (ch)	Timer/ PWM	PWM (16-bit)	BPWM (16-bit)	RTC	EADC	DAC (12-bit)	ACMP	UART	LIN	ISO-7816-3	QSPI	I²C	USCI	SPI/ I²S	PSIO	USB FS Device Crystal-less	TrustZone	XOM	Tamper	Package Type	Package Size	Mass Production	EVB	MP Programmer
M252EC2AE	48	1.75	5.5	-40	105	19	4	32	8	5	4	11	-	-	9	-	-	2	1	1	1	2	1	-	-	√	-	√	-	TSSOP28	4.4x9.7	√	NK-M252SD	NLG-28E
M252FC2AE	48	1.75	5.5	-40	105	11	4	32	8	5	4	7	-	-	3	-	-	2	1	1	1	2	1	-	-	√	-	√	-	TSSOP20	4.4x6.5	√	NK-M252SD	NLG-20F
M252KE3AE	48	1.75	5.5	-40	105	81	4	128	16	8	4	12	12	√	16	-	2	3	1	1	1	2	3	1	8	√	-	√	√	LQFP128	14x14	√	NK-M252KG	NLG-128KX
M252KG6AE	48	1.75	5.5	-40	105	81	4	256	32	8	4	12	12	√	16	1	2	3	1	1	1	2	3	1	8	√	-	√	√	LQFP128	14x14	√	NK-M252KG	NLG-128KX
M252LC2AE	48	1.75	5.5	-40	105	37	4	32	12	5	4	12	8	√	12	-	2	3	1	1	1	2	2	1	4	√	-	√	-	LQFP48	7x7	√	NK-M252SD	NLG-48L
M252LD2AE	48	1.75	5.5	-40	105	37	4	64	12	5	4	12	12	√	12	-	2	3	1	1	1	2	2	1	4	√	-	√	-	LQFP48	7x7	√	NK-M252SD	NLG-48L
M252LE3AE	48	1.75	5.5	-40	105	37	4	128	16	8	4	12	12	√	12	-	2	3	1	1	1	2	3	1	8	√	-	√	-	LQFP48	7x7	√	NK-M252KG	NLG-48L
M252LG6AE	48	1.75	5.5	-40	105	37	4	256	32	8	4	12	12	√	12	1	2	3	1	1	1	2	3	1	8	√	-	√	-	LQFP48	7x7	√	NK-M252KG	NLG-48L
M252SC2AE	48	1.75	5.5	-40	105	50	4	32	12	5	4	12	12	√	16	-	2	3	1	1	1	2	2	1	4	√	-	√	√	LQFP64	7x7	√	NK-M252SD	NLG-64S
M252SD2AE	48	1.75	5.5	-40	105	50	4	64	12	5	4	12	12	√	16	-	2	3	1	1	1	2	2	1	4	√	-	√	√	LQFP64	7x7	√	NK-M252SD	NLG-64S
M252SE3AE	48	1.75	5.5	-40	105	49	4	128	16	8	4	12	12	√	16	-	2	3	1	1	1	2	3	1	8	√	-	√	√	LQFP64	7x7	√	NK-M252KG	NLG-64S
M252SG6AE	48	1.75	5.5	-40	105	49	4	256	32	8	4	12	12	√	16	1	2	3	1	1	1	2	3	1	8	√	-	√	√	LQFP64	7x7	√	NK-M252KG	NLG-64S
M252ZC2AE	48	1.75	5.5	-40	105	23	4	32	8	5	4	12	-	√	10	-	-	2	1	1	1	2	1	-	-	√	-	√	-	QFN33	5x5	√	NK-M252SD	NLG-32Z
M252ZD2AE	48	1.75	5.5	-40	105	22	4	64	12	5	4	12	12	√	10	-	2	3	1	1	1	2	2	1	4	√	-	√	-	QFN33	5x5	√	NK-M252SD	NLG-32Z

M253 系列

NuMicro® M253 系列为超低功耗微控制器，基於 Arm® Cortex®-M23 内核和 Armv8-M 架构，支持宽工作电压 1.75V ~ 5.5V，4 K 字节独立 Flash 作为在线系统编程 (In-System Programming) 用途。M253 系列集成一路 CAN FD 介面與 USB 2.0 全速设备，无须外挂晶振，並支持高達 17 個端點 (endpoint)，等同最多五路虛擬通道 (VCOM)。

应用领域：适合于使用电池包管理，車用電子，與工業自動化設備。

• M253 系列

关键特性：最高一路 CAN FD、一路 USB 2.0 全速介面、五路串口、超低功耗技术 : 130 μA/MHz (运行模式)、1.7 μA (RTC 模式，RAM 数据保持)、1.3 μA (待机模式，RAM 数据保持)

Part No.	System						Memory				Timer			Analog		Connectivity								Security	Package		Status	Tool	
	Operating Frequency (MHz)	Operating Voltage (min) (°C)	Operating Voltage (max) (V)	Operating Temperature (min) (V)	Operating Temperature (max) (°C)	GPIO	LDROM Flash	APROM Flash	SRAM	PDMA	Timer (32-bit)	BPWM (16-bit)	RTC	EADC	ACMP	UART	I²C	USCI	SPI/ I²S	CAN FD	USB FS Device	USB FS Device Crystal-less	XOM	Package Type	Package Size	Mass Production	EVB	MP Programmer
M253LD3AE	48	1.75	5.5	-40	105	37	4	64	16	5	4	6	√	12	2	5	2	1	1	1	1	√	√	LQFP48	7x7	√	NK-M253LE	NLG-48L
M253LE3AE	48	1.75	5.5	-40	105	37	4	128	16	5	4	6	√	12	2	5	2	1	1	1	1	√	√	LQFP48	7x7	√	NK-M253LE	NLG-48L
M253ZE3AE	48	1.75	5.5	-40	105	22	4	128	16	5	4	6	√	10	2	5	2	1	1	1	1	√	√	QFN33	5x5	√	NK-M253LE	NLG-32Z

M254/M256/M258 系列

NuMicro M254/M256/M258 系列为超低功耗微控制器，基于 Arm® Cortex®-M23 内核和 Armv8-M 架构，NuMicro M254 系列内建 COM/SEG LCD 驱动，NuMicro M256/M258 系列除了内建 COM/SEG LCD 驱动也支持电容式触摸功能，NuMicro M258 系列更是支持 USB 2.0 全速装置。 NuMicro M254/M256/M258 系列支持 64/128 Kbytes 内嵌 Flash 内存以及 16 Kbytes SRAM 内存

应用领域：适合于使用电池供电的设备，诸如穿戴式装置、可携式医疗装置、智能家电、安全警报监控系统、温控器、温湿度纪录仪以及智能三表 (热表、水表、燃气表) 等。

• M254 系列

关键特性：支持 8x44, 6x46, 4x48 COM/SEG LCD 驱动，并支持三种分压方式： charge-pump, 电阻以及内建 OP Buffer，能够支持 3V 至 5V LCD 液晶屏 , 并可调整 1/2, 1/3, 1/4 偏压 以及 1/4, 1/6, 1/8 等周期

Part No.	System						Memory				Timer			Analog				Connectivity										Security	Crypto	Display	Package		Status	Tool	
	Operating Frequency (MHz)	Operating Voltage (min) (°C)	Operating Voltage (max) (V)	Operating Temperature (min) (V)	Operating Temperature (max) (°C)	GPIO	LDROM Flash	APROM Flash	SRAM	PDMA	Timer/ PWM	BPWM (16-bit)	RTC	EADC	DAC (12-bit)	ACMP	Touch Key	UART	LIN	ISO-7816-3	I²C	USCI	SPI/ I²S	USB FS Device	USB FS Device Crystal-less	XOM	AES	ComSeg LCD	Package Type	Package Size	Mass Production	EVB	MP Programmer
M254KE3AE	48	1.75	5.5	-40	105	86	4	128	16	5	4	6	√	16	-	2	-	3	1	1	1	1	1	-	-	√	-	8x44 6x46 4x48	LQFP128	14x14	√	NK-M258KE	NLG-128KX
M254KG6AE	48	1.75	5.5	-40	105	86	4	256	32	8	4	12	√	16	2	2	-	4	1	1	2	2	2	-	-	√	√	8x44 6x46 4x48	LQFP128	14x14	√	-	-
M254MD2AE	48	1.75	5.5	-40	105	37	4	64	8	5	4	6	√	12	-	2	-	3	1	1	1	1	1	-	-	√	-	8x16 6x18 4x20	LQFP44	10x10	√	-	-
M254QE3AE	48	1.75	5.5	-40	105	70	4	128	16	5	4	6	√	16	-	2	-	3	1	1	1	1	1	-	-	√	-	8x44 6x46 4x48	LQFP80	14x14	√	NK-M258KE	NLG-80Q
M254SD2AE	48	1.75	5.5	-40	105	54	4	64	8	5	4	6	√	16	-	2	-	3	1	1	1	1	1	-	-	√	-	8x28 6x30 4x32	LQFP64	7x7	√	-	-
M254SE3AE	48	1.75	5.5	-40	105	53	4	128	16	5	4	6	√	16	-	2	-	3	1	1	1	1	1	-	-	√	-	8x28 6x30 4x32	LQFP64	7x7	√	NK-M258KE	NLG-64S
M254SG6AE	48	1.75	5.5	-40	105	53	4	256	32	8	4	12	√	16	2	2	-	4	1	1	2	2	2	-	-	√	√	8x28 6x30 4x32	LQFP64	7x7	√	-	-

• M256 系列

关键特性：支持 8x44, 6x46, 4x48 COM/SEG LCD 驱动以及电容式触控功能，最高可支持至 14 个独立触控按键，并提供 single-scan，periodic key-scans, slider, wheel 等多种范例代码

Part No.	System						Memory				Timer			Analog				Connectivity									Security	Crypto	Display	Package		Status	Tool	
	Operating Frequency (MHz)	Operating Voltage (min) (°C)	Operating Voltage (max) (V)	Operating Temperature (min) (V)	Operating Temperature (max) (°C)	GPIO	LDROM Flash	APROM Flash	SRAM	PDMA	Timer/ PWM	BPWM (16-bit)	RTC	EADC	DAC (12-bit)	ACMP	Touch Key	UART	LIN	ISO-7816-3	I²C	USCI	SPI/ I²S	USB FS Device	USB FS Device Crystal-less	XOM	AES	ComSeg LCD	Package Type	Package Size	Mass Production	EVB	MP Programmer
M256KE3AE	48	86	1.75	5.5	-40	105	4	128	16	5	4	6	√	16	-	2	15	3	1	1	1	1	1	-	-	√	-	8x44 6x46 4x48	LQFP128	14x14	√	NK-M258KE	NLG-128KX
M256MD2AE	48	37	1.75	5.5	-40	105	4	64	8	5	4	6	√	12	-	2	6	3	1	1	1	1	1	-	-	√	-	8x16 6x18 4x20	LQFP44	10x10	√	-	-
M256QE3AE	48	70	1.75	5.5	-40	105	4	128	16	5	4	6	√	16	-	2	15	3	1	1	1	1	1	-	-	√	-	8x44 6x46 4x48	LQFP80	14x14	√	NK-M258KE	NLG-80Q
M256QG6AE	48	70	1.75	5.5	-40	105	4	256	32	8	4	12	√	16	2	2	23	4	1	1	2	2	2	-	-	√	√	8x44 6x46 4x48	LQFP80	14x14	√	-	-
M256SD2AE	48	54	1.75	5.5	-40	105	4	64	8	5	4	6	√	16	-	2	14	3	1	1	1	1	1	-	-	√	-	8x28 6x30 4x32	LQFP64	7x7	√	-	-
M256SE3AE	48	53	1.75	5.5	-40	105	4	128	16	5	4	6	√	16	-	2	14	3	1	1	1	1	1	-	-	√	-	8x28 6x30 4x32	LQFP64	7x7	√	NK-M258KE	NLG-64S

• M258 系列

关键特性：支持 8x40, 6x42, 4x44 COM/SEG LCD 以及高达 14 组独立电容式触控按键， 并提供 BC1.2 USB 2.0 全速之快充功能

Part No.	System						Memory				Timer			Analog				Connectivity									Security	Crypto	Display	Package		Status	Tool	
	Operating Frequency (MHz)	Operating Voltage (min) (°C)	Operating Voltage (max) (V)	Operating Temperature (min) (V)	Operating Temperature (max) (°C)	GPIO	LDROM Flash	APROM Flash	SRAM	PDMA	Timer/ PWM	BPWM (16-bit)	RTC	EADC	DAC (12-bit)	ACMP	Touch Key	UART	LIN	ISO-7816-3	I²C	USCI	SPI/ I²S	USB FS Device	USB FS Device Crystal-less	XOM	AES	ComSeg LCD	Package Type	Package Size	Mass Production	EVB	MP Programmer
M258KE3AE	48	82	1.75	5.5	-40	105	4	128	16	5	4	6	√	16	-	2	15	3	1	1	1	1	1	1	√	√	-	8x40 6x42 4x44	LQFP128	14x14	√	NK-M258KE	NLG-128KX
M258KG6AE	48	82	1.75	5.5	-40	105	4	256	32	8	4	12	√	16	2	2	24	4	1	1	2	2	2	1	√	√	√	8x40 6x42 4x44	LQFP128	14x14	√	-	-
M258QE3AE	48	66	1.75	5.5	-40	105	4	128	16	5	4	6	√	16	-	2	15	3	1	1	1	1	1	1	√	√	-	8x40 6x42 4x44	LQFP80	14x14	√	NK-M258KE	NLG-80Q
M258QG6AE	48	66	1.75	5.5	-40	105	4	256	32	8	4	12	√	16	2	2	23	4	1	1	2	2	2	1	√	√	√	8x40 6x42 4x44	LQFP80	14x14	√	-	-
M258SE3AE	48	49	1.75	5.5	-40	105	4	128	16	5	4	6	√	16	-	2	14	3	1	1	1	1	1	1	√	√	-	8x28 6x26 4x24	LQFP64	7x7	√	NK-M258KE	NLG-64S
M258SG6AE	48	49	1.75	5.5	-40	105	4	256	32	8	4	12	√	16	2	2	20	4	1	1	2	2	2	1	√	√	√	8x28 6x26 4x24	LQFP64	7x7	√	-	-

M261/M262/M263 系列

新唐科技 NuMicro® M261/M262/M263 系列是新一代 32 位低功耗微控制器产品，基于 Arm® Cortex®-M23 内核，支持 Armv8-M 指令集架构。其工作频率达 64 MHz，内嵌可支持无线更新固件技术 (OTA) 的双区块 (dual bank) 512 KB Flash, 96 KB SRAM，可运作于 1.8 ~ 3.6 V 工作电压和 - 40°C ~ 105 °C温度范围。

NuMicro® M261/M262/M263 系列提供多种低功耗操作模式以满足多样的运作场景，诸如掉电模式 (PD)、快速唤醒掉电模式 (FWPD)、低漏电掉电模式 (LLPD)、超低漏电掉电模式 (ULLPD)、待机掉电模式 (SPD) 和深度掉电模式 (DPD)。關於耗电流部分，正常运行模式下约为 97 μA/MHz (LDO 模式) 和 45 μA/MHz (DC-DC 模式)，待机掉电模式下约为 2.8 μA，深度掉电模式下的耗电流则小于 2 μA。

NuMicro® M261/M262/M263 系列支持丰富的周边接口，如看门狗定时器、RTC、PDMA、EBI (外扩接口)、LPUART、USCI (通用串行接口)、QSPI、SPI/I²S、I²C、ISO-7816-3、SDHC 2.0、GPIOs 和最高 24 路 PWM，可轻松连接更多的扩展模块与实现灯光控制功能。其亦整合高性能模拟周边电路，包含最高 16 路 12 位 3.76 MSPS 采样率 ADC、12 位 1 MSPS 采样率 DAC、模拟比较器 (ACMP)、温度检测传感器、低电压重设 (LVR) 和欠压检测 (BOD)，可提升产品性能。

NuMicro® M262 系列的微控制器均基于 NuMicro® M261 系列，其集成了符合 USB 2.0 全速 OTG 标准规范的传输接口、USB 1.1 主机和 USB 2.0 全速设备控制器，支持无需外挂晶振的功能。

NuMicro® M263 系列的微控制器均基于 NuMicro® M262 系列，其提供一组符合 CAN 2.0B 标准规范的通讯接口，可透过 PinConfigure 来设定由特定的六组引脚中的任一组引脚为 CAN 传输接口。

应用领域：适合于使用电池供电的设备，诸如物联网节点装置、可携式医疗装置、智能家电、安全警报监控系统、无线传感器节点装置、行动支付智能读卡机、无线通讯模块 (Zigbee、LoRa、Thread ... 等)、智能门锁等。

• M261/M262/M263 系列

关键特性：支持无线更新固件的 512KB 双区块 (Dual Bank) 架构闪存 (Flash), USB 2.0 全速 OTG, CAN 2.0B 接口，SDHC 2.0 接口，支持安全开机功能，硬件加密引擎，16 路 12 位 3.76 MSPS 采样率 ADC、12 位 1 MSPS 采样率 DAC、模拟比较器 (ACMP)

低功耗技术：正常运行模式下约为 97 μA/MHz (LDO 模式) 和 45 μA/MHz (DC-DC 模式)，待机掉电模式下约为 2.8 μA，深度掉电模式下的耗电流则小于 2 μA

Part No.	System						Memory				Timer						Analog			Connectivity												Security			Crypto	Package		Status	Tool	
	Operating Frequency (MHz)	Operating Voltage (min) (V)	Operating Voltage (max) (V)	Operating Temperature (min) (°C)	Operating Temperature (max) (°C)	GPIO	LDROM Flash	APROM Flash	SRAM	PDMA	Timer/ PWM	BPWM (16-bit)	EPWM (16-bit)	QEI	ECAP	RTC	EADC	DAC (12-bit)	ACMP	LIN	LPUART	ISO-7816-3	QSPI	I²C	USCI	SPI/ I²S	I²S	CAN	SDHC	USB FS OTG	EBI	TRNG	XOM	Tamper	Crypto	Package Type	Package Size	Mass Production	EVB	MP Programmer
M261KIAAE	64	1.8	3.6	-40	105	107	4	512	96	16	4	12	12	2	2	√	16	2	2	2	6	3	1	3	2	4	1	-	1	-	√	√	√	6	√	LQFP128	14x14	√	NK-M263KI	NLG-128KX
M261SIAAE	64	1.8	3.6	-40	105	51	4	512	96	16	4	12	12	2	1	√	16	2	2	2	6	3	1	3	2	4	1	-	1	-	√	√	√	1	√	LQFP128	7x7	√	NK-M263KI	NLG-64S
M261ZIAAE	64	1.8	3.6	-40	105	25	4	512	96	16	4	12	12	1	-	√	9	2	2	2	6	3	1	3	2	3	1	-	1	-	-	√	√	-	√	QFN33	5x5	√	NK-M263KI	NLG-32Z
M262KIAAE	64	1.8	3.6	-40	105	107	4	512	96	16	4	12	12	2	2	√	16	2	2	2	6	3	1	3	2	4	1	-	1	1	√	√	√	6	√	LQFP128	14x14	√	NK-M263KI	NLG-128KX
M262SIAAE	64	1.8	3.6	-40	105	51	4	512	96	16	4	12	12	2	1	√	16	2	2	2	6	3	1	3	2	4	1	-	1	1	√	√	√	1	√	LQFP64	7x7	√	NK-M263KI	NLG-64S
M262ZIAAE	64	1.8	3.6	-40	105	25	4	512	96	16	4	12	12	1	-	√	9	2	2	2	6	3	1	3	2	3	1	-	1	1	-	√	√	-	√	LQFP128	5x5	√	NK-M263KI	NLG-32Z
M263KIAAE	64	1.8	3.6	-40	105	107	4	512	96	16	4	12	12	2	2	√	16	2	2	2	6	3	1	3	2	4	1	1	1	1	√	√	√	6	√	LQFP128	14x14	√	NK-M263KI	NLG-128KX
M263SIAAE	64	1.8	3.6	-40	105	51	4	512	96	16	4	12	12	2	1	√	16	2	2	2	6	3	1	3	2	4	1	1	1	1	√	√	√	1	√	LQFP64	7x7	√	NK-M263KI	NLG-64S
M263ZIAAE	64	1.8	3.6	-40	105	25	4	512	96	16	4	12	12	1	-	√	9	2	2	2	6	3	1	3	2	3	1	1	1	1	-	√	√	-	√	QFN33	5x5	√	NK-M263KI	NLG-32Z

NuMicro® Arm® Cortex®-M0 微控制器家族

新唐科技身为全球微控制器领导厂商，持续推出当代最先进的 32 位微控制器，内建 Arm® Cortex®-M0 内核，拥有多样且宽广的操作电压范围选择性（1.8V ~ 3.6V、2.5V ~ 5.5V），可达工业控制的操作温度范围（-40° C ~ 105° C），内建高精度振荡器，兼备高稳定性和高抗干扰能力（8 kV ESD，4 kV EFT）。

Arm® Cortex®-M0 / M23 微控制器家族包含 1.8V M031 系列、5V NUC029 系列；具有 USB 2.0 全速设备功能 NUC121/123/125/126 系列、具有 CAN 功能的 NUC131/230/240 系列、超值的 Mini51 和 M051 系列和超低工耗的 Nano 系列（1.8V ~ 3.6V），是工业控制系统、工业自动化、消费产品、嵌入式网络控制、能源、电力系统和电机控制的理想解决方案。

M030G/M031G 系列

新唐 NuMicro® M030G/M031G 32 位微控制器是专为光收发模块应用所设计，两系列皆内建精度 ±2° C 的温度传感器。M031G 系列更配备了硬件曼彻斯特编译码器及一组支持自动数据产生功能的 DAC，可在最高 500kHz 频率下产生平顺的正弦波供 WDM 系统中的调顶光模块使用。M030G/M031G 系列工作频率可达 48/72 MHz，32/64 KB Flash 和 4/8 KB SRAM，可工作于 2.7V ~ 3.6V 电压接口，工作温度为 - 40° C 至 105° C 。M030G/M031G 系列具备丰富的周边，支持 2 组 1 MHz 从机模式 I²C、内建参考电压、16 路 12 位 16 M SPS ADC、4 组 12 位 DAC 等，并且两系列皆搭配 QFN24 (3x3 mm) 及 QFN33 (4x4 mm) 小封装。

专属应用：光模块

• M030G 系列

关键特性：内建温度传感器，1 MHz 从机模式 I²C, QFN24/33 小封装

Part No.	System							Memory					Clock			Timer		Analog			Connectivity			Package		Status	Tool		Others
	Operating Frequency (MHz)	CRC	Operating Voltage (min) (V)	Operating Voltage (max) (V)	Operating Temperature (min) (°C)	Operating Temperature (max) (°C)	GPIO	LDROM Flash (KB)	APROM Flash (KB)	Data Flash (KB)	SRAM (KB)	PDMA (ch)	LIRC	HIRC (MHz)	PLL (MHz)	Timer (32-bit)	BPWM (16-bit)	ADC (12-bit)	DAC (12-bit)	Internal Voltage Reference	UART	I²C	SPI/ I²S	Package Type	Package Size	Mass Production	EVB	MP Programmer	Additional Features
M030GGC1AE	48	√	2.7	3.6	-40	105	19	2	32	Configurable	4	5	38.4	48	-	2	6	11	4	√	1	2	1	QFN24	3x3	√	NK-M030GTD	NLG-M030GG	Temperature Sensor
M030GGD1AE	48	√	2.7	3.6	-40	105	19	2	64	Configurable	4	5	38.4	48	-	2	6	11	4	√	1	2	1	QFN24	3x3	√	NK-M030GTD	NLG-M030GG	Temperature Sensor
M030GTC1AE	48	√	2.7	3.6	-40	105	28	2	32	Configurable	4	5	38.4	48	-	2	6	16	4	√	1	2	1	QFN33	4x4	√	NK-M030GTD	NLG-M030GT	Temperature Sensor
M030GTD1AE	48	√	2.7	3.6	-40	105	28	2	64	Configurable	4	5	38.4	48	-	2	6	16	4	√	1	2	1	QFN33	4x4	√	NK-M030GTD	NLG-M030GT	Temperature Sensor

• M031G 系列

关键特性：硬件曼测斯特编译码器 , 一组支持自动数据产生功能 DAC, 内建温度传感器 , 1 MHz 从机模式 I²C, QFN24/33 小封装

Part No.	System							Memory					Clock			Timer		Analog			Connectivity			Package		Status	Tool		Others
	Operating Frequency (MHz)	CRC	Operating Voltage (min) (V)	Operating Voltage (max) (V)	Operating Temperature (min) (°C)	Operating Temperature (max) (°C)	GPIO	LDROM Flash (KB)	APROM Flash (KB)	Data Flash (KB)	SRAM (KB)	PDMA (ch)	LIRC	HIRC (MHz)	PLL (MHz)	Timer (32-bit)	BPWM (16-bit)	ADC (12-bit)	DAC (12-bit)	Internal Voltage Reference	UART	I²C	SPI/ I²S	Package Type	Package Size	Mass Production	EVB	MP Programmer	Additional Features
M031GGC2AE	72	√	2.7	3.6	-40	105	19	2	32	Configurable	8	7	38.4	48	72	6	6	11	4	√	1	2	1	QFN24	3x3	√	NK-M031GTD	NLG-M031GG	DAC Auto Data Generation, Temperature Sensor, Hardware Manchester Codec
M031GGD2AE	72	√	2.7	3.6	-40	105	19	2	64	Configurable	8	7	38.4	48	72	6	6	11	4	√	1	2	1	QFN24	3x3	√	NK-M031GTD	NLG-M031GG	DAC Auto Data Generation, Temperature Sensor, Hardware Manchester Codec
M031GTC2AE	72	√	2.7	3.6	-40	105	28	2	32	Configurable	8	7	38.4	48	72	6	6	16	4	√	1	2	1	QFN33	4x4	√	NK-M031GTD	NLG-M031GG	DAC Auto Data Generation, Temperature Sensor, Hardware Manchester Codec
M031GTD2AE	72	√	2.7	3.6	-40	105	28	2	64	Configurable	8	7	38.4	48	72	6	6	16	4	√	1	2	1	QFN33	4x4	√	NK-M031GTD	NLG-M031GG	DAC Auto Data Generation, Temperature Sensor, Hardware Manchester Codec

M031 系列

NuMicro® M031 系列基於 Arm® Cortex®-M0 内核，是为 1.8V ~ 3.6V 工业应用而设计。配备高效与丰富的外设，如：2 MSPS ADC，最高 144 MHz PWM，另外还符合 IEC-60730 安全规范和 USB 2.0 全速设备 (无须外挂晶振)，以及 16 ~ 512 K 字节 Flash 内存、2 ~ 96 K 字节 SRAM。

应用领域：工业控制、高精度仪表、无线充电、人机界面、物联网节点设备、安全系统、电机控制、通信系统等。

• M031 系列

关键特性：配置最高 10 路 UART、144 MHz PWM、2 MSPS ADC、24 MHz SPI、UART 支持 1 线模式、OTA、安全程序 ROM

Part No.	System						Memory				Timer				Analog		Connectivity								Security	Package		Status	Tool	
	Operating Frequency (MHz)	Operating Voltage (min) (V)	Operating Voltage (max) (V)	Operating Temperature (min) (°C)	Operating Temperature (max) (°C)	GPIO	LDROM Flash (KB)	APROM Flash (KB)	SRAM (KB)	PDMA (ch)	Timer (32-bit)	PWM (16-bit)	BPWM (16-bit)	RTC	ADC (12-bit)	ACMP	UART	QSPI	I²C	SMBUS (Supported by I2C)	USCI	SPI/ I²S	EBI	SPROM (Byte)	Package Type	Package Size	Mass Production	EVB	MP Programmer
M031EB0AE	48	1.8	3.6	-40	105	23	2	16	2	-	2	6	-	-	9	-	3	-	2	-	-	1	-	512	TSSOP28	4.4x9.7	√	NK-M031TB	NLG-28E
M031EC1AE	48	1.8	3.6	-40	105	23	2	32	4	2	4	6	-	-	9	-	3	-	2	-	-	1	-	512	TSSOP28	4.4x9.7	√	NK-M031TC	NLG-28E
M031FB0AE	48	1.8	3.6	-40	105	15	2	16	2	-	2	6	-	-	7	-	3	-	2	-	-	1	-	512	TSSOP20	4.4x6.5	√	NK-M031TB	NLG-20F
M031FC1AE	48	1.8	3.6	-40	105	15	2	32	4	2	4	6	-	-	7	-	3	-	2	-	-	1	-	512	TSSOP20	4.4x6.5	√	NK-M031TC	NLG-20F
M031KG6AE	72	1.8	3.6	-40	105	111	4	256	32	7	4	12	12	√	16	2	6	1	2	1	2	1	√	2048	LQFP128	14x14	√	NK-M031KG	NLG-128KX
M031KG8AE	72	1.8	3.6	-40	105	111	4	256	64	7	4	12	12	√	16	2	6	1	2	1	2	1	√	2048	LQFP128	14x14	√	NK-M031KG	NLG-128KX
M031KIAAE	72	1.8	3.6	-40	105	111	8	512	96	9	4	12	12	√	16	2	8	1	-	-	2	1	√	2048	LQFP128	14x14	√	NK-M031KI	NLG-128KX
M031LC2AE	48	1.8	3.6	-40	105	42	2	32	8	5	4	12	-	-	12	2	3	-	2	-	1	1	-	512	LQFP48	7x7	√	NK-M031SD	NLG-48L
M031LD2AE	48	1.8	3.6	-40	105	42	2	64	8	5	4	12	-	-	12	2	3	-	2	-	1	1	-	512	LQFP48	7x7	√	NK-M031SD	NLG-48L
M031LE3AE	48	1.8	3.6	-40	105	42	4	128	16	5	4	12	-	-	12	2	3	-	2	-	1	1	√	512	LQFP48	7x7	√	NK-M031SE	NLG-48L
M031LG6AE	72	1.8	3.6	-40	105	42	4	256	32	7	4	12	12	√	12	2	6	1	2	1	2	1	√	2048	LQFP48	7x7	√	NK-M031KG	NLG-48L
M031LG8AE	72	1.8	3.6	-40	105	42	4	256	64	7	4	12	12	√	12	2	6	1	2	1	2	1	√	2048	LQFP48	7x7	√	NK-M031KG	NLG-48L
M031SC2AE	48	1.8	3.6	-40	105	55	2	32	8	5	4	12	-	-	16	2	3	-	2	-	1	1	-	512	LQFP64	7x7	√	NK-M031SD	NLG-64S
M031SD2AE	48	1.8	3.6	-40	105	55	2	64	8	5	4	12	-	-	16	2	3	-	2	-	1	1	-	512	LQFP64	7x7	√	NK-M031SD	NLG-64S
M031SE3AE	48	1.8	3.6	-40	105	55	4	128	16	5	4	12	-	-	16	2	3	-	2	-	1	1	√	512	LQFP64	7x7	√	NK-M031SE	NLG-64S
M031SG6AE	72	1.8	3.6	-40	105	55	4	256	32	7	4	12	12	√	16	2	6	1	2	1	2	1	√	2048	LQFP64	7x7	√	NK-M031KG	NLG-64S
M031SG8AE	72	1.8	3.6	-40	105	55	4	256	64	7	4	12	12	√	16	2	6	1	2	1	2	1	√	2048	LQFP64	7x7	√	NK-M031KG	NLG-64S
M031SIAAE	72	1.8	3.6	-40	105	55	8	512	96	9	4	12	12	√	16	2	8	1	-	-	2	1	√	2048	LQFP64	7x7	√	NK-M031KI	NLG-64S
M031TB0AE	48	1.8	3.6	-40	105	27	2	16	2	-	2	6	-	-	10	-	3	-	2	-	-	1	-	512	QFN33	4x4	√	NK-M031TB	NLG-32T
M031TC1AE	48	1.8	3.6	-40	105	27	2	32	4	2	4	6	-	-	10	-	3	-	2	-	-	1	-	512	QFN33	4x4	√	NK-M031TC	NLG-32T
M031TD2AE	48	1.8	3.6	-40	105	27	2	64	8	5	4	12	-	-	10	2	3	-	2	-	1	1	-	512	QFN33	4x4	√	NK-M031SD	NLG-32T

M032 系列

NuMicro® M032 系列基於 Arm® Cortex®-M0 内核，是为 1.8V ~ 3.6V 工业应用而设计。配备高效与丰富的外设，如：2 MSPS ADC, 最高 144 MHz PWM，另外还符合 IEC-60730 安全规范和 USB 2.0 全速设备 (无须外挂晶振)，以及 16 ~ 512 K 字节 Flash 内存、2 ~ 96 K 字节 SRAM。

应用领域：滑鼠、鍵盤、電競螢幕、人机界面、物联网节点设备、安全系统、电机控制、通信系统等。

• M032 系列

关键特性：配置最高 10 路 UART、144 MHz PWM、2 MSPS ADC、24 MHz SPI、UART 支持 1 线模式、OTA、USB 2.0 全速设备 (无须外挂晶振)、安全程序 ROM

Part No.	System						Memory				Timer				Analog		Connectivity										Security	Package		Status	Tool	
	Operating Frequency (MHz)	Operating Voltage (min) (V)	Operating Voltage (max) (V)	Operating Temperature (min) (°C)	Operating Temperature (max) (°C)	GPIO	LDROM Flash (KB)	APROM Flash (KB)	SRAM (KB)	PDMA (ch)	Timer (32-bit)	PWM (16-bit)	BPWM (16-bit)	RTC	ADC (12-bit)	ACMP	UART	QSPI	I²C	SMBUS (Supported by I2C)	USCI	SPI/ PS	USB FS Device	USB FS Device Crystal-less	EBI	SPROM (Byte)	Package Type	Package Size	Mass Production	EVB	MP Programmer
M032EC1AE	48	1.8	3.6	-40	105	19	2	32	4	2	2	-	6	-	9	-	1	-	-	-	1	1	1	√	-	512	TSSOP28	4.4x9.7	√	NK-M032TC	NLG-28E
M032FC1AE	48	1.8	3.6	-40	105	11	2	32	4	2	2	-	6	-	3	-	1	-	-	-	1	1	1	√	-	512	TSSOP20	4.4x6.5	√	NK-M032TC	NLG-20F
M032KG6AE	72	1.8	3.6	-40	105	107	4	256	32	4	4	12	12	√	16	2	6	1	2	1	2	1	1	√	√	2048	LQFP128	14x14	√	NK-M032KG	NLG-128KX
M032KG8AE	72	1.8	3.6	-40	105	107	4	256	64	4	4	12	12	√	16	2	6	1	2	1	2	1	1	√	√	2048	LQFP128	14x14	√	NK-M032KG	NLG-128KX
M032KIAAE	72	1.8	3.6	-40	105	107	8	512	96	8	4	12	12	√	16	2	8	1	2	1	2	1	1	√	√	2048	LQFP128	14x14	√	NK-M032KI	NLG-128KX
M032LC2AE	48	1.8	3.6	-40	105	38	2	32	8	2	4	-	12	-	12	-	1	1	-	-	2	1	1	√	-	512	LQFP48	7x7	√	NK-M032LD	NLG-48L
M032LD2AE	48	1.8	3.6	-40	105	38	2	64	8	2	4	-	12	-	12	-	1	1	-	-	2	1	1	√	-	512	LQFP48	7x7	√	NK-M032LD	NLG-48L
M032LE3AE	48	1.8	3.6	-40	105	38	4	128	16	4	4	12	-	-	12	2	3	-	2	0	1	1	1	√	√	512	LQFP48	7x7	√	NK-M032SE	NLG-48L
M032LG6AE	72	1.8	3.6	-40	105	38	4	256	32	4	4	12	12	√	12	2	6	1	2	1	2	1	1	√	√	2048	LQFP48	7x7	√	NK-M032KG	NLG-48L
M032LG8AE	72	1.8	3.6	-40	105	38	4	256	64	4	4	12	12	√	12	2	6	1	2	1	2	1	1	√	√	2048	LQFP48	7x7	√	NK-M032KG	NLG-48L
M032SE3AE	48	1.8	3.6	-40	105	51	4	128	16	4	4	12	-	-	16	2	3	-	2	0	1	1	1	√	√	512	LQFP64	7x7	√	NK-M032SE	NLG-64S
M032SG6AE	72	1.8	3.6	-40	105	51	4	256	32	4	4	12	12	√	16	2	6	1	2	1	2	1	1	√	√	2048	LQFP64	7x7	√	NK-M032KG	NLG-64S
M032SG8AE	72	1.8	3.6	-40	105	51	4	256	64	4	4	12	12	√	16	2	6	1	2	1	2	1	1	√	√	2048	LQFP64	7x7	√	NK-M032KG	NLG-64S
M032SIAAE	72	1.8	3.6	-40	105	51	8	512	96	8	4	12	12	√	16	2	8	1	2	1	2	1	1	√	√	2048	LQFP64	7x7	√	NK-M032KI	NLG-64S
M032TC1AE	48	1.8	3.6	-40	105	23	2	32	4	2	2	-	6	-	10	-	1	-	-	-	1	1	1	√	-	512	QFN33	4x4	√	NK-M032TC	NLG-32T
M032TD2AE	48	1.8	3.6	-40	105	23	2	64	8	2	4	-	12	-	10	-	1	1	-	-	2	1	1	√	-	512	QFN33	4x4	√	NK-M032LD	NLG-32T

M031BT 系列

NuMicro® M031BT 系列嵌入式基於 Arm® Cortex®-M0 内核，并内置低功耗蓝牙 5.0（BLE 5.0），专为 1.8V ～ 3.6V 工业应用而设计。 配备高性能和丰富的外围设备，例如 2 Msps ADC，高达 96 MHz 的 PWM。 内置 64/128 KB 闪存，8/16 KB SRAM。

应用领域：IoT 边缘设备、无线医疗保健装置、智能家电、双模電競键盘 / 鼠标、資產追踪设备等。

• M031BT 系列

关键特性：低功耗蓝牙 5.0 (BLE 5.0)、96 MHz PWM、2 Msps ADC、24 MHz SPI、支持单管脚 UART 串口、SPROM (Security Protection ROM)。

Part No.	System						Memory				Timer					Analog		Connectivity						Security	Wireless	Package		Status	Tool	
	Operating Frequency (MHz)	Operating Voltage (min) (V)	Operating Voltage (max) (V)	Operating Temperature (min) (°C)	Operating Temperature (max) (°C)	GPIO	LDROM Flash (KB)	APROM Flash (KB)	Data Flash (KB)	PDMA (ch)	WDT	Timer (32-bit)	PWM (16-bit)	BPWM (16-bit)	RTC	ADC (12-bit)	ACMP	UART	QSPI	SMBUS (Supported by I2C)	USCI	USB FS Device	USB FS Device Crystal-less	SPROM (Byte)	BLE	Package Type	Package Size	Mass Production	EVB	MP Programmer
M031BTYD2AN	48	1.8	3.6	-40	85	29	2	64	Configurable	5	√	4	12	-	-	16	2	3	-	0	1	-	-	512	√	QFN48	5x5	√	NK-M031BTYE	NLG-M031BTY
M031BTYE3AN	48	1.8	3.6	-40	85	29	4	128	Configurable	5	√	4	12	-	-	16	2	3	-	0	1	-	-	512	√	QFN48	5x5	√	NK-M031BTYE	NLG-M031BTY

M032BT 系列

NuMicro® M031BT 系列嵌入式基于 Arm® Cortex®-M0 内核，并内置低功耗蓝牙 5.0（BLE 5.0），专为 1.8V ～ 3.6V 工业应用而设计。 配备高性能和丰富的外围设备，例如 2 Msps ADC，高达 144 MHz 的 PWM。 内置 256/512 KB 闪存，64/96 KB SRAM。

用领域：智能马达控制、 IoT 边缘设备、无线医疗保健装置、智能家电、资产追踪设备等。

• M032BT 系列

关键特性：低功耗蓝牙 5.0 (BLE 5.0)、144 MHz PWM、2 Msps ADC、OTA, USB 2.0 全速设备（无须外挂晶振）。

Part No.	System						Memory				Timer					Analog		Connectivity						Security	Wireless	Package		Status	Tool	
	Operating Frequency (MHz)	Operating Voltage (min) (V)	Operating Voltage (max) (V)	Operating Temperature (min) (°C)	Operating Temperature (max) (°C)	GPIO	LDROM Flash (KB)	APROM Flash (KB)	Data Flash (KB)	PDMA (ch)	WDT	Timer (32-bit)	PWM (16-bit)	BPWM (16-bit)	RTC	ADC (12-bit)	ACMP	UART	QSPI	SMBUS (Supported by I2C)	USCI	USB FS Device	USB FS Device Crystal-less	SPROM (Byte)	BLE	Package Type	Package Size	Mass Production	EVB	MP Programmer
M032BTAG8AN	72	1.8	3.6	-40	85	43	4	256	Configurable	7	√	4	12	12	v	16	2	6	1	1	2	1	v	2048	√	QFN68	8x8	√	NK-M032BTAI	NLG-M032BTA
M032BTAIAAN	72	1.8	3.6	-40	85	43	8	512	Configurable	9	√	4	12	12	v	16	2	8	1	1	2	1	v	2048	√	QFN68	8x8	√	NK-M032BTAI	NLG-M032BTA

M071 系列

NuMicro® M071 微控制器是基于 Arm®Cortex®-M0 的 32 位微控制器，设计用于针距为 0.65 / 0.8mm 的家电应用。 该系列提供 16 至 256 KB 闪存，8 至 20 KB SRAM，丰富的通信接口（例如 USB，UART，SPI，I²C 等），并带有 ADC，比较器和其他丰富的模拟接口。

应用领域：家用电器，电机控制，白色家电，工业控制

• M071 系列

关键特性：硬件除法器、VAI、RTC、EBI、PDMA

Part No.	System						Memory				Timer				Analog			Connectivity										Security	Package		Status	Tool	
	Operating Frequency (MHz)	Operating Voltage (min) (V)	Operating Voltage (max) (V)	Operating Temperature (min) (°C)	Operating Temperature (max) (°C)	GPIO	LDROM Flash (KB)	APROM Flash (KB)	SRAM (KB)	PDMA (ch)	Timer (32-bit)	Timer/ PWM	PWM (16-bit)	RTC	ADC (12-bit)	ACMP	Internal Voltage Reference	UART	LIN	ISO-7816-3	SPI	I²C	USCI	SPI/ I²S	USB FS Device	USB FS Device Crystal-less	EBI	SPROM (Byte)	Package Type	Package Size	Mass Production	EVB	MP Programmer
M071MC2AE	50	2.5	5.5	-40	105	38	4	36	8	-	4	-	12	-	8	-	-	4	3	-	1	1	-	-	-	-	-	-	LQFP44	10x10	√	NK-M071MD	NLG-M071M
M071MD2AE	50	2.5	5.5	-40	105	38	4	68	8	-	4	-	12	-	8	-	-	4	3	-	1	1	-	-	-	-	-	-	LQFP44	10x10	√	NK-M071MD	NLG-M071M
M071QE4AE	72	2.5	5.5	-40	105	67	4	128	20	5	-	4	12	√	17	2	√	3	3	2	-	2	3	2	1	√	√	2048	LQFP80	14x14	√	NK-M071VG	NLG-M071Q
M071QG4AE	72	2.5	5.5	-40	105	67	4	256	20	5	-	4	12	√	17	2	√	3	3	2	-	2	3	2	1	√	√	2048	LQFP80	14x14	√	NK-M071VG	NLG-M071Q
M071R1D3AE	72	2.5	5.5	-40	105	45	8	64	16	9	4	-	6	√	12	-	-	3	3	-	2	2	-	-	1	√	√	-	LQFP64	14x14	√	NK-M071R1E	NLG-M071R1
M071R1E3AE	72	2.5	5.5	-40	105	45	8	128	16	9	4	-	6	√	12	-	-	3	3	-	2	2	-	-	1	√	√	-	LQFP64	14x14	√	NK-M071R1E	NLG-M071R1
M071SD3AE	72	2.5	5.5	-40	105	45	8	64	16	9	4	-	6	√	12	-	-	3	3	-	2	2	-	-	1	√	√	-	LQFP64	7x7	√	NK-M071R1E	NLG-M071S
M071SE3AE	72	2.5	5.5	-40	105	45	8	128	16	9	4	-	6	√	12	-	-	3	3	-	2	2	-	-	1	√	√	-	LQFP64	7x7	√	NK-M071R1E	NLG-M071S
M071VG4AE	72	2.5	5.5	-40	105	85	4	256	20	5	-	4	12	√	20	2	√	3	3	2	-	2	3	2	1	√	√	2048	LQFP100	14x14	√	NK-M071VG	NLG-M071V

Mini51 系列

NuMicro® Mini51 系列基於 Arm® Cortex®-M0 内核，最高可运行至 50 MHz，具 4K ~ 32K 字节 Flash、2K/4K 字节 SRAM。NuMicro® Mini51 系列内嵌丰富 ADC、PWM 给不同的工业应用、支持低电压复位和欠压检测、96 位 UID 和 128 位 UCID。

应用领域：无线充电、家用电器、安全 / 报警、温度传感器、电机、工业控制等。

• Mini51 系列

关键特性：可编程之数据 Flash 区域、用于存储 ISP 引导代码的独立 2 K 字节独立 Flash

Part No.	System						Memory			Timer				Analog					Connectivity				Security	Package		Status	Tool	
	Operating Frequency (MHz)	Operating Voltage (min) (V)	Operating Voltage (max) (V)	Operating Temperature (min) (°C)	Operating Temperature (max) (°C)	GPIO	LDROM Flash (KB)	APROM Flash (KB)	SRAM (KB)	Timer (32-bit)	PWM (16-bit)	BPWM (16-bit)	ECAP	ADC (10-bit)	ADC (12-bit)	ACMP	PGA	Internal Voltage Reference	UART	SPI	I²C	USCI	SPROM (Byte)	Package Type	Package Size	Mass Production	EVB	MP Programmer
MINI51FDE	24	2.5	5.5	-40	105	17	2	4	2	2	3	-	-	4	-	-	-	-	1	1	1	-	-	TSSOP20	4.4x6.5	√	NT-Mini51F	NLG-Mini51F
MINI51LDE	24	2.5	5.5	-40	105	30	2	4	2	2	6	-	-	8	-	2	-	-	1	1	1	-	-	LQFP48	7x7	√	NT-Mini51L	NLG-Mini51L
MINI51TDE	24	2.5	5.5	-40	105	29	2	4	2	2	6	-	-	8	-	2	-	-	1	1	1	-	-	QFN33	4x4	√	NT-Mini51L	NLG-Mini51T
MINI51ZDE	24	2.5	5.5	-40	105	29	2	4	2	2	6	-	-	8	-	2	-	-	1	1	1	-	-	QFN33	5x5	√	NT-Mini51L	NLG-Mini51Z

• Mini55 系列

关键特性：支持硬件除法器

Part No.	System						Memory			Timer				Analog					Connectivity				Security	Package		Status	Tool	
	Operating Frequency (MHz)	Operating Voltage (min) (V)	Operating Voltage (max) (V)	Operating Temperature (min) (°C)	Operating Temperature (max) (°C)	GPIO	LDROM Flash (KB)	APROM Flash (KB)	SRAM (KB)	Timer (32-bit)	PWM (16-bit)	BPWM (16-bit)	ECAP	ADC (10-bit)	ADC (12-bit)	ACMP	PGA	Internal Voltage Reference	UART	SPI	I²C	USCI	SPROM (Byte)	Package Type	Package Size	Mass Production	EVB	MP Programmer
MINI52FDE	24	2.5	5.5	-40	105	17	2	8	2	2	3	-	-	4	-	-	-	-	1	1	1	-	-	TSSOP20	4.4x6.5	√	NT-Mini51F	NLG-Mini51F
MINI52LDE	24	2.5	5.5	-40	105	30	2	8	2	2	6	-	-	8	-	2	-	√	1	1	1	-	-	LQFP48	7x7	√	NT-Mini51L	NLG-Mini51L
MINI52TDE	24	2.5	5.5	-40	105	29	2	8	2	2	6	-	-	8	-	2	-	-	1	1	1	-	-	QFN33	4x4	√	NT-Mini51L	NLG-Mini51T
MINI52ZDE	24	2.5	5.5	-40	105	29	2	8	2	2	6	-	-	8	-	2	-	-	1	1	1	-	-	QFN33	5x5	√	NT-Mini51L	NLG-Mini51Z

• Mini57 系列

关键特性：2 組采样保持 ADC、可编程增益放大器

Part No.	System						Memory			Timer				Analog					Connectivity				Security	Package		Status	Tool	
	Operating Frequency (MHz)	Operating Voltage (min) (V)	Operating Voltage (max) (V)	Operating Temperature (min) (°C)	Operating Temperature (max) (°C)	GPIO	LDROM Flash (KB)	APROM Flash (KB)	SRAM(KB)	Timer (32-bit)	PWM (16-bit)	BPWM (16-bit)	ECAP	ADC (10-bit)	ADC (12-bit)	ACMP	PGA	Internal Voltage Reference	UART	SPI	I²C	USCI	SPROM (Byte)	Package Type	Package Size	Mass Production	EVB	MP Programmer
MINI54FDE	24	2.5	5.5	-40	105	17	2	16	2	2	3	-	-	4	-	-	-	√	1	1	1	-	-	TSSOP20	4.4x6.5	√	NT-Mini51F	NLG-Mini51F
MINI54LDE	24	2.5	5.5	-40	105	30	2	16	2	2	6	-	-	8	-	2	-	√	1	1	1	-	-	LQFP48	7x7	√	NT-Mini51L	NLG-Mini51L
MINI54TDE	24	2.5	5.5	-40	105	29	2	16	2	2	6	-	-	8	-	2	-	√	1	1	1	-	-	QFN33	4x4	√	NT-Mini51L	NLG-Mini51T
MINI54ZDE	24	2.5	5.5	-40	105	29	2	16	2	2	6	-	-	8	-	2	-	√	1	1	1	-	-	QFN33	5x5	√	NT-Mini51L	NLG-Mini51Z

• Mini58 系列

关键特性：可配置数据 Flash

Part No.	System						Memory			Timer				Analog					Connectivity				Security	Package		Status	Tool	
	Operating Frequency (MHz)	Operating Voltage (min) (V)	Operating Voltage (max) (V)	Operating Temperature (min) (°C)	Operating Temperature (max) (°C)	GPIO	LDROM Flash (KB)	APROM Flash (KB)	SRAM (KB)	Timer (32-bit)	PWM (16-bit)	BPWM (16-bit)	ECAP	ADC (10-bit)	ADC (12-bit)	ACMP	PGA	Internal Voltage Reference	UART	SPI	I²C	USCI	SPROM (Byte)	Package Type	Package Size	Mass Production	EVB	MP Programmer
MINI55LDE	48	2.1	5.5	-40	105	33	2	17.5	2	2	6	-	-	12	-	2	-	√	2	1	1	-	-	LQFP48	7x7	√	NT-Mini55L	NLG-Mini51L
MINI55TDE	48	2.1	5.5	-40	105	29	2	17.5	2	2	6	-	-	12	-	2	-	√	2	1	1	-	-	QFN33	4x4	√	NT-Mini55L	NLG-Mini51T

M051 系列

NuMicro® M051 系列基於 Arm® Cortex®-M0 内核，内嵌丰富資源與外设，如：8K ~ 256K 字节 Flash、4K ~ 20K 字节 SRAM、用于存储 ISP 引导代码的独立 4K / 8K 字节 Flash，最高支持 20 路 ADC 以及 24 路 PWM。支持低电压复位和欠压检测、96 位 UID 與 128 位 UCID 等功能。

应用领域：工业控制、安全 / 报警、温度传感器、电机等

• M051 系列

关键特性：4 K 字节数据闪存、支持硬件除法器、支持 4 组比较器

Part No.	System						Memory				Timer				Analog		Connectivity					Package		Status	Tool	
	Operating Frequency (MHz)	Operating Voltage (min) (V)	Operating Voltage (max) (V)	Operating Temperature (min) (°C)	Operating Temperature (max) (°C)	GPIO	LDROM Flash (KB)	APROM Flash (KB)	Data Flash (KB)	SRAM (KB)	WDT	WWDT	Timer (32-bit)	PWM (16-bit)	ADC (12-bit)	ACMP	UART	LIN	SPI	I²C	EBI	Package Type	Package Size	Mass Production	EVB	MP Programmer
M052LBN	50	2.5	5.5	-40	85	40	4	8	4	4	√	-	4	8	8	2	2	2	2	1	√	LQFP48	7x7	√	NT-M051L	NLG-M051L
M052LDE	50	2.5	5.5	-40	105	40	4	8	4	4	√	√	4	8	8	4	2	2	2	2	√	LQFP48	7x7	√	NT-M051L	NLG-M051L
M052LDN	50	2.5	5.5	-40	85	40	4	8	4	4	√	√	4	8	8	4	2	2	2	2	√	LQFP48	7x7	√	NT-M051L	NLG-M051L
M052ZBN	50	2.5	5.5	-40	85	24	4	8	4	4	√	-	4	5	5	2	2	2	1	1	-	QFN33	5X5	√	NT-M051L	NLG-M051Z
M052ZDE	50	2.5	5.5	-40	105	24	4	8	4	4	√	√	4	5	5	4	2	2	1	2	-	QFN33	5X5	√	NT-M051L	NLG-M051Z
M052ZDN	50	2.5	5.5	-40	85	24	4	8	4	4	√	√	4	5	5	4	2	2	1	2	-	QFN33	5X5	√	NT-M051L	NLG-M051Z
M054LBN	50	2.5	5.5	-40	85	40	4	16	4	4	√	-	4	8	8	2	2	2	2	1	√	LQFP48	7x7	√	NT-M051L	NLG-M051L
M054LDE	50	2.5	5.5	-40	105	40	4	16	4	4	√	√	4	8	8	4	2	2	2	2	√	LQFP48	7x7	√	NT-M051L	NLG-M051L
M054LDN	50	2.5	5.5	-40	85	40	4	16	4	4	√	√	4	8	8	4	2	2	2	2	√	LQFP48	7x7	√	NT-M051L	NLG-M051L
M054ZBN	50	2.5	5.5	-40	85	24	4	16	4	4	√	-	4	5	5	2	2	2	1	1	-	QFN33	5X5	√	NT-M051L	NLG-M051Z
M054ZDE	50	2.5	5.5	-40	105	24	4	16	4	4	√	√	4	5	5	4	2	2	1	2	-	QFN33	5X5	√	NT-M051L	NLG-M051Z
M054ZDN	50	2.5	5.5	-40	85	24	4	16	4	4	√	√	4	5	5	4	2	2	1	2	-	QFN33	5X5	√	NT-M051L	NLG-M051Z
M058LBN	50	2.5	5.5	-40	85	40	4	32	4	4	√	-	4	8	8	2	2	2	2	1	√	LQFP48	7x7	√	NT-M051L	NLG-M051L
M058LDE	50	2.5	5.5	-40	105	40	4	32	4	4	√	√	4	8	8	4	2	2	2	2	√	LQFP48	7x7	√	NT-M051L	NLG-M051L
M058LDN	50	2.5	5.5	-40	85	40	4	32	4	4	√	√	4	8	8	4	2	2	2	2	√	LQFP48	7x7	√	NT-M051L	NLG-M051L
M058ZBN	50	2.5	5.5	-40	85	24	4	32	4	4	√	-	4	5	5	2	2	2	1	1	-	QFN33	5X5	√	NT-M051L	NLG-M051Z
M058ZDE	50	2.5	5.5	-40	105	24	4	32	4	4	√	√	4	5	5	4	2	2	1	2	-	QFN33	5X5	√	NT-M051L	NLG-M051Z
M058ZDN	50	2.5	5.5	-40	85	24	4	32	4	4	√	√	4	5	5	4	2	2	1	2	-	QFN33	5X5	√	NT-M051L	NLG-M051Z
M0516LBN	50	2.5	5.5	-40	85	40	4	64	4	4	√	-	4	8	8	2	2	2	2	1	√	LQFP48	7x7	√	NT-M051L	NLG-M051L
M0516LDE	50	2.5	5.5	-40	105	40	4	64	4	4	√	√	4	8	8	4	2	2	2	2	√	LQFP48	7x7	√	NT-M051L	NLG-M051L
M0516LDN	50	2.5	5.5	-40	85	40	4	64	4	4	√	√	4	8	8	4	2	2	2	2	√	LQFP48	7x7	√	NT-M051L	NLG-M051L
M0516ZBN	50	2.5	5.5	-40	85	24	4	64	4	4	√	-	4	5	5	2	2	2	1	1	-	QFN33	5X5	√	NT-M051L	NLG-M051Z
M0516ZDE	50	2.5	5.5	-40	105	24	4	64	4	4	√	√	4	5	5	4	2	2	1	2	-	QFN33	5X5	√	NT-M051L	NLG-M051Z
M0516ZDN	50	2.5	5.5	-40	85	24	4	64	4	4	v	√	4	5	5	4	2	2	1	2	-	QFN33	5X5	√	NT-M051L	NLG-M051Z

• M0518 系列

关键特性：可配置数据闪存、支持 6 组 UART 比较器、支持 24 路高達 100 MHz PWM

Part No.	System						Memory					Timer						Analog	Connectivity			Package		Status	Tool	
	Operating Frequency (MHz)	Operating Voltage (min) (V)	Operating Voltage (max) (V)	Operating Temperature (min) (°C)	Operating Temperature (max) (°C)	GPIO	LDROM Flash (KB)	APROM Flash (KB)	Data Flash (KB)	SRAM (KB)	PDMA (ch)	WDT	WWDT	Timer (32-bit)	PWM (16-bit)	BPWM (16-bit)	ADC (12-bit)	UART	SPI	I²C	Package Type	Package Size	Mass Production	EVB	MP Programmer
M0518LC2AE	50	2.5	5.5	-40	105	42	4	36	Configurable	8	-	√	√	4	12	12	8	6	1	2	LQFP48	7x7	√	NT-M0518S	NLG-M0518L
M0518LD2AE	50	2.5	5.5	-40	105	42	4	68	Configurable	8	-	√	√	4	12	12	8	6	1	2	LQFP48	7x7	√	NT-M0518S	NLG-M0518L
M0518SC2AE	50	2.5	5.5	-40	105	56	4	36	Configurable	8	-	√	√	4	12	12	8	6	1	2	LQFP64	7x7	√	NT-M0518S	NLG-M0518S
M0518SD2AE	50	2.5	5.5	-40	105	56	4	68	Configurable	8	-	√	√	4	12	12	8	6	1	2	LQFP64	7x7	√	NT-M0518S	NLG-M0518S

• M0519 系列

关键特性：支持硬件除法器、2 组独立 ADC、2 组 OPA、3 组比较器

Part No.	System						Memory				Timer						Analog		Connectivity				Package		Status	Tool	
	Operating Frequency (MHz)	Operating Voltage (min) (V)	Operating Voltage (max) (V)	Operating Temperature (min) (°C)	Operating Temperature (max) (°C)	GPIO	LDROM Flash (KB)	APROM Flash (KB)	Data Flash (KB)	SRAM (KB)	WDT	WWDT	Timer (32-bit)	BPWM (16-bit)	EPWM (16-bit)	ECAP	ADC (12-bit)	ACMP	UART	LIN	SPI	I²C	Package Type	Package Size	Mass Production	EVB	MP Programmer
M0519LD3AE	72	2.5	5.5	-40	105	38	8	64	4	16	√	√	4	2	4	-	16	2	2	2	1	1	LQFP48	7X7	√	NT-M0519V	NLG-M0519L
M0519LE3AE	72	2.5	5.5	-40	105	38	8	128	Configurable	16	√	√	4	2	4	-	16	2	2	2	1	1	LQFP48	7X7	√	NT-M0519V	NLG-M0519L
M0519SD3AE	72	2.5	5.5	-40	105	51	8	64	4	16	√	√	4	2	8	-	16	2	2	2	2	1	LQFP64	7X7	√	NT-M0519V	NLG-M0519S
M0519SE3AE	72	2.5	5.5	-40	105	51	8	128	Configurable	16	√	√	4	2	8	-	16	2	2	2	2	1	LQFP64	7X7	√	NT-M0519V	NLG-M0519S
M0519VE3AE	72	2.5	5.5	-40	105	82	8	128	Configurable	16	√	√	4	2	12	6	16	3	2	2	3	1	LQFP100	14X14	√	NT-M0519V	NLG-M0519V

• M0564 系列

关键特性：可配置 Flash 内存、支持硬件除法器、支持 8 组 UART、高達 144 MHz PWM、800 kSPS ADC

Part No.	System						Memory					Timer					Analog		Connectivity						Security	Package		Status	Tool	
	Operating Frequency (MHz)	Operating Voltage (min) (V)	Operating Voltage (max) (V)	Operating Temperature (min) (°C)	Operating Temperature (max) (°C)	GPIO	LDROM Flash (KB)	APROM Flash (KB)	Data Flash (KB)	SRAM (KB)	PDMA (ch)	WDT	WWDT	Timer/ PWM	PWM (16-bit)	RTC	ADC (12-bit)	ACMP	UART	ISO-7816-3	I²C	USCI	SPI/ I²S	EBI	SPROM (Byte)	Package Type	Package Size	Mass Production	EVB	MP Programmer
M0564LE4AE	72	2.5	5.5	-40	105	41	4	128	Configurable	20	5	√	√	4	12	√	10	2	3	2	2	3	2	√	2048	LQFP48	7x7	√	NT-M0564V	NLG-M0564L
M0564LG4AE	72	2.5	5.5	-40	105	41	4	128	Configurable	20	5	√	√	4	12	√	10	2	3	2	2	3	2	√	2048	LQFP48	7x7	√	NT-M0564V	NLG-M0564L
M0564SE4AE	72	2.5	5.5	-40	105	53	4	256	Configurable	20	5	√	√	4	12	√	15	2	3	2	2	3	2	√	2048	LQFP64	7x7	√	NT-M0564V	NLG-M0564S
M0564SG4AE	72	2.5	5.5	-40	105	53	4	128	Configurable	20	5	√	√	4	12	√	15	2	3	2	2	3	2	√	2048	LQFP64	7x7	√	NT-M0564V	NLG-M0564S
M0564VG4AE	72	2.5	5.5	-40	105	85	4	256	Configurable	20	5	√	√	4	12	√	20	2	3	2	2	3	2	√	2048	LQF100	14X14	√	NT-M0564V	NLG-M0564V

NUC029 系列

NuMicro® NUC029 系列是为工业应用而设计的，拥有强大的抗干扰 EFT 特性，基於 Arm® Cortex®-M0 内核，5V 工作电压。NUC029 系列提供 16 ~ 256 K 字节 Flash，2 ~ 20 K 字节 SRAM，内嵌高效能外设，如：12 位 ADC、UART、PWM、SPI、I²C 等。个别型号支持硬件除法器、比较器、无须外挂晶振，直接支持 USB 2.0 全速设备。

应用领域：工业控制、高精度仪表、人机界面、电机控制、通信系统等。

• NUC029 系列

关键特性：5V 工业控制、高抗干扰 (EFT 4.4 kV，ESD HBM 8 kV)

Part No.	System						Memory					Timer					Analog		Connectivity							Security	Package		Status	Tool	
	Operating Frequency (MHz)	Operating Voltage (min)	Operating Voltage (max)	Operating Temperature (min)	Operating Temperature (max)	GPIO	LDROM Flash (KB)	APROM Flash (KB)	Data Flash (KB)	SRAM (KB)	PDMA (ch)	Timer/ PWM	PWM (16-bit)	RTC	ADC (12-bit)	ACMP	ACMP	UART	SPI	I²C	USCI	SPI/ I²S	USB FS Device	USB FS Device Crystal-less	EBI	SPROM (Byte)	Package Type	Package Size	Mass Production	EVB	MP Programmer
NUC029FAE	24	2.5	5.5	-40	105	17	2	16	Configurable	2	-	2	3	-	4	-	2	1	1	-	-	-	-	-	√	-	TSSOP20	4.4x6.5	√	NT-NUC029F	NLG-NUC029FA
NUC029KGE	72	2.5	5.5	-40	105	86	4	256	Configurable	20	5	4	12	√	-	20	2	3	-	2	3	2	1	√	√	2048	LQFP128	14x14	√	NT-NUC029SG	NLG-NUC029KG
NUC029LAN	50	2.5	5.5	-40	85	40	4	64	4	4	-	4	8	-	-	8	4	2	2	-	-	-	-	-	√	-	LQFP48	7x7	√	NT-NUC029L	NLG-NUC029LD
NUC029LDE	50	2.5	5.5	-40	105	42	4	68	Configurable	20	-	4	12	-	-	8	-	4	1	-	-	-	-	-	-	-	LQFP48	7x7	√	NT-NUC029SD	NLG-NUC029LD
NUC029LEE	72	2.5	5.5	-40	105	31	8	128	Configurable	16	9	4	4	√	-	10	-	2	1	-	-	-	1	√	√	-	LQFP48	7x7	√	NT-NUC029SE	NLG-NUC029LE
NUC029LGE	72	2.5	5.5	-40	105	35	4	256	Configurable	20	5	4	10	√	-	9	2	3	-	2	3	2	1	√	√	2048	LQFP48	7x7	√	NT-NUC029SG	NLG-NUC029LG
NUC029NAN	50	2.5	5.5	-40	85	40	4	64	4	4	-	4	8	-	-	8	4	2	2	-	-	-	-	-	√	-	QFN48	7x7	√	NT-NUC029L	NLG-NUC029NA
NUC029SDE	50	2.5	5.5	-40	105	56	4	68	Configurable	20	-	4	12	-	-	8	-	4	1	-	-	-	-	-	-	-	LQFP64	7x7	√	NT-NUC029SD	NLG-NUC029SD
NUC029SEE	72	2.5	5.5	-40	105	45	8	128	Configurable	16	9	4	6	√	-	12	-	3	2	-	-	-	1	√	√	-	LQFP64	7x7	√	NT-NUC029SE	NLG-NUC029SE
NUC029SGE	72	2.5	5.5	-40	105	49	4	256	Configurable	20	5	4	12	√	-	15	2	3	-	2	3	2	1	√	√	2048	LQFP64	7x7	√	NT-NUC029SG	NLG-NUC029SG
NUC029TAN	50	2.5	5.5	-40	85	24	4	32	4	4	-	4	5	-	-	5	3	2	1	-	-	-	-	-	√	-	QFN33	4x4	√	NT-NUC029L	NLG-NUC029TA
NUC029ZAN	50	2.5	5.5	-40	85	24	4	64	4	4	-	4	5	-	-	5	3	2	1	-	-	-	-	-	√	-	QFN33	5x5	√	NT-NUC029L	NLG-NUC029ZA

NUC121 系列

NuMicro® NUC121 系列基於 Arm® Cortex®-M0 内核，具 32 ~ 256 K 字节 Flash、8 ~ 20 K 字节 SRAM、4 K 字节 独立 Flash 作为在线系统编程 (In-System Programming) 用途。本系列支持 USB 接口，内建 48 MHz 高速振荡器而无须外挂晶振（不包含 NUC123），最高支持 24 路 PWM 和 20 路 ADC。

关键特性：大于 4 K 字节独立 Flash 作为在线系统编程 (In-System Programming) 用途；支持 USB2.0 全速设备，无须外部晶振 (NUC123 不支持无须外部晶振的功能)。NUC125 / 126 支持电压调整接口 (VAI)，有獨立的 V_{DDIO}，可支援 1.8V 至 5.5V 电压范围，弹性满足不同接口電壓的需求。

应用领域：USB 复合设备、电竞鼠标、电竞键盘、USB 耳机、工业控制、物联网设备等。

• NUC121 系列

Part No.	System						Memory					Timer						Analog	Connectivity							Security	Package		Status	Tool	
	Operating Frequency (MHz)	Operating Voltage (min)	Operating Voltage (max)	Operating Temperature (min)	Operating Temperature (max)	GPIO	LDROM Flash (KB)	APROM Flash (KB)	Data Flash (KB)	SRAM (KB)	PDMA (ch)	WDT	WWDT	Timer (32-bit)	PWM (16-bit)	BPWM (16-bit)	ADC (12-bit)	UART	LIN	I²C	USCI	SPI/ I²S	USB FS Device	USB FS Device Crystal-less	SPROM (Byte)	Package Type	Package Size	Mass Production	EVB	MP Programmer
NUC121LC2AE	50	2.5	5.5	-40	105	38	4.5	32	Configurable	8	5	√	√	4	24	14	10	1	1	2	1	1	1	√	512	LQFP48	7x7	√	NT-NUC121S	NLG-NUC121L
NUC121SC2AE	50	2.5	5.5	-40	105	52	4.5	32	Configurable	8	5	√	√	4	24	17	12	1	1	2	1	1	1	√	512	LQFP64	7x7	√	NT-NUC121S	NLG-NUC121S
NUC121ZC2AE	50	2.5	5.5	-40	105	22	4.5	32	Configurable	8	5	√	√	4	17	7	4	1	1	2	1	1	1	√	512	QFN33	5x5	√	NT-NUC121S	NLG-NUC121Z

• NUC125 系列

关键特性：电压调整接口 (VAI) 支援 1.8V 至 5.5V 电压范围、最高支持 12 路 ADC

Part No.	System						Memory					Timer						Analog	Connectivity							Security	Package		Status	Tool	
	Operating Frequency (MHz)	Operating Voltage (min) (V)	Operating Voltage (max) (V)	Operating Temperature (min) (°C)	Operating Temperature (max) (°C)	GPIO	LDROM Flash (KB)	APROM Flash (KB)	Data Flash (KB)	SRAM (KB)	PDMA (ch)	WDT	WWDT	Timer (32-bit)	PWM (16-bit)	BPWM (16-bit)	ADC (12-bit)	UART	LIN	I²C	USCI	SPI/ I²S	USB FS Device	USB FS Device Crystal-less	SPROM (Byte)	Package Type	Package Size	Mass Production	EVB	MP Programmer
NUC125LC2AE	50	2.5	5.5	-40	105	37	4.5	32	Configurable	8	5	√	√	4	23	13	9	1	1	2	1	1	1	√	512	LQFP48	7x7	√	NT-NUC125S	NLG-NUC125L
NUC125SC2AE	50	2.5	5.5	-40	105	51	4.5	32	Configurable	8	5	√	√	4	23	16	11	1	1	2	1	1	1	√	512	LQFP64	7x7	√	NT-NUC125S	NLG-NUC125S
NUC125ZC2AE	50	2.5	5.5	-40	105	22	4.5	32	Configurable	8	5	√	√	4	17	7	4	1	1	2	1	1	1	√	512	QFN33	5x5	√	NT-NUC125S	NLG-NUC125Z

• NUC123 系列

Part No.	System						Memory					Timer				Analog	Connectivity						Package		Status	Tool	
	Operating Frequency (MHz)	Operating Voltage (min) (V)	Operating Voltage (max) (V)	Operating Temperature (min) (°C)	Operating Temperature (max) (°C)	GPIO	LDROM Flash (KB)	APROM Flash (KB)	Data Flash (KB)	SRAM (KB)	PDMA (ch)	WDT	WWDT	Timer (32-bit)	PWM (16-bit)	ADC (10-bit)	UART	SPI	I²C	I²S	PS/2 Device	USB FS Device	Package Type	Package Size	Mass Production	EVB	MP Programmer
NUC123LC2AE1	72	2.5	5.5	-40	105	36	4	36	Configurable	12	6	√	√	4	4	8	2	3	2	1	1	1	LQFP48	7x7	√	NK-NUC123SE	NLG-NUC123L
NUC123LC2AN1	72	2.5	5.5	-40	85	36	4	36	Configurable	12	6	√	√	4	4	8	2	3	2	1	1	1	LQFP48	7x7	√	NK-NUC123SE	NLG-NUC123L
NUC123LD4AE0	72	2.5	5.5	-40	105	36	4	68	Configurable	20	6	√	√	4	4	8	2	3	2	1	1	1	LQFP48	7x7	√	NK-NUC123SE	NLG-NUC123L
NUC123LD4AN0	72	2.5	5.5	-40	85	36	4	68	Configurable	20	6	√	√	4	4	8	2	3	2	1	1	1	LQFP48	7x7	√	NK-NUC123SE	NLG-NUC123L
NUC123SC2AE1	72	2.5	5.5	-40	105	47	4	36	Configurable	12	6	√	√	4	4	8	2	3	2	1	1	1	LQFP64	7x7	√	NK-NUC123SE	NLG-NUC123S
NUC123SC2AN1	72	2.5	5.5	-40	85	47	4	36	Configurable	12	6	√	√	4	4	8	2	3	2	1	1	1	LQFP64	7x7	√	NK-NUC123SE	NLG-NUC123S
NUC123SD4AE0	72	2.5	5.5	-40	105	47	4	68	Configurable	20	6	√	√	4	4	8	2	3	2	1	1	1	LQFP64	7x7	√	NK-NUC123SE	NLG-NUC123S
NUC123SD4AN0	72	2.5	5.5	-40	85	47	4	68	Configurable	20	6	√	√	4	4	8	2	3	2	1	1	1	LQFP64	7x7	√	NK-NUC123SE	NLG-NUC123S
NUC123ZC2AE1	72	2.5	5.5	-40	105	20	4	36	Configurable	12	6	√	√	4	3	3	1	3	1	1	-	1	QFN33	5x5	√	NK-NUC123SE	NLG-NUC123Z
NUC123ZC2AN1	72	2.5	5.5	-40	85	20	4	36	Configurable	12	6	√	√	4	2	3	1	3	1	1	-	1	QFN33	5x5	√	NK-NUC123SE	NLG-NUC123Z
NUC123ZD4AE0	72	2.5	5.5	-40	105	20	4	68	Configurable	20	6	√	√	4	3	3	1	3	1	1	-	1	QFN33	5x5	√	NK-NUC123SE	NLG-NUC123Z
NUC123ZD4AN0	72	2.5	5.5	-40	85	20	4	68	Configurable	20	6	√	√	4	2	3	1	3	1	1	-	1	QFN33	5x5	√	NK-NUC123SE	NLG-NUC123Z

• NUC126 系列

关键特性：最高支持 12 路 144 MHz PWM 、20 路 800 kSPS ADC 和硬件除法器

Part No.	System						Memory					Timer						Analog	Connectivity								Security	Package		Status	Tool	
	Operating Frequency (MHz)	Operating Voltage (min) (V)	Operating Voltage (max) (V)	Operating Temperature (min) (°C)	Operating Temperature (max) (°C)	GPIO	LDROM Flash (KB)	APROM Flash (KB)	Data Flash (KB)	SRAM (KB)	PDMA (ch)	WDT	WWDT	Timer/ PWM	PWM (16-bit)	RTC	BPWM (16-bit)	ADC (12-bit)	UART	ISO-7816-3	I²C	USCI	SPI/ I²S	USB FS Device	USB FS Device Crystal-less	EBI	SPROM (Byte)	Package Type	Package Size	Mass Production	EVB	MP Programmer
NUC126LE4AE	72	2.5	5.5	-40	105	35	4	128	Configurable	20	5	v	√	4	10	√	-	9	3	2	2	3	2	1	√	√	2048	LQFP48	7x7	√	NT-NUC126V	NLG-NUC126L
NUC126LG4AE	72	2.5	5.5	-40	105	49	4	256	Configurable	20	5	v	√	4	10	√	-	9	3	2	2	3	2	1	√	√	2048	LQFP48	7x7	√	NT-NUC126V	NLG-NUC126L
NUC126NE4AE	72	2.5	5.5	-40	105	35	4	128	Configurable	20	5	v	√	4	10	√	-	9	3	2	2	3	2	1	√	√	2048	QFN48	7x7	√	NT-NUC126V	NLG-NUC126N
NUC126SE4AE	72	2.5	5.5	-40	105	49	4	128	Configurable	20	5	v	√	4	12	√	-	15	3	2	2	3	2	1	√	√	2048	LQFP64	7x7	√	NT-NUC126V	NLG-NUC126S
NUC126SG4AE	72	2.5	5.5	-40	105	49	4	256	Configurable	20	5	v	√	4	12	√	-	15	3	2	2	3	2	1	√	√	2048	LQFP64	7x7	√	NT-NUC126V	NLG-NUC126S
NUC126VG4AE	72	2.5	5.5	-40	105	81	4	256	Configurable	20	5	v	√	4	12	√	-	20	3	2	2	3	2	1	√	√	2048	LQFP100	14x14	√	NT-NUC126V	NLG-NUC126V

• NUC1262 系列

关键特性：支持 10 路 LED 灯带接口 (LLSI) 、支持 24 路 72 MHz PWM、支持 9 路 50 mA 高灌电流、8 路 800 kSPS ADC、支持 10 路 PDMA

Part No.	System							Memory					Timer				Analog	Connectivity					Security	Package		Status	Tool	
	Core	Operating Frequency (MHz)	Operating Voltage (min) (V)	Operating Voltage (max) (V)	Operating Temperature (min) (°C)	Operating Temperature (max) (°C)	GPIO	LDROM Flash (KB)	APROM Flash (KB)	Data Flash (KB)	SRAM (KB)	PDMA (ch)	WDT	WWDT	Timer/ PWM	PWM (16-bit)	ADC (12-bit)	UART	I²C	SPI/ I²S	USB FS Device	USB FS Device Crystal-less	SPROM (Byte)	Package Type	Package Size	Mass Production	Evaluation Board (Ordering No.)	Mass Production Programmer
NUC1262LE4AE	Cortex-M23	72	2.5	5.5	-40	105	37	4	128	Configurable	20	10	√	√	4	24	8	2	2	2	1	√	2048	LQFP48	7x7	√	NK-NUC1262SE	NLG-NUC126L
NUC1262NE4AE	Cortex-M23	72	2.5	5.5	-40	105	37	4	128	Configurable	20	10	√	√	4	24	8	2	2	2	1	√	2048	QFN48	7x7	√	NK-NUC1262SE	NLG-NUC126N
NUC1262SE4AE	Cortex-M23	72	2.5	5.5	-40	105	50	4	128	Configurable	20	10	√	√	4	24	8	2	2	2	1	√	2048	LQFP64	7x7	√	NK-NUC1262SE	NLG-NUC126S

NUC131/ NUC230/ NUC240 CAN 系列

NuMicro® NUC131/230/240 CAN 总线系列，基於 Arm® Cortex®-M0 内核，具 32 ~ 128 K 字节闪存、4 ~ 16 K 字节 SRAM、4 K / 8 K 独立 Flash 字节作为在线系统编程 (In-System Programming) 用途；该系列是专门为 CAN 应用而设计的，并且还配备了各种通用丰富外设，如：LIN、USB 2.0 全速设备、 UART、 I²C、ADC、 比较器，支持低电压复位和欠压检测。

NUC131/ NUC230/ NUC240 CAN 系列	USB FS	LIN	CAN
NUC131		√	√
NUC230		√	√
NUC240	√	√	√

关键特性：支持 LIN 和多达 2 路 CAN 总线、4 K 字节数据 Flash 以及用于存储 ISP 引导代码的独立 4 K / 8 K 字节 Flash
应用领域：車用、安防系统、温度传感器、通信系统等。

• NUC131 系列

Part No.	System						Memory				Timer					Analog	Connectivity							Package		Status	Tool	
	Operating Frequency (MHz)	Operating Voltage (min) (V)	Operating Voltage (max) (V)	Operating Temperature (min) (°C)	Operating Temperature (max) (°C)	GPIO	LDROM Flash (KB)	APROM Flash (KB)	Data Flash (KB)	SRAM (KB)	WDT	WWDT	Timer (32-bit)	PWM (16-bit)	BPWM (16-bit)	ADC (12-bit)	UART	LIN	SPI	I²C	CAN	LPUART	ISO-7816-3	Package Type	Package Size	Mass Production	EVB	MP Programmer
NUC131LC2AE	50	2.5	5.5	-40	105	56	4	36	Configurable	8	√	√	4	12	12	8	6	3	1	2	1	-	-	LQFP 48	7x7	√	NK-NUC131	NLG-NUC131L
NUC131LD2AE	50	2.5	5.5	-40	105	56	4	68	Configurable	8	√	√	4	12	12	8	6	3	1	2	1	-	-	LQFP 48	7x7	√	NK-NUC131	NLG-NUC131L
NUC131SC2AE	50	2.5	5.5	-40	105	42	4	36	Configurable	8	√	√	4	12	12	8	6	3	1	2	1	-	-	LQFP 64	7x7	√	NK-NUC131	NLG-NUC131S
NUC131SD2AE	50	2.5	5.5	-40	105	42	4	68	Configurable	8	√	√	4	12	12	8	6	3	1	2	1	-	-	LQFP 64	7x7	√	NK-NUC131	NLG-NUC131S
NUC1311LC2AE	50	2.5	5.5	-40	105	42	4	36	Configurable	8	√	√	4	12	-	8	4	3	1	1	1	-	-	LQFP 48	7x7	√	NK-NUC1311	NLG-NUC1311
NUC1311LD2AE	50	2.5	5.5	-40	105	42	4	68	Configurable	8	√	√	4	12	-	8	4	3	1	1	1	-	-	LQFP 48	7x7	√	NK-NUC1311	NLG-NUC1311

• NUC230 系列

Part No.	System						Memory					Timer						Analog		Connectivity									Package		Status	Tool	
	Operating Frequency (MHz)	Operating Voltage (min) (V)	Operating Voltage (max) (V)	Operating Temperature (min) (°C)	Operating Temperature (max) (°C)	GPIO	LDROM Flash (KB)	APROM Flash (KB)	Data Flash (KB)	SRAM (KB)	PDMA (ch)	WDT	WWDT	Timer (32-bit)	PWM (16-bit)	RTC	ADC (12-bit)	ACMP	UART	LIN	ISO-7816-3	SPI	I²C	I²S	CAN	PS/2 Device	EBI	Package Type	Package Size	Mass Production	EVB	MP Programmer
NUC230LC2AE	72	2.5	5.5	-40	105	35	8	32	4	8	9	√	√	4	4	√	7	1	3	3	2	1	2	1	2	-	-	LQFP48	7x7	√	NT-NUC240V	NLG-NUC200L
NUC230LD2AE	72	2.5	5.5	-40	105	35	8	64	4	8	9	√	√	4	4	√	7	1	3	3	2	1	2	1	2	-	-	LQFP48	7x7	√	NT-NUC240V	NLG-NUC200L
NUC230LE3AE	72	2.5	5.5	-40	105	35	8	128	Configurable	16	9	√	√	4	4	√	7	1	3	3	2	1	2	1	2	-	-	LQFP48	7x7	√	NT-NUC240V	NLG-NUC200L
NUC230SC2AE	72	2.5	5.5	-40	105	49	8	32	4	8	9	√	√	4	6	√	7	2	3	3	2	2	2	1	2	-	√	LQFP64	7x7	√	NT-NUC240V	NLG-NUC200S
NUC230SD2AE	72	2.5	5.5	-40	105	49	8	64	4	8	9	√	√	4	6	√	7	2	3	3	2	2	2	1	2	-	√	LQFP64	7x7	√	NT-NUC240V	NLG-NUC200S
NUC230SE3AE	72	2.5	5.5	-40	105	49	8	128	Configurable	16	9	√	√	4	6	√	7	2	3	3	2	2	2	1	2	-	√	LQFP64	7x7	√	NT-NUC240V	NLG-NUC200S
NUC230VE3AE	72	2.5	5.5	-40	105	83	8	128	Configurable	16	9	√	√	4	8	√	8	2	3	3	3	4	2	1	2	1	√	LQFP100	14x14	√	NT-NUC240V	NLG-NUC200V

• NUC240 系列

Part No.	System						Memory					Timer					Analog		Connectivity										Package		Status	Tool	
	Operating Frequency (MHz)	Operating Voltage (min) (V)	Operating Voltage (max) (V)	Operating Temperature (min) (°C)	Operating Temperature (max) (°C)	GPIO	LDROM Flash (KB)	APROM Flash (KB)	Data Flash (KB)	SRAM (KB)	PDMA (ch)	WDT	WWDT	Timer (32-bit)	PWM (16-bit)	RTC	ADC (12-bit)	ACMP	UART	LIN	ISO-7816-3	SPI	I²C	I²S	CAN	PS/2 Device	USB FS Device	EBI	Package Type	Package Size	Mass Production	EVB	MP Programmer
NUC240LC2AE	72	2.5	5.5	-40	105	31	8	32	4	8	9	√	√	4	4	√	7	1	2	2	1	1	2	1	2	-	1	-	LQFP48	7x7	√	NT-NUC240V	NLG-NUC200L
NUC240LD2AE	72	2.5	5.5	-40	105	31	8	64	4	8	9	√	√	4	4	√	7	1	2	2	1	1	2	1	2	-	1	-	LQFP48	7x7	√	NT-NUC240V	NLG-NUC200L
NUC240LE3AE	72	2.5	5.5	-40	105	31	8	128	Configurable	16	9	√	√	4	4	√	7	1	2	2	1	1	2	1	2	-	1	-	LQFP48	7x7	√	NT-NUC240V	NLG-NUC200L
NUC240SC2AE	72	2.5	5.5	-40	105	45	8	32	4	8	9	√	√	4	4	√	7	2	3	3	2	2	2	1	2	-	1	√	LQFP64	7x7	√	NT-NUC240V	NLG-NUC200S
NUC240SD2AE	72	2.5	5.5	-40	105	45	8	64	4	8	9	√	√	4	4	√	7	2	3	3	2	2	2	1	2	-	1	√	LQFP64	7x7	√	NT-NUC240V	NLG-NUC200S
NUC240SE3AE	72	2.5	5.5	-40	105	45	8	128	Configurable	16	9	√	√	4	4	√	7	2	3	3	2	2	2	1	2	-	1	√	LQFP64	7x7	√	NT-NUC240V	NLG-NUC200S
NUC240VE3AE	72	2.5	5.5	-40	105	79	8	128	Configurable	16	9	√	√	4	8	√	8	2	3	3	3	4	2	1	2	1	1	√	LQFP100	14x14	√	NT-NUC240V	NLG-NUC200V

Nano100 系列

NuMicro® Nano 系列为超低功耗微控制器，基於 Arm® Cortex®-M0 内核，具 16 ~ 128 K 字节 Flash、4 ~ 16 K 字节 SRAM、4K 字节独立 Flash 作为在线系统编程 (In-System Programming) 用途。
Nano 系列集成 COM / SEG LCD 驱动、時鐘 (RTC)、ADC、DAC、USB 2.0 全速设备、ISO7816-3 智能卡接口和丰富外设，并支持多种接口快速唤醒。

关键特性：超低功耗与快速唤醒
应用领域：适合于使用电池供电的设备，诸如穿戴式装置、物联网节点装置、可携式医疗装置、智能家电、安全警报监控系统、行动支付智能读卡机、GPS 数据采集器、无线通讯模块 (Zigbee、LoRa ...)、电子货架标签、无线射频识别、智能三表 (热表、水表、燃气表) 等

• Nano100 系列

关键特性：超低功耗 200 μA/MHz (运行模式)、75 μA/MHz (Idle 模式)、2.5 μA (RTC 模式，RAM 数据保持)、1 μA (待机模式，RAM 数据保持)、3.5 μs 快速唤醒

Part No.	System						Memory					Timer					Analog		Connectivity						Package		Status	Package	
	Operating Frequency (MHz)	Operating Voltage (min) (V)	Operating Voltage (max) (V)	Operating Temperature (min) (°C)	Operating Temperature (max) (°C)	GPIO	LDROM Flash (KB)	APROM Flash (KB)	Data Flash (KB)	SRAM (KB)	PDMA (ch)	WDT	WWDT	Timer (32-bit)	PWM (16-bit)	RTC	ADC (12-bit)	DAC (12-bit)	UART	LIN	ISO-7816-3	SPI	I²C	I²S	Package Type	Package Size	Mass Production	EVB	MP Programmer
NANO100KD3BN	42	1.8	3.6	-40	85	86	4	64	Configurable	16	8	√	√	4	8	√	12	2	2	2	3	3	2	1	LQFP128	14X14	√	NT-Nano100K / NT-Nano120K / NT-Nano130K	NLG-Nano100K
NANO100KE3BN	42	1.8	3.6	-40	85	86	4	128	Configurable	16	8	√	√	4	8	√	12	2	2	2	3	3	2	1	LQFP128	14X14	√	NT-Nano100K / NT-Nano120K / NT-Nano130K	NLG-Nano100K
NANO100LC2BN	42	1.8	3.6	-40	85	38	4	32	Configurable	8	8	√	√	4	6	√	7	2	2	2	2	3	2	1	LQFP48	7X7	√	NT-Nano100K / NT-Nano120K / NT-Nano130K	NLG-Nano100L
NANO100LD2BN	42	1.8	3.6	-40	85	38	4	64	Configurable	8	8	√	√	4	6	√	7	2	2	2	2	3	2	1	LQFP48	7X7	√	NT-Nano100K / NT-Nano120K / NT-Nano130K	NLG-Nano100L
NANO100LD3BN	42	1.8	3.6	-40	85	38	4	64	Configurable	16	8	√	√	4	6	√	7	2	2	2	2	3	2	1	LQFP48	7X7	√	NT-Nano100K / NT-Nano120K / NT-Nano130K	NLG-Nano100L
NANO100LE3BN	42	1.8	3.6	-40	85	38	4	128	Configurable	16	8	√	√	4	6	√	7	2	2	2	2	3	2	1	LQFP48	7X7	√	NT-Nano100K / NT-Nano120K / NT-Nano130K	NLG-Nano100L
NANO100NC2BN	42	1.8	3.6	-40	85	38	4	32	Configurable	8	8	√	√	4	6	√	7	2	2	2	2	3	2	1	QFN48	7X7	√	NT-Nano100K / NT-Nano120K / NT-Nano130K	NLG-Nano100N
NANO100ND2BN	42	1.8	3.6	-40	85	38	4	64	Configurable	8	8	√	√	4	6	√	7	2	2	2	2	3	2	1	QFN48	7X7	√	NT-Nano100K / NT-Nano120K / NT-Nano130K	NLG-Nano100N
NANO100ND3BN	42	1.8	3.6	-40	85	38	4	64	Configurable	16	8	√	√	4	6	√	7	2	2	2	2	3	2	1	QFN48	7X7	√	NT-Nano100K / NT-Nano120K / NT-Nano130K	NLG-Nano100N
NANO100NE3BN	42	1.8	3.6	-40	85	38	4	128	Configurable	16	8	√	√	4	6	√	7	2	2	2	2	3	2	1	QFN48	7X7	√	NT-Nano100K / NT-Nano120K / NT-Nano130K	NLG-Nano100N
NANO100SC2BN	42	1.8	3.6	-40	85	52	4	32	Configurable	8	8	√	√	4	8	√	7	2	2	2	3	3	2	1	LQFP64	7X7	√	NT-Nano100K / NT-Nano120K / NT-Nano130K	NLG-Nano100S
NANO100SD2BN	42	1.8	3.6	-40	85	52	4	64	Configurable	8	8	√	√	4	8	√	7	2	2	2	3	3	2	1	LQFP64	7X7	√	NT-Nano100K / NT-Nano120K / NT-Nano130K	NLG-Nano100S
NANO100SD3BN	42	1.8	3.6	-40	85	52	4	64	Configurable	16	8	√	√	4	8	√	7	2	2	2	3	3	2	1	LQFP64	7X7	√	NT-Nano100K / NT-Nano120K / NT-Nano130K	NLG-Nano100S
NANO100SE3BN	42	1.8	3.6	-40	85	52	4	128	Configurable	16	8	√	√	4	8	√	7	2	2	2	3	3	2	1	LQFP64	7X7	√	NT-Nano100K / NT-Nano120K / NT-Nano130K	NLG-Nano100S

• Nano102 系列

关键特性：超低功耗技术：150 μA/MHz (运行模式)、65 μA/MHz (Idle 模式)、1.5 μA (RTC 模式，RAM 数据保持)、0.65 μA (待机模式，RAM 数据保持)、3.5 μs 快速唤醒时间

Part No.	System						Memory					Timer						Analog			Connectivity				Package		Status	Tool	
	Operating Frequency (MHz)	Operating Voltage (min) (V)	Operating Voltage (max) (V)	Operating Temperature (min) (°C)	Operating Temperature (max) (°C)	GPIO	LDROM Flash (KB)	APROM Flash (KB)	Data Flash (KB)	SRAM (KB)	PDMA (ch)	WDT	WWDT	Timer (32-bit)	PWM (16-bit)	RTC	ADC (12-bit)	ACMP	Internal Voltage Reference	UART	ISO-7816-3	SPI	I²C	Package Type	Package Size	Mass Production	EVB	MP Programmer
NANO102LB1AN	32	1.8	3.6	-40	85	40	4	16	Configurable	4	4	√	√	4	4	√	7	2	√	2	2	2	2	LQFP48	7x7	√	NT-Nano102S	NLG-Nano112L
NANO102LC2AN	32	1.8	3.6	-40	85	40	4	32	Configurable	8	4	√	√	4	4	√	7	2	√	2	2	2	2	LQFP48	7x7	√	NT-Nano102S	NLG-Nano112L
NANO102SC2AN	32	1.8	3.6	-40	85	58	4	32	Configurable	8	4	√	√	4	4	√	7	2	√	2	2	2	2	LQFP64	7x7	√	NT-Nano102S	NLG-Nano112S
NANO102ZB1AN	32	1.8	3.6	-40	85	27	4	16	Configurable	4	4	√	√	4	4	√	2	2	√	2	1	2	2	QFN33	5x5	√	NT-Nano102S	NLG-Nano102Z
NANO102ZC2AN	32	1.8	3.6	-40	85	27	4	32	Configurable	8	4	√	√	4	4	√	2	2	√	2	1	2	2	QFN33	5x5	√	NT-Nano102S	NLG-Nano102Z

• Nano103 系列

关键特性：超低功耗技术：180 μA/MHz (运行模式)、75 μA/MHz (Idle 模式)、2 μA (RTC 模式，RAM 数据保持)

Part No.	System						Memory					Timer						Analog			Connectivity				Package		Status	Tool	
	Operating Frequency (MHz)	Operating Voltage (min) (V)	Operating Voltage (max) (V)	Operating Temperature (min) (°C)	Operating Temperature (max) (°C)	GPIO	LDROM Flash (KB)	APROM Flash (KB)	Data Flash (KB)	SRAM (KB)	PDMA (ch)	WDT	WWDT	Timer (32-bit)	PWM (16-bit)	RTC	ADC (12-bit)	ACMP	Internal Voltage Reference	UART	ISO-7816-3	SPI	I²C	Package Type	Package Size	Mass Production	EVB	MP Programmer
NANO103LD3AE	36	1.8	3.6	-40	105	39	4	64	Configurable	16	4	√	√	4	6	√	8	1	√	2	2	4	2	LQFP48	7x7	√	NT-Nano103S	NLG-Nano103L
NANO103SD3AE	36	1.8	3.6	-40	105	53	4	64	Configurable	16	4	√	√	4	6	√	8	1	√	2	2	4	2	LQFP64	7x7	√	NT-Nano103S	NLG-Nano103S
NANO103ZD3AE	36	1.8	3.6	-40	105	26	4	64	Configurable	16	4	√	√	4	2	√	6	1	√	2	2	4	2	QFN33	5x5	√	NT-Nano103S	NLG-Nano103Z

• Nano110 系列

关键特性：集成 4x40 或 6x38 COM / SEG LCD 驱动、超低功耗技术：200 μA/MHz (运行模式)、75 μA/MHz (Idle 模式)、2.5 μA (RTC 模式，RAM 数据保持)、1 μA (待机模式，RAM 数据保持)、3.5 μs 快速唤醒时间

Part No.	System						Memory					Timer					Analog		Connectivity						Display	Package		Status	Tool	
	Operating Frequency (MHz)	Operating Voltage (min) (V)	Operating Voltage (max) (V)	Operating Temperature (min) (°C)	Operating Temperature (max) (°C)	GPIO	LDROM Flash (KB)	APROM Flash (KB)	Data Flash (KB)	SRAM (KB)	PDMA (ch)	WDT	WWDT	Timer (32-bit)	PWM (16-bit)	RTC	ADC (12-bit)	DAC (12-bit)	UART	LIN	ISO-7816-3	SPI	I²C	I²S	ComSeg LCD	Package Type	Package Size	Mass Production	EVB	MP Programmer
NANO110KC2BN	42	1.8	3.6	-40	85	86	4	32	Configurable	8	8	√	√	4	8	√	12	2	2	2	3	3	2	1	4x40/6x38	LQFP128	14X14	√	NT-Nano130K	NLG-Nano100K
NANO110KD2BN	42	1.8	3.6	-40	85	86	4	64	Configurable	8	8	√	√	4	8	√	12	2	2	2	3	3	2	1	4x40/6x38	LQFP128	14X14	√	NT-Nano130K	NLG-Nano100K
NANO110KD3BN	42	1.8	3.6	-40	85	86	4	64	Configurable	16	8	√	√	4	8	√	12	2	2	2	3	3	2	1	4x40/6x38	LQFP128	14X14	√	NT-Nano130K	NLG-Nano100K
NANO110KE3BN	42	1.8	3.6	-40	85	86	4	128	Configurable	16	8	√	√	4	8	√	12	2	2	2	3	3	2	1	4x40/6x38	LQFP128	14X14	√	NT-Nano130K	NLG-Nano100K
NANO110RC2BN	42	1.8	3.6	-40	85	51	4	32	Configurable	8	8	√	√	4	7	√	7	2	2	2	3	3	2	1	4x31/6x29	LQFP64	10X10	√	NT-Nano130K	NLG-Nano100R
NANO110RD2BN	42	1.8	3.6	-40	85	51	4	64	Configurable	8	8	√	√	4	7	√	7	2	2	2	3	3	2	1	4x31/6x29	LQFP64	10X10	√	NT-Nano130K	NLG-Nano100R
NANO110RD3BN	42	1.8	3.6	-40	85	51	4	64	Configurable	16	8	√	√	4	7	√	7	2	2	2	3	3	2	1	4x31/6x29	LQFP64	10X10	√	NT-Nano130K	NLG-Nano100R
NANO110RE3BN	42	1.8	3.6	-40	85	51	4	128	Configurable	16	8	√	√	4	7	√	7	2	2	2	3	3	2	1	4x31/6x29	LQFP64	10X10	√	NT-Nano130K	NLG-Nano100R
NANO110SC2BN	42	1.8	3.6	-40	85	51	4	32	Configurable	8	8	√	√	4	7	√	7	2	2	2	3	3	2	1	4x31/6x29	LQFP64	7X7	√	NT-Nano130K	NLG-Nano100S
NANO110SD2BN	42	1.8	3.6	-40	85	51	4	64	Configurable	8	8	√	√	4	7	√	7	2	2	2	3	3	2	1	4x31/6x29	LQFP64	7X7	√	NT-Nano130K	NLG-Nano100S
NANO110SD3BN	42	1.8	3.6	-40	85	51	4	64	Configurable	16	8	√	√	4	7	√	7	2	2	2	3	3	2	1	4x31/6x29	LQFP64	7X7	√	NT-Nano130K	NLG-Nano100S
NANO110SE3BN	42	1.8	3.6	-40	85	51	4	128	Configurable	16	8	√	√	4	7	√	7	2	2	2	3	3	2	1	4x31/6x29	LQFP64	7X7	√	NT-Nano130K	NLG-Nano100S

• Nano112 系列

关键特性：集成 4x36 或 6x34 COM / SEG LCD 驱动、超低功耗技术：150 μA/MHz (运行模式)、65 μA/MHz (Idle 模式)、1.5 μA (RTC 模式，RAM 数据保持)、0.65 μA (待机模式，RAM 数据保持)、3.5 μs 快速唤醒时间

Part No.	System						Memory					Timer					Analog			Connectivity					Display	Package		Status	Tool	
	Operating Frequency (MHz)	Operating Voltage (min) (V)	Operating Voltage (max) (V)	Operating Temperature (min) (°C)	Operating Temperature (max) (°C)	GPIO	LDROM Flash (KB)	APROM Flash (KB)	Data Flash (KB)	SRAM (KB)	PDMA (ch)	WDT	WWDT	Timer (32-bit)	PWM (16-bit)	RTC	ADC (12-bit)	ACMP	Internal Voltage Reference	UART	ISO-7816-3	SPI	I²C	ComSeg LCD	Package Type	Package Size	Mass Production	EVB	MP Programmer
NANO112LB1AN	32	1.8	3.6	-40	85	40	4	16	Configurable	4	4	√	√	4	4	√	7	2	√	2	2	2	2	4x20/6x18	LQFP48	7x7	√	NT-Nano112V	NLG-Nano112L
NANO112LC2AN	32	1.8	3.6	-40	85	40	4	32	Configurable	8	4	√	√	4	4	√	7	2	√	2	2	2	2	4x20/6x18	LQFP48	7x7	√	NT-Nano112V	NLG-Nano112L
NANO112RB1AN	32	1.8	3.6	-40	85	58	4	16	Configurable	4	4	√	√	4	4	√	7	2	√	2	2	2	2	4x32/6x30	LQFP64	10x10	√	NT-Nano112V	NLG-Nano112R
NANO112RC2AN	32	1.8	3.6	-40	85	58	4	32	Configurable	8	4	√	√	4	4	√	7	2	√	2	2	2	2	4x32/6x30	LQFP64	10x10	√	NT-Nano112V	NLG-Nano112R
NANO112SB1AN	32	1.8	3.6	-40	85	58	4	16	Configurable	4	4	√	√	4	4	√	7	2	√	2	2	2	2	4x32/6x30	LQFP64	7x7	√	NT-Nano112V	NLG-Nano112S
NANO112SC2AN	32	1.8	3.6	-40	85	58	4	32	Configurable	8	4	√	√	4	4	√	7	2	√	2	2	2	2	4x32/6x30	LQFP64	7x7	√	NT-Nano112V	NLG-Nano112S
NANO112VC2AN	32	1.8	3.6	-40	85	80	4	32	Configurable	8	4	√	√	4	4	√	8	2	√	2	2	2	2	4x36/6x34	LQFP100	14x14	√	NT-Nano112V	NLG-Nano112V

• Nano120 系列

关键特性：集成 USB 2.0 全速设备、超低功耗技术 : 200 μA/MHz (运行模式)、75 μA/MHz (Idle 模式)、2.5 μA (RTC 模式，RAM 数据保持)、1 μA (待机模式，RAM 数据保持)、3.5 μs 快速唤醒时间

Part No.	System						Memory					Timer					Analog			Connectivity				Display	Package		Status	Tool	
	Operating Frequency (MHz)	Operating Voltage (min) (V)	Operating Voltage (max) (V)	Operating Temperature (min) (°C)	Operating Temperature (max) (°C)	GPIO	LDROM Flash (KB)	APROM Flash (KB)	Data Flash (KB)	SRAM (KB)	PDMA (ch)	WDT	WWDT	Timer (32-bit)	PWM (16-bit)	RTC	ADC (12-bit)	ACMP	Internal Voltage Reference	UART	ISO-7816-3	SPI	I²C	ComSeg LCD	Package Type	Package Size	Mass Production	EVB	MP Programmer
NANO112LB1AN	32	1.8	3.6	-40	85	40	4	16	Configurable	4	4	√	√	4	4	√	7	2	√	2	2	2	2	4x20/6x18	LQFP48	7x7	√	NT-Nano112V	NLG-Nano112L
NANO112LC2AN	32	1.8	3.6	-40	85	40	4	32	Configurable	8	4	√	√	4	4	√	7	2	√	2	2	2	2	4x20/6x18	LQFP48	7x7	√	NT-Nano112V	NLG-Nano112L
NANO112RB1AN	32	1.8	3.6	-40	85	58	4	16	Configurable	4	4	√	√	4	4	√	7	2	√	2	2	2	2	4x32/6x30	LQFP64	10x10	√	NT-Nano112V	NLG-Nano112R
NANO112RC2AN	32	1.8	3.6	-40	85	58	4	32	Configurable	8	4	√	√	4	4	√	7	2	√	2	2	2	2	4x32/6x30	LQFP64	10x10	√	NT-Nano112V	NLG-Nano112R
NANO112SB1AN	32	1.8	3.6	-40	85	58	4	16	Configurable	4	4	√	√	4	4	√	7	2	√	2	2	2	2	4x32/6x30	LQFP64	7x7	√	NT-Nano112V	NLG-Nano112S
NANO112SC2AN	32	1.8	3.6	-40	85	58	4	32	Configurable	8	4	√	√	4	4	√	7	2	√	2	2	2	2	4x32/6x30	LQFP64	7x7	√	NT-Nano112V	NLG-Nano112S
NANO112VC2AN	32	1.8	3.6	-40	85	80	4	32	Configurable	8	4	√	√	4	4	√	8	2	√	2	2	2	2	4x36/6x34	LQFP100	14x14	√	NT-Nano112V	NLG-Nano112V

• Nano130 系列

关键特性：集成 4x40 或 6x38 COM / SEG LCD 驱动和 USB 2.0 全速设备、低电压工作范围 1.8V 至 3.6V、工作温度为 -40° C 至 85° C、超低功耗技术：200 μA/MHz (运行模式)、75 μA/MHz (Idle 模式)、2.5 μA (RTC 模式，RAM 数据保持)、1 μA (待机模式，RAM 数据保持)、3.5 μs 快速唤醒时间

Part No.	System						Memory					Timer					Analog		Connectivity							Display	Package		Status	Tool	
	Operating Frequency (MHz)	Operating Voltage (min) (V)	Operating Voltage (max) (V)	Operating Temperature (min) (°C)	Operating Temperature (max) (°C)	GPIO	LDROM Flash (KB)	APROM Flash (KB)	Data Flash (KB)	SRAM (KB)	PDMA (ch)	WDT	WWDT	Timer (32-bit)	PWM (16-bit)	RTC	ADC (12-bit)	DAC (12-bit)	UART	LIN	ISO-7816-3	SPI	I²C	I²S	ComSeg LCD	Package Type	Package Size	Mass Production	EVB	MP Programmer
NANO130KC2BN	42	1.8	3.6	-40	85	86	4	32	Configurable	8	8	√	√	4	8	√	12	2	2	2	3	3	2	1	4x40/6x38	LQFP128	14X14	√	NT-Nano130K	NLG-Nano100K
NANO130KD2BN	42	1.8	3.6	-40	85	86	4	64	Configurable	8	8	√	√	4	8	√	12	2	2	2	3	3	2	1	4x40/6x38	LQFP128	14X14	√	NT-Nano130K	NLG-Nano100K
NANO130KD3BN	42	1.8	3.6	-40	85	86	4	64	Configurable	16	8	√	√	4	8	√	12	2	2	2	3	3	2	1	4x40/6x38	LQFP128	14X14	√	NT-Nano130K	NLG-Nano100K
NANO130KE3BN	42	1.8	3.6	-40	85	86	4	128	Configurable	16	8	√	√	4	8	√	12	2	2	2	3	3	2	1	4x40/6x38	LQFP128	14X14	√	NT-Nano130K	NLG-Nano100K
NANO130SC2BN	42	1.8	3.6	-40	85	47	4	32	Configurable	8	8	√	√	4	7	√	7	2	2	2	3	3	2	1	4x31/6x29	LQFP64	7X7	√	NT-Nano130K	NLG-Nano100S
NANO130SD2BN	42	1.8	3.6	-40	85	47	4	64	Configurable	8	8	√	√	4	7	√	7	2	2	2	3	3	2	1	4x31/6x29	LQFP64	7X7	√	NT-Nano130K	NLG-Nano100S
NANO130SD3BN	42	1.8	3.6	-40	85	47	4	64	Configurable	16	8	√	√	4	7	√	7	2	2	2	3	3	2	1	4x31/6x29	LQFP64	7X7	√	NT-Nano130K	NLG-Nano100S
NANO130SE3BN	42	1.8	3.6	-40	85	47	4	128	Configurable	16	8	√	√	4	7	√	7	2	2	2	3	3	2	1	4x31/6x29	LQFP64	7X7	√	NT-Nano130K	NLG-Nano100S

新唐 NuMicro® Arm® Cortex®-M4 微控制器家族

新唐 NuMicro® Arm® Cortex®-M4 微控制器家族运行于 72 MHz 至 200 MHz，提供高达 90 DMIPS 至 240 DMIPS 的高性能系统设计，在 M480 系列，当系统由内置 Flash 运行时，其动态功耗更可低至 130 μA/MHz。EBI 接口支持 Intel 8080 屏，搭配 emWin 图形库可轻松生成完美的互動式圖形介面。

新唐 NuMicro® Arm® Cortex®-M4 微控制器家族由以下产品系列组成：

M480 系列 : 192 MHz 工作主频、多达 512 KB 双区块 (Dual bank) Flash、多达 160 KB SRAM、SPI Master 接口支持就地执行 (XIP, eXecute-In-Place) 与 16 位 I80 QVGA LCD

- M481 子系列 – 192 MHz PWM、 二组 SDHC、 二组 5 MSPS ADC 与二组 1 MSPS DAC
- M482 子系列 – 全速 USB 从设备 / 主设备 / OTG 带片上 PHY 且内置 1 KB 数据缓存、二组 5 MSPS ADC
- M483 子系列 – 二组或三组 CAN 2.0B、二组 USB 支持高速 OTG 及全速 OTG
- M484 子系列 – 高速 USB 从设备 / 主设备 / OTG 带片上 PHY 且内置 4 KB 数据缓存、全速 USB 从设备 / 主设备 / OTG 带片上 PHY 且内置 1 KB 数据缓存
- M485 子系列 – 硬件加解密引擎支持 ECC-256, AES-256, and SHA-512, 随机数生成器、 二组 USB 2.0 从设备 / 主设备 /OTG
- M487 子系列 – 10/100 兆以太网 MAC 支持 RMII/MDC/MDIO 接口、硬件加解密引擎、二组 CAN 2.0B、二组 USB 2.0 从设备 / 主设备 / OTG

M471 系列 : 72/120 MHz 工作主频、多达 512 KB 双区块 (Dual bank) Flash、多达 64 KB SRAM、內建獨立 32 Kbytes data Flash, 支持寬管腳間距封裝 , 以及提供經認證的 IEC60730-1 Class B Software Test Library (STL) 軟件庫

- M471 V/K 子系列 – 2 MSPS, 12-bit, up to 24 channels SAR ADC, and hardware Customize IR receiver interface
- M471 M/R1/S 子系列 – 1 MSPS, 12-bit, up to 16 channels SAR ADC、USB 2.0 full speed device/host with integrated PHY

M460 系列 : 200 MHz 工作主頻、多达 1024 KB 双区块 (Dual bank) Flash、多达 512 KB SRAM、雙 Pheripheral Direct Memory Access (PDMA) 設計、支持 programmable serial I/O (PSIO) 接口 , hyper bus interface (HBI) 接口 , 經認證之 IEC60730-1 Class B Software Test Library (STL) 軟件庫、以及 SPI Master 接口支持就地执行 (XIP, eXecute-In-Place)

- M463 子系列 – 四组 CAN-FD、二组 USB 分别支持高速 OTG 及全速 OTG
- M464 子系列 – 高速 USB 从设备 / 主设备 / OTG 带片上 PHY 且内置 4 KB 数据缓存
- M467 子系列 – 10/100 兆以太网 MAC 支持 RMII/MDC/MDIO 接口、硬件加解密引擎、四组 CAN-FD、二组 USB 分别支持高速 OTG 及全速 OTG、皆带片上 PHY

M451 系列 : 72 MHz 工作主频、多达 256 KB Flash、多达 32 KB SRAM、Quad-SPI 接口

- M451 子系列 – 144 MHz PWM
- M452 子系列 – 全速 USB 从设备 / 主设备 / OTG 带片上 PHY
- M453 子系列 – 全速 USB 从设备 / 主设备 / OTG 带片上 PHY、CAN 2.0B

M480 系列

高效能、低功耗、安全启动 (Secure Boot) 与硬件加密的 NuMicro® M480 系列 Arm® Cortex®-M4F 微控制器，支持 DSP 指令集且集成浮点运算单元 (FPU)。动态功耗可低至 175 μA/MHz 或 130 μA/MHz，待机电流可低至 1 μA。
M480 系列支持安全启动 (Secure Boot) 功能，为系统软件的预启动身份验证提供一个不变的数字签名，以确保闪存内容未经修改或破坏。

应用领域：工业自动化、家庭自动化、传感器中枢、物联网网关、安防系统、以太网转换器、电竞配件等

M480 系列	全速 USB	高速 USB	CAN 2.0B	硬件加解密	以太网
M481					
M482	√				
M483	√	√	√		
M484	√	√			
M485	√	√		√	
M487	√	√	√	√	√

关键特性：可配置的数据存储区、电压可调接口 (VAI)、16+16 字节 UART FIFO 用于 TX/RX、二组 5 MSPS ADC、高速 USB 从设备 / 主设备 /OTG 带片上 PHY、硬件加解密引擎、10/100 兆以太网、EBI 接口支持 Intel 8080 屏 , ICP/ISP/IAP

Part No.	System						Memory				Timer				Analog			Connectivity											Security	Crypto	Package		Status	Tool	
	Operating Frequency (MHz)	Operating Voltage (min) (V)	Operating Voltage (max) (V)	Operating Temperature (min) (°C)	Operating Temperature (max) (°C)	GPIO	LDROM Flash (KB)	APROM Flash (KB)	SRAM (KB)	PDMA (ch)	Timer (32-bit)	BPWM (16-bit)	EPWM (16-bit)	RTC	EADC (12-bit)	DAC (12-bit)	ACMP	LPUART	QSPI	I²C	USCI	SPI/ I²S	CAN	SDHC	USB FS OTG	USB HS OTG	EMAC	PRNG	Crypto	Package Type	Package Size	Mass Production	EVB	MP Programmer
M481LGCAE	192	1.8	3.6	-40	105	41	4	256	128	16	4	12	12	√	12	1	2	8	2	3	-	2	-	1	-	-	-	√	√	LQFP48	7x7	√	NK-M483KG	NLG-48L
M481LIDAE	192	1.8	3.6	-40	105	41	4	512	160	16	4	12	12	√	12	2	2	6	1	3	2	3	-	2	-	-	-	-	-	LQFP48	7x7	√	NK-BEDM487	NLG-48L
M481SGCAE	192	1.8	3.6	-40	105	52	4	256	128	16	4	12	12	√	16	1	2	8	2	3	-	3	-	1	-	-	-	√	√	LQFP64	7x7	√	NK-M483KG	NLG-64S
M481SGCAE2A	192	1.8	3.6	-40	105	52	4	256	128	16	4	12	12	√	16	1	2	8	2	3	-	3	-	1	-	-	-	√	√	LQFP64	7x7	√	NK-M483KG	NLG-64S
M481SIDAE	192	1.8	3.6	-40	105	52	4	512	160	16	4	12	12	√	16	2	2	6	1	3	2	4	-	2	-	-	-	-	-	LQFP64	7x7	√	NK-BEDM487	NLG-64S
M481ZGCAE	192	1.8	3.6	-40	105	26	4	256	128	16	4	12	12	√	10	1	2	8	2	3	-	2	-	1	-	-	-	√	√	QFN33	5x5	√	NK-M483KG	NLG-32Z
M481ZIDAE	192	1.8	3.6	-40	105	26	4	512	160	16	4	12	12	√	10	2	2	6	1	3	2	3	-	1	-	-	-	-	-	QFN33	5x5	√	NK-BEDM487	NLG-32Z
M482KGCAE	192	1.8	3.6	-40	105	100	4	256	128	16	4	12	12	√	16	1	2	8	2	3	-	3	-	1	1	-	-	√	√	LQFP128	14x14	√	NK-M483KG	NLG-128K
M482KIDAE	192	1.8	3.6	-40	105	100	4	512	160	16	4	12	12	√	16	2	2	6	1	3	2	4	-	2	1	-	-	-	-	LQFP128	14x14	√	NK-BEDM487	NLG-128K
M482LGCAE	192	1.8	3.6	-40	105	41	4	256	128	16	4	12	12	√	12	1	2	8	2	3	-	2	-	1	1	-	-	√	√	LQFP48	7x7	√	NK-M483KG	NLG-48L
M482LIDAE	192	1.8	3.6	-40	105	41	4	512	160	16	4	12	12	√	12	2	2	6	1	3	2	3	-	2	1	-	-	-	-	LQFP48	7x7	√	NK-BEDM487	NLG-48L
M482SGCAE	192	1.8	3.6	-40	105	52	4	256	128	16	4	12	12	√	16	1	2	8	2	3	-	3	-	1	1	-	-	√	√	LQFP64	7x7	√	NK-M483KG	NLG-64S
M482SIDAE	192	1.8	3.6	-40	105	52	4	512	160	16	4	12	12	√	16	2	2	6	1	3	2	4	-	2	1	-	-	-	-	LQFP64	7x7	√	NK-BEDM487	NLG-64S
M482ZGCAE	192	1.8	3.6	-40	105	26	4	256	128	16	4	12	12	√	10	1	2	8	2	3	-	2	-	1	1	-	-	√	√	QFN33	5x5	√	NK-M483KG	NLG-32Z
M482ZIDAE	192	1.8	3.6	-40	105	26	4	512	160	16	4	12	12	√	10	2	2	6	1	3	2	3	-	1	1	-	-	-	-	QFN33	5x5	√	NK-BEDM487	NLG-32Z
M483KGCAE	192	1.8	3.6	-40	105	100	4	256	128	16	4	12	12	√	16	1	2	8	2	3	-	3	3	1	1	-	-	√	√	LQFP128	14x14	√	NK-M483KG	NLG-128K
M483KGCAE2A	192	1.8	3.6	-40	105	100	4	256	128	16	4	12	12	√	24	1	2	8	2	3	-	3	3	1	1	-	-	√	√	LQFP128	14x14	√	NK-M483KG	NLG-128K
M483KIDAE	192	1.8	3.6	-40	105	100	4	512	160	16	4	12	12	√	16	2	2	6	1	3	2	4	2	2	1	1	-	-	-	LQFP128	14x14	√	NK-BEDM487	NLG-128K
M483SGCAE	192	1.8	3.6	-40	105	52	4	256	128	16	4	12	12	√	16	1	2	8	2	3	-	3	2	1	1	-	-	√	√	LQFP64	7x7	√	NK-M483KG	NLG-64S
M483SGCAE2A	192	1.8	3.6	-40	105	52	4	256	128	16	4	12	12	√	16	1	2	8	2	3	-	3	2	1	1	-	-	√	√	LQFP64	7x7	√	NK-M483KG	NLG-64S
M483SIDAE	192	1.8	3.6	-40	105	44	4	512	160	16	4	12	12	√	16	2	2	6	1	3	2	4	2	2	-	1	-	-	-	LQFP64	7x7	√	NK-BEDM487	NLG-64S
M484KIDAE	192	1.8	3.6	-40	105	100	4	512	160	16	4	12	12	√	16	2	2	6	1	3	2	4	-	2	1	1	-	-	-	LQFP128	14x14	√	NK-BEDM487	NLG-128K
M484SIDAE	192	1.8	3.6	-40	105	44	4	512	160	16	4	12	12	√	16	2	2	6	1	3	2	4	-	2	1	-	-	-	-	LQFP64	7x7	√	NK-BEDM487	NLG-64S
M484SIDAE2U	192	1.8	3.6	-40	105	44	4	512	160	16	4	12	12	√	16	2	2	6	1	3	2	4	-	2	1	1	-	-	-	LQFP64	7x7	√	NK-BEDM487	NLG-64S
M485KIDAE	192	1.8	3.6	-40	105	100	4	512	160	16	4	12	12	√	16	2	2	6	1	3	2	4	-	2	1	1	-	√	√	LQFP128	14x14	√	NK-BEDM487	NLG-128K
M485LIDAE	192	1.8	3.6	-40	105	41	4	512	160	16	4	12	12	√	12	2	2	6	1	3	2	3	-	2	1	-	-	√	√	LQFP48	7x7	√	NK-BEDM487	NLG-48L
M485SIDAE	192	1.8	3.6	-40	105	44	4	512	160	16	4	12	12	√	16	2	2	6	1	3	2	4	-	2	-	1	-	√	√	LQFP64	7x7	√	NK-BEDM487	NLG-64S
M487JIDAE	192	1.8	3.6	-40	105	114	4	512	160	16	4	12	12	√	16	2	2	6	1	3	2	4	2	2	1	1	1	√	√	LQFP144	20x20	√	NK-BEDM487	NLG-144J
M487KIDAE	192	1.8	3.6	-40	105	100	4	512	160	16	4	12	12	√	16	2	2	6	1	3	2	4	2	2	1	1	1	√	√	LQFP128	14x14	√	NK-BEDM487	NLG-128K
M487KMCAN	192	1.8	3.6	-40	105	114	4	2560	160	16	4	12	12	√	16	2	2	6	1	3	2	4	2	2	1	1	1	√	√	LQFP128	14x14	√	NK-BEDM487	NLG-128K
M487SIDAE	192	1.8	3.6	-40	105	44	4	512	160	16	4	12	12	√	16	2	2	6	1	3	2	4	2	2	-	1	1	√	√	LQFP64	7x7	√	NK-BEDM487	NLG-64S

M471 系列

NuMicro® M471 系列 Arm® Cortex®-M4F 微控制器，支持 DSP 指令集且集成浮点运算单元 (FPU)。动态功耗可低至 370 μA/MHz 或 130 μA/MHz，待机电流可低至 1.6 μA。
M471 系列提供寬管腳間距封裝，經認證的 IEC60730-1 Class B Software Test Library (STL) 軟件庫，以及支持高亢干擾特性 ESD(HBM) 8 KV, EFT 4.4 KV

应用领域：白電主控板、小家電主控板、工業自動化、通訊系統等
关键特性：獨立 32 Kbytes 的数据存储区、电压可调接口 (VAI)、16+16 字节 UART FIFO 用于 TX/RX、1.8 MSPS ADC、全速 USB 从设备 / 主设备带片上 PHY、EBI 接口支持 Intel 8080 屏，ICP/ISP/IAP

Part No.	System							Memory						Timer		Analog			Connectivity									Package		Status	Tool	
	Operating Frequency (MHz)	Operating Voltage (min) (V)	Operating Voltage (max) (V)	Operating Temperature (min) (°C)	Operating Temperature (max) (°C)	GPIO	V_{BAT}	LDROM Flash (KB)	APROM Flash (KB)	Dual-Bank Flash	Data Flash (KB)	SRAM (KB)	PDMA (ch)	Timer (32-bit)	PWM (16-bit)	BPWM (16-bit)	EPWM (16-bit)	RTC	EADC (12-bit)	DAC (12-bit)	ACMP	UART	LPUART	I²C	SPI/ I²S	USB FS Device/ Host	PRNG	Package Type	Package Size	Mass Production	EVB	MP Programmer
M471KI8AE	120	2.5	5.5	-40	105	119	-	4	512	√	32	64	6	4	-	12	12	√	24	1	2	-	6	2	2	-	√	LQFP128	14x14	√	NK-M471KI	NLG-128K
M471VI8AE	120	2.5	5.5	-40	105	91	-	4	512	√	32	64	6	4	-	12	12	√	23	1	2	-	6	2	2	-	√	LQFP100	14x14	√	NK-M471KI	NLG-100V
M471R1E6AE	72	2.5	5.5	-40	105	49	√	4	128	-	Configurable	32	8	4	12	-	-	√	16	-	-	4	-	2	1	1	-	LQFP64	14x14	√	NK-M471R1	NG-M471R1
M471SE6AE	72	2.5	5.5	-40	105	49	√	4	128	-	Configurable	32	8	4	12	-	-	√	16	-	-	4	-	2	1	1	-	LQFP64	7x7	√	NK-M471R1	NG-M471S
M471MD6AE	72	2.5	5.5	-40	105	35	√	4	64	-	Configurable	32	8	4	10	-	-	√	10	-	-	3	-	2	1	-	-	LQFP44	10x10	√	NK-M471R1	NG-M471M

M460 系列

M460 系列提供雙 Pheripheral Direct Memory Access (PDMA) 設計，可大幅增強 MCU 內部資料搬運能力，明顯提升整體系統效能。
M460 系列提供 Keystore 儲存空間，可顯著提升加解密金鑰儲存之安全性。

应用领域：智能工廠、智能建築、传感器中枢、物联网网关、大型儲能系統、TFT LCD 屏之 GUI 控制、以太网转换器、电竞配件等

M480 系列	全速 USB	高速 USB	CAN	硬件加解密	以太網
M463	√	√	√		
M464		√			
M467	√	√	√	√	√

关键特性： 可配置的数据存储区、电压可调接口 (VAI)、16+16 字节 UART FIFO 用于 TX/RX、三组 5 MSPS ADC、高速 USB 从设备 / 主设备 /OTG 带片上 PHY、硬件加解密引擎、10/100 兆以太网、EBI 接口支持 Intel 8080 屏 , ICP/ISP/IAP

Part No.	System						Memory				Timer		Analog			Connectivity																Security			Crypto	Display		Package		Status	Tool	
	Operating Frequency (MHz)	Operating Voltage (min) (V)	Operating Voltage (max) (V)	Operating Temperature (min) (°C)	Operating Temperature (max) (°C)	GPIO	LDROM Flash (KB)	APROM Flash (KB)	SRAM (KB)	PDMA (ch)	Timer (32-bit)	RTC	EADC (12-bit)	DAC (12-bit)	ACMP	LPUART	ISO-7816	QSPI	I²C	USCI	SPI/I²S	SPIM	I²S	CAN FD	SDHC	PSIO	USB FS OTG	USB HS OTG	EMAC	EBI	TRNG	XOM	Key Store	Crypto	Camera Interface	Keypad Interface	Package Type	Package Size	Mass Production	EVB	MP Programmer
M467SJHAE	200	1.8	3.6	40	105	44	8	1024	512	32	4	√	20	2	4	9	3	2	5	1	4	1	2	4	2	4	1	1	1	√	√	√	√	√	√	6x8	LQFP64	7x7	2022Q3	-	-
M467KJHAE	200	1.8	3.6	40	105	100	8	1024	512	32	4	√	28	2	4	10	3	2	5	1	4	1	2	4	2	8	1	1	1	√	√	√	√	√	√	6x8	LQFP128	14x14	2022Q3	-	-
M467JJHAE	200	1.8	3.6	40	105	114	8	1024	512	32	4	√	28	2	4	10	3	2	5	1	4	1	2	4	2	8	1	1	1	√	√	√	√	√	√	6x8	LQFP144	20x20	2022Q3	-	-
M467HJHAE	200	1.8	3.6	40	105	146	8	1024	512	32	4	√	28	2	4	10	3	2	5	1	4	1	2	4	2	8	1	1	1	√	√	√	√	√	√	6x8	LQFP176	24x24	2022Q3	-	-
M463SJHAE	200	1.8	3.6	40	105	44	8	1024	512	32	4	√	20	2	4	9	3	2	5	1	4	1	2	4	2	4	1	1	-	√	√	√	√	-	√	6x8	LQFP64	7x7	2022Q3	-	-
M463KJHAE	200	1.8	3.6	40	105	100	8	1024	512	32	4	√	28	2	4	10	3	2	5	1	4	1	2	4	2	8	1	1	-	√	√	√	√	-	√	6x8	LQFP128	14x14	2022Q3	-	-
M463SIHAE	200	1.8	3.6	40	105	44	8	512	512	32	4	√	20	2	4	9	3	2	5	1	4	1	2	4	2	4	1	1	-	√	√	√	√	-	√	6x8	LQFP64	7x7	2022Q3	-	-
M463KIHAE	200	1.8	3.6	40	105	100	8	512	512	32	4	√	28	2	4	10	3	2	5	1	4	1	2	4	2	8	1	1	-	√	√	√	√	-	√	6x8	LQFP128	14x14	2022Q3	-	-
M463KGCAE	200	1.8	3.6	40	105	100	8	256	128	16	4	√	16	-	2	8	1	2	5	1	4	-	-	2	1	-	-	1	-	√	√	√	√	√	-	6x8	LQFP128	14x14	2022Q4	-	-
M464KGCAE	200	1.8	3.6	40	105	100	8	256	128	16	4	√	16	-	2	8	1	2	5	1	4	-	-	-	1	-	-	1	-	√	√	√	√	√	-	6x8	LQFP128	14x14	2022Q4	-	-
M463SGCAE	200	1.8	3.6	40	105	44	8	256	128	16	4	√	16	-	2	8	1	2	5	1	4	-	-	2	1	-	-	1	-	√	√	√	√	√	-	6x8	LQFP64	7x7	2022Q4	-	-
M464SGCAE	200	1.8	3.6	40	105	44	8	256	128	16	4	√	16	-	2	8	1	2	5	1	4	-	-	-	1	-	-	1	-	√	√	√	√	√	-	6x8	LQFP64	7x7	2022Q4	-	-
M464AGCAE	200	1.8	3.6	40	105	44	8	256	128	16	4	√	16	-	2	8	1	2	5	1	4	-	-	-	1	-	-	1	-	√	√	√	√	√	-	6x8	QFN64	8x8	2022Q4	-	-
M463LGCAE	200	1.8	3.6	40	105	33	8	256	128	16	4	√	12	-	2	8	1	2	5	1	4	-	-	2	1	-	-	1	-	√	√	√	√	√	-	6x8	LQFP48	7x7	2022Q4	-	-
M464LGCAE	200	1.8	3.6	40	105	33	8	256	128	16	4	√	12	-	2	8	1	2	5	1	4	-	-	-	1	-	-	1	-	√	√	√	√	√	-	6x8	LQFP48	7x7	2022Q4	-	-
M464YGCAE	200	1.8	3.6	40	105	33	8	256	128	16	4	√	12	-	2	8	1	2	5	1	4	-	-	-	1	-	-	1	-	√	√	√	√	√	-	6x8	QFN48	8x8	2022Q4	-	-

M451 系列

NuMicro® M451 系列基於 Arm® Cortex®-M4F 内核，支持 DSP 指令集且集成浮点运算单元 (FPU)。
动态功耗可低至 430 μA/MHz，待机电流可低至 1.6 μA。

应用领域：工业自动化、家庭自动化、马达控制、通信系统、USB 配件等。

M451 系列	USB FS	LIN
M451		
M452	√	
M453	√	√

关键特性：可配置的数据存储区、电压可调接口 (VAI)、16+16 字节 UART FIFO 用于 TX/RX、1 MSPS ADC、全速 USB 从设备 / 主设备 / OTG 带片上 PHY、EBI 接口支持 Intel 8080 屏

Part No.	System							Memory					Timer				Analog			Connectivity									Package		Status	Tool	
	Operating Frequency (MHz)	Operating Voltage (min) (V)	Operating Voltage (max) (V)	Operating Temperature (min) (°C)	Operating Temperature (max) (°C)	GPIO	VBAT	LDROM Flash (KB)	APROM Flash (KB)	Data Flash (KB)	SRAM (KB)	PDMA (ch)	Timer (32-bit)	PWM (16-bit)	RTC	EADC (12-bit)	DAC (12-bit)	ACMP	UART	ISO-7816-3	QSPI	I²C	SPI/ I²S	CAN	USB FS Device/ Host	USB FS OTG	EBI	Package Type	Package Size	Mass Production	EVB	MP Programmer
M451LC3AE	72	2.5	5.5	-40	105	39	√	4	40	Configurable	16	8	4	12	√	10	1	2	4	1	1	2	1	-	-	-	√	LQFP48	7x7	√	NT-M451V	NG-M451L
M451LD3AE	72	2.5	5.5	-40	105	39	√	4	72	Configurable	16	8	4	12	√	10	1	2	4	1	1	2	1	-	-	-	√	LQFP48	7x7	√	NT-M451V	NG-M451L
M451LE6AE	72	2.5	5.5	-40	105	39	√	4	128	Configurable	32	12	4	12	√	8	1	2	3	1	1	2	2	-	-	-	√	LQFP48	7x7	√	NT-M451V	NG-M451L
M451LG6AE	72	2.5	5.5	-40	105	39	√	4	256	Configurable	32	12	4	12	√	8	1	2	3	1	1	2	2	-	-	-	√	LQFP48	7x7	√	NT-M451V	NG-M451L
M451MLC3AE	72	2.5	5.5	-40	105	42	-	4	40	Configurable	16	8	4	12	-	11	1	2	4	1	1	2	1	-	-	-	√	LQFP48	7x7	√	NT-M451V	NG-M451ML
M451MLD3AE	72	2.5	5.5	-40	105	42	-	4	72	Configurable	16	8	4	12	-	11	1	2	4	1	1	2	1	-	-	-	√	LQFP48	7x7	√	NT-M451V	NG-M451ML
M451MLE6AE	72	2.5	5.5	-40	105	42	-	4	128	Configurable	32	12	4	12	-	9	1	2	4	1	1	2	2	-	-	-	√	LQFP48	7x7	√	NT-M451V	NG-M451ML
M451MLG6AE	72	2.5	5.5	-40	105	42	-	4	256	Configurable	32	12	4	12	-	9	1	2	3	1	1	2	2	-	-	-	√	LQFP48	7x7	√	NT-M451V	NG-M451ML
M451MSC3AE	72	2.5	5.5	-40	105	55	-	4	40	Configurable	16	8	4	12	-	13	1	2	4	1	1	2	1	-	-	-	√	LQFP64	7x7	√	NT-M451V	NG-M451MS
M451MSD3AE	72	2.5	5.5	-40	105	55	-	4	72	Configurable	16	8	4	12	-	13	1	2	4	1	1	2	1	-	-	-	√	LQFP64	7x7	√	NT-M451V	NG-M451MS
M451RC3AE	72	2.5	5.5	-40	105	53	√	4	40	Configurable	16	8	4	12	√	16	1	2	4	1	1	2	1	-	-	-	√	LQFP64	10x10	√	NT-M451V	NG-M451R
M451RD3AE	72	2.5	5.5	-40	105	53	√	4	72	Configurable	16	8	4	12	√	16	1	2	4	1	1	2	1	-	-	-	√	LQFP64	10x10	√	NT-M451V	NG-M451R
M451RE6AE	72	2.5	5.5	-40	105	53	√	4	128	Configurable	32	12	4	12	√	12	1	2	4	1	1	2	2	-	-	-	√	LQFP64	10x10	√	NT-M451V	NG-M451R
M451RG6AE	72	2.5	5.5	-40	105	53	√	4	256	Configurable	32	12	4	12	√	12	1	2	4	1	1	2	2	-	-	-	√	LQFP64	10x10	√	NT-M451V	NG-M451R
M451VE6AE	72	2.5	5.5	-40	105	85	√	4	128	Configurable	32	12	4	12	√	16	1	2	4	1	1	2	2	-	-	-	√	LQFP100	14x14	√	NT-M451V	NG-M451V
M451VG6AE	72	2.5	5.5	-40	105	85	√	4	256	Configurable	32	12	4	12	√	16	1	2	4	1	1	2	2	-	-	-	√	LQFP100	14x14	√	NT-M451V	NG-M451V
M4521LE6AE	72	2.5	5.5	-40	105	35	√	4	128	Configurable	32	8	4	10	√	10	-	-	3	1	1	2	1	-	1	-	√	LQFP48	7x7	√	NT-M4521S	NG-M453L
M4521SE6AE	72	2.5	5.5	-40	105	49	√	4	128	Configurable	32	8	4	12	√	16	-	-	4	1	1	2	1	-	1	-	√	LQFP64	7x7	√	NT-M4521S	NG-M453S
M452LC3AE	72	2.5	5.5	-40	105	35	√	4	40	Configurable	16	8	4	10	√	10	1	2	4	1	1	2	1	-	-	-	√	LQFP48	7x7	√	NT-M451V	NG-M453L
M452LD3AE	72	2.5	5.5	-40	105	35	√	4	72	Configurable	16	8	4	10	√	10	1	2	4	1	1	2	1	-	-	-	√	LQFP48	7x7	√	NT-M451V	NG-M453L
M452LE6AE	72	2.5	5.5	-40	105	34	√	4	128	Configurable	32	12	4	10	√	8	1	2	3	1	1	2	1	-	-	1	√	LQFP48	7x7	√	NT-M451V	NG-M453L
M452LG6AE	72	2.5	5.5	-40	105	34	√	4	256	Configurable	32	12	4	10	√	8	1	2	3	1	1	2	1	-	-	1	√	LQFP48	7x7	√	NT-M451V	NG-M453L
M452RD3AE	72	2.5	5.5	-40	105	49	√	4	72	Configurable	16	8	4	12	√	16	1	2	4	1	1	2	1	-	-	-	√	LQFP64	10x10	√	NT-M451V	NG-M453R
M452RE6AE	72	2.5	5.5	-40	105	48	√	4	128	Configurable	32	12	4	12	√	12	1	2	4	1	1	2	2	-	-	1	√	LQFP64	10x10	√	NT-M451V	NG-M453R
M452RG6AE	72	2.5	5.5	-40	105	48	√	4	256	Configurable	32	12	4	12	√	12	1	2	4	1	1	2	2	-	-	1	√	LQFP64	10x10	√	NT-M451V	NG-M453R
M452VE6AE	72	2.5	5.5	-40	105	80	√	4	128	Configurable	32	12	4	12	√	16	1	2	4	1	1	2	2	-	-	1	√	LQFP100	14x14	√	NT-M451V	NG-M453V
M452VG6AE	72	2.5	5.5	-40	105	80	√	4	256	Configurable	32	12	4	12	√	16	1	2	4	1	1	2	2	-	-	1	√	LQFP100	14x14	√	NT-M451V	NG-M453V
M453LC3AE	72	2.5	5.5	-40	105	35	√	4	40	Configurable	16	8	4	10	√	10	1	2	4	1	1	2	1	1	-	-	√	LQFP48	7x7	√	NT-M451V	NG-M453L
M453LD3AE	72	2.5	5.5	-40	105	35	√	4	72	Configurable	16	8	4	10	√	10	1	2	4	1	1	2	1	1	-	-	√	LQFP48	7x7	√	NT-M451V	NG-M453L
M453LE6AE	72	2.5	5.5	-40	105	34	√	4	128	Configurable	32	12	4	10	√	8	1	2	3	1	1	2	2	1	-	1	√	LQFP48	7x7	√	NT-M451V	NG-M453L
M453LG6AE	72	2.5	5.5	-40	105	34	√	4	256	Configurable	32	12	4	10	√	8	1	2	3	1	1	2	2	1	-	1	√	LQFP48	7x7	√	NT-M451V	NG-M453L
M453RD3AE	72	2.5	5.5	-40	105	49	√	4	72	Configurable	16	8	4	12	√	16	1	2	4	1	1	2	1	1	-	-	√	LQFP64	10x10	√	NT-M451V	NG-M453R
M453RE6AE	72	2.5	5.5	-40	105	48	√	4	128	Configurable	32	12	4	12	√	12	1	2	4	1	1	2	2	1	-	1	√	LQFP64	10x10	√	NT-M451V	NG-M453R
M453RG6AE	72	2.5	5.5	-40	105	48	√	4	256	Configurable	32	12	4	12	√	12	1	2	4	1	1	2	2	1	-	1	√	LQFP64	10x10	√	NT-M451V	NG-M453R
M453VD3AE	72	2.5	5.5	-40	105	72	√	4	72	Configurable	16	8	4	12	√	16	1	2	4	1	1	2	1	1	-	-	√	LQFP100	14x14	√	NT-M451V	NG-M453V
M453VE6AE	72	2.5	5.5	-40	105	80	√	4	128	Configurable	32	12	4	12	√	16	1	2	4	1	1	2	2	1	-	1	√	LQFP100	14x14	√	NT-M451V	NG-M453V
M453VG6AE	72	2.5	5.5	-40	105	80	√	4	256	Configurable	32	12	4	12	√	16	1	2	4	1	1	2	2	1	-	1	√	LQFP100	14x14	√	NT-M451V	NG-M453V

NUC505 系列

NuMicro® NUC505 系列基于 Arm® Cortex®-M4F 内核，支持 DSP 指令集且集成浮点运算单元 (FPU)。
动态功耗可低至 479 μA/MHz，待机电流可低至 7 μA。
NUC505 系列内置 Audio PLL 与支持麦克风 / 线路输入及耳机输出的立体声 24 位 Sigma-Delta 音讯编译码器。

应用领域：热敏打印机、GPS 定位器、无线麦克风、报警扬声器等
关键特性：128 位密钥用于代码保护、64+64 字节 UART FIFO 用于 TX/RX、2 组 USB、Audio PLL、24 位音讯编译码器

Part No.	System							Memory		Timer			Analog		Connectivity							Package		Status	Tool	
	Operating Frequency (MHz)	Operating Voltage (min) (V)	Operating Voltage (max) (V)	Operating Temperature (min) (°C)	Operating Temperature (max) (°C)	GPIO	V_{BAT}	APROM Flash (KB)	Data Flash (KB)	Timer (32-bit)	PWM (16-bit)	RTC	ADC (12-bit)	Audio Codec	UART	SPI	I²C	I²S	SDHC	USB FS Host	USB HS Device	Package Type	Package Size	Mass Production	EVB	MP Programmer
NUC505DL13Y	100	3	3.6	-40	85	25	√	2048	128	4	4	√	5	-	3	2	2	1	1	1	1	LQFP48	7x7	√	NT-NUC505Y	-
NUC505DLA	100	3	3.6	-40	85	18	√	512	128	4	-	√	5	1	2	1	2	1	-	-	1	LQFP48	7x7	√	NT-NUC505Y	-
NUC505DS13Y	100	3	3.6	-40	85	35	√	2048	128	4	4	√	8	1	3	2	2	1	1	1	1	LQFP64	7x7	√	NT-NUC505Y	-
NUC505DSA	100	3	3.6	-40	85	34	√	512	128	4	4	√	5	1	3	2	2	1	1	1	1	LQFP64	7x7	√	NT-NUC505Y	-
NUC505YLA	100	3	3.6	-40	85	18	√	512	128	4	-	√	5	1	2	1	2	1	-	-	1	QFN48	7x7	√	NT-NUC505Y	-
NUC505YLA2Y	100	3	3.6	-40	85	25	√	512	128	4	4	√	5	-	3	2	3	1	1	1	1	QFN48	7x7	√	NT-NUC505Y	-
NUC505YO13Y	100	3	3.6	-40	85	52	√	2048	128	4	4	√	8	1	3	2	2	1	1	1	1	QFN88	10x10	√	NT-NUC505Y	-

NuMicro® Arm9™ 微处理器

NUC970/980 系列

新唐 NUC970/980 工业网络系列提供堆栈 64 MB~128 MB DDR 内存于 LQFP 封装，可缩小 PCB 尺寸与减少 EMI 问题。提供了丰富的外设，包括 11 组 UART、双以太网与双 SDIO / eMMC 接口、NAND 闪存接口、LCD 控制器、CAN 2.0B 接口和高速 USB 2.0 主机 / 设备控制器、可实现高度灵活性， 集成了加密引擎，包含 AES、ECC、RSA 和 SHA 功能提供硬件加速。

开机来源：SPI NOR、SPI NAND、NAND、SD、eMMC、USB

应用领域：工业自动化、人机界面、工业物联网网关、网路打印机、以太网转换器、智能家居匝道器、电表集中器等

NUC970/980 系列	EBI	LCD	Crypto Engine	Linux
NUC980DF	√	-	AES/ECC/RSA/SHA	√
NUC980DK	√	-	AES/ECC/RSA/SHA	√
NUC980DR	-	-	AES/ECC/RSA/SHA	√
NUC972DF	√	√	AES/ECC/SHA/DES/3DES	√
NUC975DK	-	-	AES/ECC/SHA/DES/3DES	√
NUC976DK	-	√	AES/ECC/SHA/DES/3DES	√
NUC977DK	-	√	AES/ECC/SHA/DES/3DES	√

关键特性：MCP 工业规格 DDR 于 LQFP 封装、双高速 USB 主机、 双 10/100 兆 以太网口

NUC970/980 系列

Part No.	System						Memory			Timer	Analog	Connectivity												Security	Crypto	Display		Package		Status	Tool
	Operating Frequency (MHz)	Operating Voltage (min) (V)	Operating Voltage (max) (V)	Operating Temperature (min) (°C)	Operating Temperature (max) (°C)	GPIO	SRAM (KB)	DDR (MB)	PDMA	PWM (16-bit)	ADC (12-bit)	UART	ISO-7816-3	QSPI	SPI	I²C	CAN	SDHC	USB FS Host	USB HS Host	USB HS Device/ Host	EMAC	EBI	OTP	Crypto	Camera Interface	TFT-LCD Interface	Package Type	Package Size	Mass Production	EVB
NUC980DF63YC	300	2.97	3.63	-40	85	104	16	64	6	8	8	10	2	1	2	4	4	2	HL*6	1	1	2	√	-	√	2	-	LQFP216	24x24	√	NK-NUC980
NUC980DF71YC	300	2.97	3.63	-40	85	104	16	128	6	8	8	10	2	1	2	4	4	2	HL*6	1	1	2	√	-	√	2	-	LQFP216	24x24	√	-
NUC980DK63YC	300	2.97	3.63	-40	85	92	16	64	6	8	8	10	2	1	2	4	4	2	HL*6	1	1	2	√	-	√	2	-	LQFP128	14x14	√	NK-NUC980
NUC980DK71YC	300	2.97	3.63	-40	85	92	16	128	6	8	8	10	2	1	2	4	4	2	HL*6	1	1	2	√	-	√	2	-	LQFP128	14x14	√	-
NUC980DR63YC	300	2.97	3.63	-40	85	40	16	64	6	5	2	8	2	-	2	2	2	1	HL*6	1	1	1	-	-	√	1	-	LQFP64-EP	10x10	√	NK-NUC980
NUC972DF63YC	300	2.97	3.63	-40	85	146	56	64	-	4	8	11	2	-	2	2	2	2	-	1	1	2	√	√	√	1	24bit	LQFP216	24x24	√	ND-NUC972
NUC972DF71YC	300	2.97	3.63	-40	85	146	56	128	-	4	8	11	2	-	2	2	2	2	-	1	1	2	√	√	√	1	24bit	LQFP216	24x24	√	-
NUC975DK63YC	300	2.97	3.63	-40	85	87	56	64	-	4	4	10	2	-	2	2	1	2	-	1	1	1	√	√	√	1	-	LQFP128	14X14	√	ND-NUC972
NUC976DK63YC	300	2.97	3.63	-40	85	80	56	64	-	4	4	6	2	-	2	2	1	2	-	1	1	1	-	√	√	1	16bit	LQFP128	14x14	√	ND-NUC972
NUC977DK63YC	300	2.97	3.63	-40	85	87	56	64	-	4	-	8	2	-	2	2	1	2	-	1	1	1	-	√	√	1	16bit	LQFP128	14x14	√	ND-NUC972

N9H 系列

新唐人机界面 emWin N9H 系列基于 ARM926EJ-S 内核。 工作主頻分别為 200 MHz、240 MHz 和 300 MHz。它采用堆栈式 SDRAM 的多芯片封装（MCP），容量范围为 2 MB 至 128 MB，可显著降低 PCB 大小和电磁干扰（EMI），减少系统设计工作并缩短产品设计周期。
N9H 系列 BSP（软件支持包）带有工业领先的 emWin 嵌入式互动图形界面库，其中包含 emWin 库、样本、工具和文件；让开发人员创建流畅、专业、高质量的产品。

开机来源：SPI NOR, NAND, SD, eMMC
应用领域：工业自动化设备、智慧建筑、智能家电、智慧医疗装置、充电桩、以及各式消费类人机介面产品

系列	工作主频 (MHz)	LCD	影像编解码	音讯编解码	Ethernet	CAN	工作温度	Linux
N9H20	200	16 / 24bit	JPEG	√	-	-	-20°C to 85°C	√
N9H26	240	24bit	JPEG/H.264	√	-	-	-20°C to 85°C	√
N9H30	300	16 / 24 bit	JPEG	-	√	√	-40°C to 85°C	√

关键特性：整合 SDRAM 高达 128 MB 于 LQFP 封装、LCD 支持最高 24 位 1024x768、免費使用 emWin 绘图函式库

Part No.	System						Memory			Timer		Analog		Connectivity											Display				Package		Status	Tool
	Operating Frequency (MHz)	Operating Voltage (min) (V)	Operating Voltage (max) (V)	Operating Temperature (min) (°C)	Operating Temperature (max) (°C)	GPIO	SRAM (KB)	DDR (MB)	PDMA (ch)	Timer (32-bit)	PWM (16-bit)	ADC (10-bit)	ADC (12-bit)	UART	ISO-7816-3	SPI	I²C	CAN	SDHC	USB FS	USB HS	USB HS Device/ Host	EMAC	EBI	Camera Interface	TFT-LCD Interface	2D Graphics Engine	Video Codec	Package Type	Package Size	Mass Production	EVB
N9H20K11N	200	2.97	3.63	-20	85	70	8	2	4	2	4	3	-	2	-	2	1	-	3	H*1	D*1	-	-	-	-	24bit	√	JPEG	LQFP128	14x14	√	NK-N9H20
N9H20K31N	200	2.97	3.63	-20	85	70	8	8	4	2	4	3	-	2	-	2	1	-	3	H*1	D*1	-	-	-	-	24bit	√	JPEG	LQFP128	14x14	√	NK-N9H20
N9H20K51N	200	2.97	3.63	-20	85	70	8	32	4	2	4	3	-	2	-	2	1	-	3	H*1	D*1	-	-	-	-	24bit	√	JPEG	LQFP128	14x14	√	NK-N9H20
N9H20R11N	200	2.97	3.63	-20	85	44	8	2	4	2	4	-	-	2	-	1	1	-	1	H*1	D*1	-	-	-	-	16bit	√	JPEG	TQFP64-EP	10x10	√	NK-N9H20
N9H26K63N	240	2.97	3.63	-20	85	80	8	64	4	4	4	7	-	2	-	2	1	-	3	-	H*2+D*1	-	-	-	-	24bit	√	JPEG/ H.264	LQFP128	14x14	√	NK-N9H26
N9H30F63IEC	300	2.97	3.63	-40	85	146	56	64	-	5	4	-	8	11	2	2	2	2	2	-	H*1+H/D*1	1	2	√	1	24bit	√	JPEG	LQFP216	24x24	√	NK-N9H30
N9H30F71IEC	300	2.97	3.63	-40	85	146	56	128	-	5	4	-	8	11	2	2	2	2	2	-	H*1+H/D*1	1	2	√	1	24bit	√	JPEG	LQFP216	24x24	√	-
N9H30K63IEC	300	2.97	3.63	-40	85	86	56	64	-	5	4	-	5	9	2	2	2	1	2	-	H*1+H/D*1	1	1	-	1	16bit	√	JPEG	LQFP128	14x14	√	NK-N9H30

N329 系列

新唐 N329 影像系列提供堆栈 2 ~64 MB DDR 内存于 LQFP 封装，可缩小 PCB 尺寸与减少 EMI 问题。提供 JPEG 與 H.264 影像邊解碼硬件引擎，且有丰富的外设，包括 UART、以太网、SDIO / eMMC 接口、NAND 闪存接口、LCD 控制器、內建音讯编译码器和高速 USB 2.0 主机 / 设备控制器，可应用于消费类影音产品。

开机来源：SPI NOR、NAND、SD、eMMC

系列	Operating Frequency	Video CODEC	Linux
N3290xR	200	JPEG	√
N3290xU	200	JPEG	√
N3290xK	200	JPEG	√
N3292xU	240	H.264/ JPEG	√

关键特性：內建 2D GFX, H.264 / MJPEG 硬体加速器、整合 SDRAM 高达 64MB 于 LQFP 封装、支持 LCD 接口、內建音讯编译码器

Part No.	System						Memory			Timer		Analog	Connectivity							Display				Package		Status	Tool
	Operating Frequency (MHz)	Operating Voltage (min) (V)	Operating Voltage (max) (V)	Operating Temperature (min) (°C)	Operating Temperature (max) (°C)	GPIO	SRAM (KB)	DDR (MB)	PDMA (ch)	Timer (32-bit)	PWM (16-bit)	ADC (10-bit)	UART	SPI	I²C	SDHC	USB FS	USB HS	EMAC	Camera Interface	TFT-LCD Interface	2D Graphics Engine	Video Codec	Package Type	Package Size	Mass Production	EVB
N32903K5DN	200	2.97	3.63	-20	85	70	8	8	4	2	4	3	2	2	1	3	H*1	D*1	-	1	24bit	√	JPEG	LQFP128	14x14	√	ND-N32905
N32905K5DN	200	2.97	3.63	-20	85	70	8	32	4	2	4	3	2	2	1	3	H*1	D*1	-	1	24bit	√	JPEG	LQFP128	14x14	√	ND-N32905
N32901R1DN	200	2.97	3.63	-20	85	34	8	2	4	2	2	1	2	1	-	2	H*1	D*1	-	1	-	√	JPEG	LQFP64	10x10	√	ND-N32905
N32903R5DN	200	2.97	3.63	-20	85	34	8	8	4	2	2	1	2	1	-	2	H*1	D*1	-	1	-	√	JPEG	TQFP64-EP	10x10	√	ND-N32905
N32905R3DN	200	2.97	3.63	-20	85	34	8	32	4	2	2	1	2	1	-	2	H*1	D*1	-	1	-	√	JPEG	TQFP64-EP	10x10	√	ND-N32905
N32901U1DN	200	2.97	3.63	-20	85	64	8	2	4	2	4	2	2	1	1	3	H*1	D*1	-	1	18bit	√	JPEG	LQFP128	14x14	√	ND-N32905
N32903U5DN	200	2.97	3.63	-20	85	64	8	8	4	2	4	2	2	1	1	3	H*1	D*1	-	1	18bit	√	JPEG	LQFP128	14x14	√	ND-N32905
N32905U3DN	200	2.97	3.63	-20	85	64	8	32	4	2	4	2	2	1	1	3	H*1	D*1	-	1	18bit	√	JPEG	LQFP128	14x14	√	ND-N32905
N32926U6DN	240	2.97	3.63	-20	85	80	8	64	4	4	4	7	2	2	1	3	H*1	D*1	1	2	24bit	√	JPEG/H.264	LQFP128	14x14	√	ND-N32926

新唐 NuMicro® 8051 微控制器家族

新唐在 8051 微控制器领域深耕多年，不断提供产品高性价比与最佳解决方案来满足客户需求。8051 微控制器全产品线为工业温度规格，并带丰富外设以满足市场不同应用需求。产品组合完整，适用于各类工业或消费产品应用领域，并提供完整开发工具及全方位服务，使客户能缩短产品上市时间。

MS51 工业控制系列

新唐 MS51 系列以 1T 8051 处理器为内核，能在低引脚数的小封装內提供豐富的外设，目标应用定位于注重成本的产品设备。

关键特性：可配置的数据存储区。具备高抗干扰能力 (8 kV ESD 与 4 kV EFT) 与强灌电流能力 (20 mA)

应用领域：工业自动化、小家電、燈光控制、马达控制、安防系统、消費性產品等

Part No.	System						Memory				Timer			Analog	Connectivity				Security	Package		Status	Tool	
	Operating Frequency (MHz)	Operating Voltage (min) (V)	Operating Voltage (max) (V)	Operating Temperature (min) (°C)	Operating Temperature (max) (°C)	GPIO	LDROM Flash (KB)	APROM Flash (KB)	Data Flash (KB)	SRAM (KB)	WDT	Timer (16-bit)	PWM (16-bit)	ADC (12-bit)	UART	ISO-7816-3	SPI	I²C	SPROM (Byte)	Package Type	Package Size	Mass Production	EVB	MP Programmer
MS51BA9AE	16/24	2.4	5.5	-40	105	8	4	8	Shared with APROM	1K + 256 (B)	√	4	5	5	2	-	1	1	128	MSOP10	3x3	√	NT-MS51DA	-
MS51DA9AE	16/24	2.4	5.5	-40	105	12	4	8	Shared with APROM	1K + 256 (B)	√	4	5	8	2	-	1	1	128	TSSOP14	4.4x5	√	NT-MS51DA	-
MS51EB0AE	16/24	2.4	5.5	-40	105	26	4	16	Shared with APROM	2K+256 (B)	√	4	12	15	2	3	1	1	128	TSSOP28	4.4x9.7	√	NK-MS51PC	NLG-MS51E
MS51EC0AE	16/24	2.4	5.5	-40	105	26	4	32	Shared with APROM	2K+256 (B)	√	4	12	15	2	3	1	1	128	TSSOP28	4.4x9.7	√	NK-MS51PC	NLG-MS51E
MS51FB9AE	16/24	2.4	5.5	-40	105	18	4	16	Shared with APROM	1K + 256 (B)	√	4	6	8	2	-	1	1	128	TSSOP20	4.4x6.5	√	NT-MS51FB	NLG-MS51F
MS51FC0AE	16/24	2.4	5.5	-40	105	18	4	32	Shared with APROM	2K+256 (B)	√	4	12	15	2	3	1	1	128	TSSOP20	4.4x6.5	√	NK-MS51PC	NLG-MS51F
MS51PC0AE	16/24	2.4	5.5	-40	105	31	4	32	Shared with APROM	2K+256 (B)	√	4	12	15	2	3	1	1	128	LQFP32	7x7	√	NK-MS51PC	-
MS51TC0AE	16/24	2.4	5.5	-40	105	31	4	32	Shared with APROM	2K+256 (B)	√	4	12	15	2	3	1	1	128	QFN33	4x4	√	NK-MS51PC	-
MS51XB9AE	16/24	2.4	5.5	-40	105	18	4	16	Shared with APROM	1K + 256 (B)	√	4	6	8	2	-	1	1	128	QFN20	3x3	√	NT-MS51FB	-
MS51XB9BE	16/24	2.4	5.5	-40	105	18	4	16	Shared with APROM	1K + 256 (B)	√	4	6	8	2	-	1	1	128	QFN20	3x3	√	NT-MS51FB	NLG-20XB
MS51XC0BE	16/24	2.4	5.5	-40	105	18	4	32	Shared with APROM	2K+256 (B)	√	4	12	15	2	3	1	1	128	QFN20	3x3	√	NK-MS51PC	-

ML51 / ML54 / ML56 低功耗系列

新唐 ML51 系列以 1T 8051 处理器为内核，满足低功耗与高性能的需求，内建参考电压与模拟比较器，更能符合手持式装置的应用。

关键特性：可配置的数据存储区，正常运行功耗为 100 μA/MHz，低功耗运行模式功耗为 15 μA，低功耗闲置模式功耗为 13 μA，休眠模式在 3.3V 时功耗为 0.8 μA、在 10 μS 内的快速唤醒时间、并具备高抗干扰能力 (8 kV ESD，4 kV EFT) 与强灌电流能力 (20 mA)。
应用领域：工业自动化、家庭自动化、马达控制、安防系统、温控器、电池管理、医疗器材等

• ML51 低功耗系列

Part No.	System						Memory					Timer				Analog				Connectivity				Security			Display	Package		Status	Tool	
	Operating Frequency (MHz)	Operating Voltage (min) (V)	Operating Voltage (max) (V)	Operating Temperature (min) (°C)	Operating Temperature (max) (°C)	GPIO	LDROM Flash (KB)	APROM Flash (KB)	Data Flash (KB)	SRAM (KB)	PDMA (ch)	WDT	Timer (16-bit)	PWM (16-bit)	RTC	ADC (12-bit)	ACMP	Touch Key	Internal Voltage Reference	UART	ISO-7816-3	SPI	I²C	SPROM (Byte)	UID	UCID	ComSeg LCD	Package Type	Package Size	Mass Production	EVB	MP Programmer
ML51BB9AE	24	1.8	5.5	-40	105	7	4	16	Shared with APROM	1	2	√	4	4	-	2	-	-	-	2	-	-	1	128	96	128	-	MSOP10	3x3	√	NT-ML51EB	-
ML51DB9AE	24	1.8	5.5	-40	105	11	4	16	Shared with APROM	1	2	√	4	4	-	3	-	-	-	2	1	1	2	128	96	128	-	TSSOP14	4.4x5.0	√	NT-ML51EB	-
ML51EB9AE	24	1.8	5.5	-40	105	24	4	16	Shared with APROM	1	2	√	4	6	-	8	-	-	-	2	1	1	2	128	96	128	-	TSSOP28	4.4x9.7	√	NT-ML51EB	NLG-28E
ML51EC0AE	24	1.8	5.5	-40	105	24	4	32	Shared with APROM	2	2	√	4	6	-	8	2	-	√	2	1	2	2	128	96	128	-	TSSOP28	4.4x9.7	√	NK-ML51PC	NLG-28E
ML51FB9AE	24	1.8	5.5	-40	105	16	4	16	Shared with APROM	1	2	√	4	6	-	6	-	-	-	2	1	1	2	128	96	128	-	TSSOP20	4.4x6.5	√	NT-ML51EB	NLG-20F
ML51LD1AE	24	1.8	3.6	-40	105	43	4	64	Shared with APROM	4	4	√	4	12	√	10	2	-	√	2	2	2	2	128	96	128	-	LQFP48	7x7	√	NK-ML51SD	NLG-48L
ML51OB9AE	24	1.8	5.5	-40	105	16	4	16	Shared with APROM	1	2	√	4	6	-	6	-	-	-	2	1	1	2	128	96	128	-	SOP20	7.6x13	√	NT-ML51EB	-
ML51PB9AE	24	1.8	5.5	-40	105	28	4	16	Shared with APROM	2	2	√	4	6	-	8	2	-	√	2	1	1	2	128	96	128	-	LQFP32	7x7	√	NT-ML51EB	-
ML51PC0AE	24	1.8	5.5	-40	105	28	4	32	Shared with APROM	2	2	√	4	6	-	8	2	-	√	2	1	2	2	128	96	128	-	LQFP32	7x7	√	NK-ML51PC	-
ML51SD1AE	24	1.8	3.6	-40	105	56	4	64	Shared with APROM	4	4	√	4	12	√	14	2	-	√	2	2	2	2	128	96	128	-	LQFP64	7x7	√	NK-ML51SD	NLG-64S
ML51TB9AE	24	1.8	5.5	-40	105	28	4	16	Shared with APROM	2	2	√	4	6	-	8	2	-	√	2	1	1	2	128	96	128	-	QFN33	4x4	√	NT-ML51EB	NLG-32T
ML51TC0AE	24	1.8	5.5	-40	105	28	4	32	Shared with APROM	2	2	√	4	6	-	8	2	-	√	2	1	2	2	128	96	128	-	QFN33	4x4	√	NK-ML51PC	NLG-32T
ML51TD1AE	24	1.8	3.6	-40	105	28	4	64	Shared with APROM	4	4	√	4	12	√	9	2	-	√	2	2	2	2	128	96	128	-	QFN33	4x4	√	NK-ML51SD	NLG-32T
ML51UB9AE	24	1.8	5.5	-40	105	24	4	16	Shared with APROM	2	2	√	4	6	-	8	-	-	√	2	1	1	2	128	96	128	-	SOP28	7.6x18	√	NT-ML51EB	-
ML51UC0AE	24	1.8	5.5	-40	105	24	4	32	Shared with APROM	2	2	√	4	6	-	8	2	-	√	2	1	2	2	128	96	128	-	SOP28	7.6x18	√	NK-ML51PC	-
ML51XB9AE	24	1.8	5.5	-40	105	17	4	16	Shared with APROM	1	2	√	4	6	-	6	-	-	-	2	1	1	2	128	96	128	-	QFN20	3x3	√	NT-ML51EB	-

• ML54 低功耗 LCD 系列

Part No.	System						Memory						Timer				Analog				Connectivity				Security			Display	Package		Status	Tool	
	Operating Frequency (MHz)	Operating Voltage (min) (V)	Operating Voltage (max) (V)	Operating Temperature (min) (°C)	Operating Temperature (max) (°C)	GPIO	LDROM Flash (KB)	APROM Flash (KB)	Data Flash (KB)	SRAM (KB)	PDMA (ch)	WDT	Timer (16-bit)	PWM (16-bit)	RTC	ADC (12-bit)	ACMP	Touch Key	Internal Voltage Reference	UART	ISO-7816-3	SPI	I²C	SPROM (Byte)	UID	UCID	ComSeg LCD	Package Type	Package Size	Mass Production	EVB	MP Programmer
ML54LD1AE	24	1.8	3.6	-40	105	42	-	64	Shared with APROM	4	4	√	4	12	√	10	2	-	√	2	2	2	2	128	96	128	4x22/6x20/8x18	LQFP48	7x7	√	NK-ML54SD	NLG-48L
ML54MD1AE	24	1.8	3.6	-40	105	38	-	64	Shared with APROM	4	4	√	4	12	√	10	2	-	√	2	2	2	2	128	96	128	4x21/6x19/8x17	LQFP44	10x10	√	NK-ML54SD	-
ML54SD1AE	24	1.8	3.6	-40	105	55	-	64	Shared with APROM	4	4	√	4	12	√	14	2	-	√	2	2	2	2	128	96	128	4x32/6x30/8x28	LQFP64	7x7	√	NK-ML54SD	NLG-64S

• ML56 低功耗 LCD + 觸摸系列

Part No.	System						Memory						Timer				Analog				Connectivity				Security			Display	Package		Status	Tool	
	Operating Frequency (MHz)	Operating Voltage (min) (V)	Operating Voltage (max) (V)	Operating Temperature (min) (°C)	Operating Temperature (max) (°C)	GPIO	LDROM Flash (KB)	APROM Flash (KB)	Data Flash (KB)	SRAM (KB)	PDMA (ch)	WDT	Timer (16-bit)	PWM (16-bit)	RTC	ADC (12-bit)	ACMP	Touch Key	Internal Voltage Reference	UART	ISO-7816-3	SPI	I²C	SPROM (Byte)	UID	UCID	ComSeg LCD	Package Type	Package Size	Mass Production	EVB	MP Programmer
ML56LD1AE	24	1.8	3.6	-40	105	42	-	64	Shared with APROM	4	4	√	4	12	√	10	2	9	√	2	2	2	2	128	96	128	4x22/6x20/8x18	LQFP48	7x7	√	NK-ML56SD	NLG-48L
ML56MD1AE	24	1.8	3.6	-40	105	38	-	64	Shared with APROM	4	4	√	4	12	√	10	2	6	√	2	2	2	2	128	96	128	4x21/6x19/8x17	LQFP44	10x10	√	NK-ML56SD	-
ML56SD1AE	24	1.8	3.6	-40	105	55	-	64	Shared with APROM	4	4	√	4	12	√	14	2	14	√	2	2	2	2	128	96	128	4x32/6x30/8x28	LQFP64	7x7	√	NK-ML56SD	NLG-64S

N76E 系列 (1T)

应用领域：工业自动化、家庭自动化、温控器、 人机接口、 LED 灯调控制、消费性产品等。

关键特性：提供高整合度的高精度 ADC 与电源管理单元，包括 BOD、POR 与 LVR 等、内建丰富外设 I²C、UART、SPI、ADC、PWM、内建 RC 振荡、数据 Flash 区域

Part No.	System						Memory				Timer					Analog		Connectivity			Display	Package		Status	Tool	
	Operating Frequency (MHz)	Operating Voltage (min) (V)	Operating Voltage (max) (V)	Operating Temperature (min) (°C)	Operating Temperature (max) (°C)	GPIO	LDROM Flash (KB)	APROM Flash (KB)	Data Flash (KB)	SRAM (KB)	WDT	Timer (16-bit)	PWM (10-bit)	PWM (12-bit)	PWM (16-bit)	ADC (10-bit)	ADC (12-bit)	UART	SPI	I²C	ComSeg LCD	Package Type	Package Size	Mass Production	EVB	MP Programmer
N76E003AQ20	16	2.4	5.5	-40	105	18	4	18	Shared with APROM	1	√	4	-	-	6	-	8	2	1	1	-	QFN20	3x3	√	NT-N76E003	-
N76E003AT20	16	2.4	5.5	-40	105	18	4	18	Shared with APROM	1	√	4	-	-	6	-	8	2	1	1	-	TSSOP20	4.4x6.5	√	NT-N76E003	NLG-MS51F
N76E003BQ20	16	2.4	5.5	-40	105	18	4	18	Shared with APROM	1	√	4	-	-	6	-	8	2	1	1	-	QFN20	3x3	√	NT-N76E003	NLG-20XB
N76E616AF44	16	2.4	5.5	-40	105	42	4	18	Shared with APROM	512 (B)	√	4	-	-	6	8	-	2	-	1	4x32/6x30	PQFP44	10x10	√	NT-N76E616	-
N76E616AL48	16	2.4	5.5	-40	105	46	4	18	Shared with APROM	512 (B)	√	4	-	-	6	8	-	2	-	1	4x32/6x30	LQFP48	7x7	√	NT-N76E616	-
N76E616AM44	16	2.4	5.5	-40	105	42	4	18	Shared with APROM	512 (B)	√	4	-	-	6	8	-	2	-	1	4x32/6x30	LQFP44	10x10	√	NT-N76E616	-
N76E885AQ20	25	2.4	5.5	-40	105	18	4	18	Shared with APROM	512 (B)	√	4	-	6	-	10	-	2	1	1	-	QFN20	4x4	√	NT-N76E885	-
N76E885AT20	25	2.4	5.5	-40	105	18	4	18	Shared with APROM	512 (B)	√	4	-	6	-	10	-	2	1	1	-	TSSOP20	4.4x6.5	√	NT-N76E885	-
N76E885AT28	25	2.4	5.5	-40	105	26	4	18	Shared with APROM	512 (B)	√	4	-	6	-	10	-	2	1	1	-	TSSOP28	4.4x9.7	√	NT-N76E885	-

N79E 系列 (4T)

Part No.	System						Memory				Timer					Analog		Connectivity			Display	Package		Status	Tool	
	Operating Frequency (MHz)	Operating Voltage (min) (V)	Operating Voltage (max) (V)	Operating Temperature (min) (°C)	Operating Temperature (max) (°C)	GPIO	LDROM Flash (KB)	APROM Flash (KB)	Data Flash (KB)	SRAM (KB)	WDT	Timer (16-bit)	PWM (10-bit)	PWM (12-bit)	PWM (16-bit)	ADC (10-bit)	ADC (12-bit)	UART	SPI	I²C	ComSeg LCD	Package Type	Package Size	Mass Production	EVB	MP Programmer
N79E715AS16	24	2.4	5.5	-40	85	13	4	16	Shared with APROM	512 (B)	√	4	4	-	-	8	-	2	1	1	-	SOP16	3.9x10	√	NT-N79E715	-
N79E715AS20	24	2.4	5.5	-40	85	17	4	16	Shared with APROM	512 (B)	√	4	4	-	-	8	-	2	1	1	-	SOP20	7.6x13	√	NT-N79E715	-
N79E715AS28	24	2.4	5.5	-40	85	25	4	16	Shared with APROM	512 (B)	√	4	4	-	-	8	-	2	1	1	-	SOP28	7.6x18	√	NT-N79E715	-
N79E715AT20	24	2.4	5.5	-40	85	17	4	16	Shared with APROM	512 (B)	√	4	4	-	-	8	-	2	1	1	-	TSSOP20	4.4x6.5	√	NT-N79E715	-
N79E715AT28	24	2.4	5.5	-40	85	25	4	16	Shared with APROM	512 (B)	√	4	4	-	-	8	-	2	1	1	-	TSSOP28	4.4x9.7	√	NT-N79E715	-
N79E8132AS16	24	2.4	5.5	-40	85	13	4	16	Shared with APROM	512 (B)	√	4	4	-	-	8	-	2	1	1	-	SOP16	3.9x10	√	NT-N79E715	-
N79E815AS20	24	2.4	5.5	-40	85	17	4	16	Shared with APROM	512 (B)	√	4	4	-	-	8	-	2	1	1	-	SOP20	7.6x13	√	NT-N79E715	-
N79E815AS28	24	2.4	5.5	-40	85	25	4	16	Shared with APROM	512 (B)	√	4	4	-	-	8	-	2	1	1	-	SOP28	7.6x18	√	NT-N79E715	-
N79E815AT20	24	2.4	5.5	-40	85	17	4	16	Shared with APROM	512 (B)	√	4	4	-	-	8	-	2	1	1	-	TSSOP20	4.4x6.5	√	NT-N79E715	-
N79E815AT28	24	2.4	5.5	-40	85	25	4	16	Shared with APROM	512 (B)	√	4	4	-	-	8	-	2	1	1	-	TSSOP28	4.4x9.7	√	NT-N79E715	-

标准型 8051系列

新唐标准型 8051 系列、内建 22.1184 MHz 高精度振荡器 、并具备高抗干扰能力 (8 kV ESD, 4 kV EFT)、4 K 字节独立 Flash 作为在线系统编程 (In System Programming) 用途。

关键特性：内建丰富外设，UART、SPI、PWM、RC 振荡、数据 Flash 区域和在线系统程序设计 (In-System Programming)
应用领域：条形码读取设备、数字电话、多计算机切换器 (KVM)、2.4G 无线键盘、工控机、显示器等

• W78 系列

Part No.	Flash (KB)	SRAM (bytes)	ISP ROM (KB)	I/O	Connectivity			ADC (10-bit)	Comp	ISP	INT	PWM (8-bit)	Timer (16-bit)	Special Function	Package	Mass Production
					I²C	SPI	UART									
W78E052D	8	256	2	36	-	-	1	-	-	√	4	-	3	6T/12T option, Extra I/O port	PDIP40/PLCC44/PQFP44/ LQFP48//TQFP44	√
W78E054D	16	256	2	36	-	-	1	-	-	√	4	-	3	6T/12T option, Extra I/O port	PDIP40/PLCC44/PQFP44/ LQFP48//TQFP44	√
W78E058D	32	512	4	36	-	-	1	-	-	√	4	-	3	6T/12T option, Extra I/O port	PDIP40/PLCC44/PQFP44/ LQFP48	√
W78E516D	64	512	4	36	-	-	1	-	-	√	4	-	3	6T/12T option, Extra I/O port	PDIP40/PLCC44/PQFP44/ LQFP48	√

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Smart Toy

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• W584A 4-bit µC Base, 1-ch Voice + Dual Tone Melody Synthesizer

Part No.	ROM (Kbits)	Duration (Sec.) @ 5-bit MDM		VDD (V)	CH	Fsys (MHz)	OSC	Audio		RAM (N)	GPIO	High Sink
		(6 KHz)	(8 KHz)					PWM	DAC			
W584A011	300	9	7	2.2~5.5	1 + DTM	4,8	Ring	9-bit	10-bit	128	8 I/O	8-pin
W584A016	460	15	11	2.2~5.5	1 + DTM	4,8	Ring	9-bit	10-bit	128	8 I/O	8-pin
W584A021	620	20	15	2.2~5.5	1 + DTM	4,8	Ring	9-bit	10-bit	128	8 I/O	8-pin
W584A031	1020	34	25	2.2~5.5	1 + DTM	4,8	Ring	9-bit	10-bit	128	8 I/O	8-pin
W584A041	1260	42	32	2.2~5.5	1 + DTM	4,8	Ring	9-bit	10-bit	128	8 I/O	8-pin
W584A052	1580	53	40	2.2~5.5	1 + DTM	4,8	Ring	9-bit	10-bit	128	8 I/O	8-pin
W584A062	1900	64	48	2.2~5.5	1 + DTM	4,8	Ring	9-bit	10-bit	128	8 I/O	8-pin
W584A017	460	15	11	2.2~5.5	1 + DTM	4,8	Ring	9-bit	10-bit	128	12 I/O	8-pin
W584A022	620	20	15	2.2~5.5	1 + DTM	4,8	Ring	9-bit	10-bit	128	12 I/O	8-pin
W584A032	1020	34	25	2.2~5.5	1 + DTM	4,8	Ring	9-bit	10-bit	128	12 I/O	8-pin
W584A042	1260	42	32	2.2~5.5	1 + DTM	4,8	Ring	9-bit	10-bit	128	12 I/O	8-pin
W584A051	1580	53	40	2.2~5.5	1 + DTM	4,8	Ring	9-bit	10-bit	128	12 I/O	8-pin
W584A061	1900	64	48	2.2~5.5	1 + DTM	4,8	Ring	9-bit	10-bit	128	12 I/O	8-pin
W584A071	2220	75	56	2.2~5.5	1 + DTM	4,8	Ring	9-bit	10-bit	128	12 I/O	8-pin
W584A081	2540	86	64	2.2~5.5	1 + DTM	4,8	Ring	9-bit	10-bit	128	12 I/O	8-pin
W584A025	620	20	15	2.2~5.5	1 + DTM	4,8	Ring	9-bit	10-bit	128	16 I/O	8-pin
W584A035	1020	35	26	2.2~5.5	1 + DTM	4,8	Ring	9-bit	10-bit	128	16 I/O	8-pin
W584A045	1260	42	32	2.2~5.5	1 + DTM	4,8	Ring	9-bit	10-bit	128	16 I/O	8-pin

• W584A 4-bit µC Base, 1-ch Voice + Dual Tone Melody Synthesizer

Part No.	ROM (Kbits)	Duration (Sec.) @ 5-bit MDM		VDD (V)	CH	Fsys (MHz)	OSC	Audio		RAM (N)	GPIO	High Sink
		(6 KHz)	(8 KHz)					PWM	DAC			
W584A065	1900	64	48	2.2~5.5	1 + DTM	4,8	Ring	9-bit	10-bit	128	16 I/O	8-pin
W584A075	2220	75	56	2.2~5.5	1 + DTM	4,8	Ring	9-bit	10-bit	128	16 I/O	8-pin
W584A085	2540	86	64	2.2~5.5	1 + DTM	4,8	Ring	9-bit	10-bit	128	16 I/O	8-pin
W584A100	3180	108	81	2.2~5.5	1 + DTM	4,8	Ring	9-bit	10-bit	128	16 I/O	8-pin
W584A120	3820	129	97	2.2~5.5	1 + DTM	4,8	Ring	9-bit	10-bit	128	16 I/O	8-pin
W584A151	4460	151	113	2.2~5.5	1 + DTM	4,8	Ring	9-bit	10-bit	128	16 I/O	8-pin
W584A171	5100	173	130	2.2~5.5	1 + DTM	4,8	Ring	9-bit	10-bit	128	16 I/O	8-pin
W584A191	5740	195	146	2.2~5.5	1 + DTM	4,8	Ring	9-bit	10-bit	128	16 I/O	8-pin
W584A300	9100	310	232	2.2~5.5	1 + DTM	4,8	Ring	9-bit	10-bit	128	16 I/O	8-pin
W584A340	10220	348	261	2.2~5.5	1 + DTM	4,8	Ring	9-bit	10-bit	128	16 I/O	8-pin
W584AP017 (OTP)	460	15	11	2.2~5.5	1 + DTM	4,8	Ring	9-bit	10-bit	128	12 I/O	-
W584AP045 (OTP)	1260	42	32	2.2~5.5	1 + DTM	4,8	Ring	9-bit	10-bit	128	16 I/O	-
W584AP065 (OTP)	1900	64	48	2.2~5.5	1 + DTM	4,8	Ring	9-bit	10-bit	128	16 I/O	-

• W584B 4-bit µC Base, 1-ch Voice Synthesizer

Part No.	ROM (Kbits)	Duration (Sec.) @ 5-bit MDM		V_{DD} (V)	CH	Fsys (MHz)	OSC	Audio		RAM (N)	GPIO	High Sink
		(6 KHz)	(8 KHz)					PWM	DAC			
W584B010	300	9	7	2.2~5.5	1	4,8	Ring	9-bit	10-bit	128	8 I/O	8-pin
W584B015	460	15	11	2.2~5.5	1	4,8	Ring	9-bit	10-bit	128	8 I/O	8-pin
W584B020	620	20	15	2.2~5.5	1	4,8	Ring	9-bit	10-bit	128	8 I/O	8-pin
W584B030	1020	34	25	2.2~5.5	1	4,8	Ring	9-bit	10-bit	128	8 I/O	8-pin
W584B040	1260	42	32	2.2~5.5	1	4,8	Ring	9-bit	10-bit	128	8 I/O	8-pin
W584B052	1580	53	40	2.2~5.5	1	4,8	Ring	9-bit	10-bit	128	8 I/O	8-pin
W584B062	1900	64	48	2.2~5.5	1	4,8	Ring	9-bit	10-bit	128	8 I/O	8-pin
W584B016	460	15	11	2.2~5.5	1	4,8	Ring	9-bit	10-bit	128	12 I/O	8-pin
W584B021	620	20	15	2.2~5.5	1	4,8	Ring	9-bit	10-bit	128	12 I/O	8-pin
W584B031	1020	34	25	2.2~5.5	1	4,8	Ring	9-bit	10-bit	128	12 I/O	8-pin
W584B041	1260	42	32	2.2~5.5	1	4,8	Ring	9-bit	10-bit	128	12 I/O	8-pin
W584B070	2220	75	56	2.2~5.5	1	4,8	Ring	9-bit	10-bit	128	12 I/O	8-pin
W584B080	2540	86	64	2.2~5.5	1	4,8	Ring	9-bit	10-bit	128	12 I/O	8-pin
W584B100	3180	108	81	2.2~5.5	1	4,8	Ring	9-bit	10-bit	128	16 I/O	8-pin
W584B120	3820	129	97	2.2~5.5	1	4,8	Ring	9-bit	10-bit	128	16 I/O	8-pin
W584B150	4460	151	113	2.2~5.5	1	4,8	Ring	9-bit	10-bit	128	16 I/O	8-pin
W584B170	5100	173	130	2.2~5.5	1	4,8	Ring	9-bit	10-bit	128	16 I/O	8-pin
W584B190	5740	195	146	2.2~5.5	1	4,8	Ring	9-bit	10-bit	128	16 I/O	8-pin

• W588L 8-bit µC Base, 2 Batteries, 2-ch Voice + Melody Synthesizer

Part No.	ROM (Kbytes)	Duration (Sec.) @ 5-bit MDM		V_{DD} (V)	CH	Fsys (MHz)	OSC	Audio		RAM (Bytes)	GPIO
		(6 KHz)	(8 KHz)					PWM	DAC		
W588L020	94	23	18	1.8~3.6	1	4, 6	Ring	12-bit	-	96	8 I/O
W588L030	126	32	24	1.8~3.6	1	4, 6	Ring	12-bit	-	96	8 I/O
W588L035	170	44	33	1.8~3.6	2	4, 6	Ring	12-bit	-	128	16 I/O
W588L040	192	50	37	1.8~3.6	2	4, 6	Ring	12-bit	-	128	16 I/O
W588L050	224	58	43	1.8~3.6	2	4, 6	Ring	12-bit	-	128	16 I/O
W588L060	254	66	49	1.8~3.6	2	4, 6	Ring	12-bit	-	128	16 I/O
W588L070	330	86	65	1.8~3.6	2	4, 6	Ring	12-bit	-	128	16 I/O
W588L080	382	100	75	1.8~3.6	2	4, 6	Ring	12-bit	-	128	16 I/O
W588L100	448	118	88	1.8~3.6	2	4, 6	Ring	12-bit	-	128	16 I/O

• W588C 8-bit µC Base, 2-ch Voice + Melody Synthesizer

Part No.	ROM (Kbytes)	Duration (Sec.) @ 4-bit NM4		V_{DD} (V)	CH	Fsys (MHz)	OSC	Audio		RAM (Bytes)	GPIO
		(6 KHz)	(8 KHz)					PWM	DAC		
W588C003	20	5	4	2.2~5.5	2	4~8	Ring	12-bit	-	96	8 I/O
W588C006	30	8	6	2.2~5.5	2	4~8	Ring	12-bit	-	96	8 I/O
W588C009	50	14	11	2.2~5.5	2	4~8	Ring	12-bit	-	96	8 I/O
W588C012	62	18	14	2.2~5.5	2	4~8	Ring	12-bit	-	96	8 I/O
W588C015	78	23	17	2.2~5.5	2	4~8	Ring	12-bit	-	96	8 I/O
W588C020	98	29	22	2.2~5.5	2	4~8	Ring	12-bit	13-bit	128	12 I/O
W588C025	114	35	26	2.2~5.5	2	4~8	Ring	12-bit	13-bit	128	12 I/O
W588C030	126	38	29	2.2~5.5	2	4~8	Ring	12-bit	13-bit	128	12 I/O

• W588C 8-bit µC Base, 2-ch Voice + Melody Synthesizer

Part No.	ROM (Kbytes)	Duration (Sec.) @ 4-bit NM4		V_{DD} (V)	CH	Fsys (MHz)	OSC	Audio		RAM (Bytes)	GPIO
		(6 KHz)	(8 KHz)					PWM	DAC		
***W588C036**	170	52	39	2.2~5.5	2	4~8	Ring	12-bit	13-bit	128	16 I/O
***W588C041**	192	59	44	2.2~5.5	2	4~8	Ring	12-bit	13-bit	128	16 I/O
***W588C046**	205	63	48	2.2~5.5	2	4~8	Ring	12-bit	13-bit	128	16 I/O
***W588C051**	224	69	52	2.2~5.5	2	4~8	Ring	12-bit	13-bit	128	16 I/O
***W588C056**	240	74	56	2.2~5.5	2	4~8	Ring	12-bit	13-bit	128	16 I/O
***W588C061**	254	79	59	2.2~5.5	2	4~8	Ring	12-bit	13-bit	128	16 I/O
***W588C071**	330	103	77	2.2~5.5	2	4~8	Ring	12-bit	13-bit	128	16 I/O
***W588C081**	382	119	90	2.2~5.5	2	4~8	Ring	12-bit	13-bit	128	16 I/O
***W588C101**	448	140	105	2.2~5.5	2	4~8	Ring	12-bit	13-bit	128	16 I/O
***W588C121**	510	160	120	2.2~5.5	2	4~8	Ring	12-bit	13-bit	128	16 I/O
W588C150	640	201	151	2.2~5.5	2	4~8	Ring	12-bit	13-bit	192	16 I/O
W588C170	768	242	181	2.2~5.5	2	4~8	Ring	12-bit	13-bit	192	16 I/O
W588C210	896	282	212	2.2~5.5	2	4~8	Ring	12-bit	13-bit	192	16 I/O
W588C260	1022	322	242	2.2~5.5	2	4~8	Ring	12-bit	13-bit	192	16 I/O
W588C300	1180	372	279	2.2~5.5	2	4~8	Ring	12-bit	13-bit	192	16 I/O

*DAC w/o Noise Shaping

• W588D 8-bit µC Base, 3-ch Voice + Melody Synthesizer

Part No.	ROM (Kbytes)	Duration (Sec.) @ 4-bit NM4		V_{DD} (V)	CH	Fsys (MHz)	OSC	Sub-Clock 32KHz	Audio		RAM (Bytes)	GPIO	SIM SPI
		(6 KHz)	(8 KHz)						PWM	DAC			
W588D003	20	5	4	2.2~5.5	3	4~8	Ring/X'tal	X'tal	12-bit	13-bit	192	16 I/O	√
W588D006	30	8	6	2.2~5.5	3	4~8	Ring/X'tal	X'tal	12-bit	13-bit	192	16 I/O	√
W588D009	50	14	11	2.2~5.5	3	4~8	Ring/X'tal	X'tal	12-bit	13-bit	256	16 I/O	√
W588D012	62	18	14	2.2~5.5	3	4~8	Ring/X'tal	X'tal	12-bit	13-bit	256	16 I/O	√
W588D015	78	23	17	2.2~5.5	3	4~8	Ring/X'tal	X'tal	12-bit	13-bit	256	16 I/O	√
W588D020	98	29	22	2.2~5.5	3	4~8	Ring/X'tal	X'tal	12-bit	13-bit	256	16 I/O	√
W588D025	114	35	26	2.2~5.5	3	4~8	Ring/X'tal	X'tal	12-bit	13-bit	256	16 I/O	√
W588D030	126	38	29	2.2~5.5	3	4~8	Ring/X'tal	X'tal	12-bit	13-bit	256	16 I/O	√
W588D035	170	52	39	2.2~5.5	3	4~8	Ring/X'tal	X'tal	12-bit	13-bit	256	16 I/O	√
W588D040	192	59	44	2.2~5.5	3	4~8	Ring/X'tal	X'tal	12-bit	13-bit	256	16 I/O	√
W588D045	205	63	48	2.2~5.5	3	4~8	Ring/X'tal	X'tal	12-bit	13-bit	256	16 I/O	√
W588D050	224	69	52	2.2~5.5	3	4~8	Ring/X'tal	X'tal	12-bit	13-bit	256	16 I/O	√
W588D055	240	74	56	2.2~5.5	3	4~8	Ring/X'tal	X'tal	12-bit	13-bit	256	16 I/O	√
W588D060	254	79	59	2.2~5.5	3	4~8	Ring/X'tal	X'tal	12-bit	13-bit	256	16 I/O	√
W588DF060 (MTP)	254	79	59	2.2~5.5	3	4~8	Ring/X'tal	X'tal	12-bit	13-bit	256	16 I/O	√
W588D070	330	103	77	2.2~5.5	3	4~8	Ring/X'tal	X'tal	12-bit	13-bit	256	24 I/O	√
W588D080	382	119	90	2.2~5.5	3	4~8	Ring/X'tal	X'tal	12-bit	13-bit	256	24 I/O	√
W588D100	448	140	105	2.2~5.5	3	4~8	Ring/X'tal	X'tal	12-bit	13-bit	256	24 I/O	√
W588D120	510	160	120	2.2~5.5	3	4~8	Ring/X'tal	X'tal	12-bit	13-bit	256	24 I/O	√
W588D150	640	201	151	2.2~5.5	3	4~8	Ring/X'tal	X'tal	12-bit	13-bit	384	24 I/O	√
W588D170	768	242	181	2.2~5.5	3	4~8	Ring/X'tal	X'tal	12-bit	13-bit	384	24 I/O	√
W588D210	896	282	212	2.2~5.5	3	4~8	Ring/X'tal	X'tal	12-bit	13-bit	384	24 I/O	√
W588D260	1022	322	242	2.2~5.5	3	4~8	Ring/X'tal	X'tal	12-bit	13-bit	384	24 I/O	√
W588D300	1180	372	279	2.2~5.5	3	4~8	Ring/X'tal	X'tal	12-bit	13-bit	512	8I, 24 I/O	√
W588D350	1348	425	319	2.2~5.5	3	4~8	Ring/X'tal	X'tal	12-bit	13-bit	512	8I, 24 I/O	√
W588D400	1534	484	363	2.2~5.5	3	4~8	Ring/X'tal	X'tal	12-bit	13-bit	512	8I, 24 I/O	√

• N584L 4-bit µC Base, 1~2 Battery, 1-ch Voice + Dual Tone Melody Synthesizer

Part No.	ROM (Kbits)	Duration (Sec.) @ 5-bit MDM		V_{DD} (V)	Booster Output (V)	CH	Fsys (MHz)	OSC	Audio		RAM (N)	GPIO
		(6 KHz)	(8 KHz)						PWM	DAC		
N584L020	620	20	15	1.0~1.8	3	1 + DTM	4~8	Ring	9-bit	-	128	8 I/O
N584L030	1020	34	25	1.0~1.8	3	1 + DTM	4~8	Ring	9-bit	-	128	8 I/O
N584L040	1260	42	32	1.0~1.8	3	1 + DTM	4~8	Ring	9-bit	-	128	8 I/O
N584L080	2540	86	64	1.0~1.8	3	1 + DTM	4~8	Ring	9-bit	-	128	12 I/O
N584L120	3820	129	97	1.0~1.8	3	1 + DTM	4~8	Ring	9-bit	-	128	12 I/O
N584L031	1020	34	25	1.0~3.6	4	1 + DTM	4~8	Ring	9-bit	-	128	12 I/O
N584L041	1260	42	32	1.0~3.6	4	1 + DTM	4~8	Ring	9-bit	-	128	12 I/O
N584L061	1900	64	48	1.0~3.6	4	1 + DTM	4~8	Ring	9-bit	-	128	12 I/O
N584L081	2540	86	64	1.0~3.6	4	1 + DTM	4~8	Ring	9-bit	-	128	12 I/O
N584L121	3820	129	97	1.0~3.6	4	1 + DTM	4~8	Ring	9-bit	-	128	12 I/O

• N588L 1.0~3.6V, 8-bit µC Base, 2-ch Voice Synthesizer

Part No.	ROM (Kbytes)	Duration (Sec.) @ 4-bit NM4		V_{DD}	CH	Fsys (MHz)	OSC	Audio		Vp (V)	RAM (Bytes)	LVD	GPIO	PWM Output
		(6 KHz)	(8 KHz)					PWM	DAC					
N588L040	126	40	30	1.0~3.6V	2	4,6,8	TRIM/X'tal	12-bit	-	3.3, 4.2	384	√	16 I/O	3-pair
N588L080	254	80	60	1.0~3.6V	2	4,6,8	TRIM/X'tal	12-bit	-	3.3, 4.2	384	√	16 I/O	3-pair
N588L120	416	132	99	1.0~3.6V	2	4,6,8	TRIM/X'tal	12-bit	-	3.3, 4.2	384	√	16 I/O	3-pair
N588L160	528	167	125	1.0~3.6V	2	4,6,8	TRIM/X'tal	12-bit	-	3.3, 4.2	384	√	16 I/O	3-pair
N588L200	638	202	152	1.0~3.6V	2	4,6,8	TRIM/X'tal	12-bit	-	3.3, 4.2	384	√	16 I/O	3-pair
N588L240	768	243	182	1.0~3.6V	2	4,6,8	TRIM/X'tal	12-bit	-	3.3, 4.2	384	√	16 I/O	3-pair
N588L280	896	284	213	1.0~3.6V	2	4,6,8	TRIM/X'tal	12-bit	-	3.3, 4.2	384	√	16 I/O	3-pair
N588L330	1022	324	243	1.0~3.6V	2	4,6,8	TRIM/X'tal	12-bit	-	3.3, 4.2	384	√	16 I/O	3-pair
N588LP080 (OTP)	254	80	60	1.0~3.6V	2	4,6,8	TRIM/X'tal	12-bit	-	3.3, 4.2	384	√	16 I/O	3-pair
N588LP200 (OTP)	638	202	152	1.0~3.6V	2	4,6,8	TRIM/X'tal	12-bit	-	3.3, 4.2	384	√	16 I/O	3-pair
N588LP330 (OTP)	1022	324	243	1.0~3.6V	2	4,6,8	TRIM/X'tal	12-bit	-	3.3, 4.2	384	√	16 I/O	3-pair

* N588LP (OTP), 1.0~3.6V, 8-bit µC base, 2-ch Voice Synthesizer

Part No.	ROM (Kbytes)	Duration (Sec.) @ 4-bit NM4		V_{DD}	CH	Fsys (MHz)	OSC	Audio		Vp (V)	RAM (Bytes)	LVD	GPIO	PWM Output
		(6 KHz)	(8 KHz)					PWM	DAC					
N588LP122	416	132	99	1.0~3.6V	2	4,6,8	TRIM	12-bit	-	3.3, 4.2	384	√	16 I/O	2-pin
N588LP162	528	167	125	1.0~3.6V	2	4,6,8	TRIM	12-bit	-	3.3, 4.2	384	√	16 I/O	2-pin
N588LP202	638	202	152	1.0~3.6V	2	4,6,8	TRIM	12-bit	-	3.3, 4.2	384	√	16 I/O	2-pin
N588LP242	768	243	182	1.0~3.6V	2	4,6,8	TRIM	12-bit	-	3.3, 4.2	384	√	16 I/O	2-pin
N588LP282	896	284	213	1.0~3.6V	2	4,6,8	TRIM	12-bit	-	3.3, 4.2	384	√	16 I/O	2-pin
N588LP332	1022	324	243	1.0~3.6V	2	4,6,8	TRIM	12-bit	-	3.3, 4.2	384	√	16 I/O	2-pin

* Under Development

• N584H High Sound Quality 1-ch Voice

Part No.	ROM (Kbits)	Duration (Sec.) @ 4-bit NM4		V_{DD} (4 MHz)	CH	Fsys (MHz)	OSC	Audio		Cap Sensor	RAM (N)	LVD	GPIO	High Sink
		(6 KHz)	(8 KHz)					PWM	DAC					
N584H009	300	12	9	1.8~5.5V	1	4, 8	TRIM	9-bit	-	-	96	√	4 I/O	4-pin
N584H019	620	24	18	1.8~5.5V	1	4, 8	TRIM	9-bit	-	-	96	√	4 I/O	4-pin
N584H029	940	37	28	1.8~5.5V	1	4, 8	TRIM	9-bit	-	-	96	√	4 I/O	4-pin
N584H039	1260	49	37	1.8~5.5V	1	4, 8	TRIM	9-bit	-	-	96	√	4 I/O	4-pin
N584H010	300	12	9	1.8~5.5V	1	4, 8	TRIM	9-bit	-	-	96	√	8 I/O	8-pin
N584H020	620	24	18	1.8~5.5V	1	4, 8	TRIM	9-bit	-	-	96	√	8 I/O	8-pin
N584H030	940	37	28	1.8~5.5V	1	4, 8	TRIM	9-bit	-	-	96	√	8 I/O	8-pin
N584H040	1260	49	37	1.8~5.5V	1	4, 8	TRIM	9-bit	-	-	96	√	8 I/O	8-pin
N584H060	1740	68	51	1.8~5.5V	1	4, 8	TRIM	9-bit	-	-	96	√	8 I/O	8-pin
N584H070	1900	74	56	1.8~5.5V	1	4, 8	TRIM	9-bit	-	-	96	√	8 I/O	8-pin
N584H120	3340	131	98	1.8~5.5V	1 + DTM	4, 8	TRIM	9-bit	-	8-pin	224	√	16 I/O	8-pin
N584H160	4070	159	119	1.8~5.5V	1 + DTM	4, 8	TRIM	9-bit		8-pin	224	√	16 I/O	8-pin
N584H170	4460	175	131	1.8~5.5V	1 + DTM	4, 8	TRIM	9-bit	-	8-pin	224	√	16 I/O	8-pin
N584H210	5740	225	169	1.8~5.5V	1 + DTM	4, 8	TRIM	9-bit	-	8-pin	224	√	16 I/O	8-pin
N584H260	7020	275	206	1.8~5.5V	1 + DTM	4, 8	TRIM	9-bit	-	8-pin	224	√	16 I/O	8-pin
N584H300	7980	312	234	1.8~5.5V	1 + DTM	4, 8	TRIM	9-bit	-	8-pin	224	√	16 I/O	8-pin

• N584P (OTP), High Sound Quality 1-ch Voice

Part No.	ROM (Kbits)	Duration (Sec.) @ 4-bit NM4		V_{DD} (8 MHz)	CH	OSC	Audio		Cap Sensor	RAM (N)	LVD	GPIO	High Sink
		(6 KHz)	(8 KHz)				PWM	DAC					
N584P040	1260	49	37	1.8~5.5V	1	TRIM	9-bit	-	-	96	√	8 I/O	8-pin
N584P070	1900	74	56	1.8~5.5V	1	TRIM	9-bit	-	-	96	√	8 I/O	8-pin
N584P120	3340	131	98	1.8~5.5V	1 + DTM	TRIM	9-bit	-	8-pin	224	√	16 I/O	8-pin
N584P170	4460	175	131	1.8~5.5V	1 + DTM	TRIM	9-bit	-	8-pin	224	√	16 I/O	8-pin
N584P210	5740	225	169	1.8~5.5V	1 + DTM	TRIM	9-bit	-	8-pin	224	√	16 I/O	8-pin
N584P260	7020	275	206	1.8~5.5V	1 + DTM	TRIM	9-bit	-	8-pin	224	√	16 I/O	8-pin
N584P300	7980	312	234	1.8~5.5V	1 + DTM	TRIM	9-bit	-	8-pin	224	√	16 I/O	8-pin

• N588J 8-bit µC Base, 1-ch Voice Synthesizer w/ PWM Direct Driver

Part No.	ROM (Kbytes)	Duration (Sec.) @ 4-bit NM4		V_{DD}	CH	Fsys (MHz)	Audio		RAM (Bytes)	LVD	GPIO	PWM Output
		(6 KHz)	(8 KHz)				PWM	DAC				
N588J010	30	10	7	2.2~5.5V	1	4,6,8	12-bit	-	128	√	16 I/O	3-pair
N588J040	126	40	30	2.2~5.5V	1	4,6,8	12-bit	-	128	√	16 I/O	3-pair
N588J060	206	65	49	2.2~5.5V	1	4,6,8	12-bit	-	128	√	16 I/O	3-pair
N588J080	254	80	60	2.2~5.5V	1	4,6,8	12-bit	-	128	√	16 I/O	3-pair
N588J120	414	131	98	2.2~5.5V	1	4,6,8	12-bit	-	128	√	16 I/O	3-pair
N588J170	510	162	121	2.2~5.5V	1	4,6,8	12-bit	-	128	√	16 I/O	3-pair
N588J200	704	223	167	2.2~5.5V	1	4,6,8	12-bit	-	192	√	24 I/O	3-pair
N588J250	830	263	197	2.2~5.5V	1	4,6,8	12-bit	-	192	√	24 I/O	3-pair
N588J340	1020	324	243	2.2~5.5V	1	4,6,8	12-bit	-	192	√	24 I/O	3-pair
N588J480	1534	486	364	2.2~5.5V	1	4,6,8	12-bit	-	192	√	24 I/O	3-pair
N588J650	2044	648	486	2.2~5.5V	1	4,6,8	12-bit	-	192	√	24 I/O	3-pair

• N588JP (OTP), 8-bit µC Base, 1-ch Voice Synthesizer w/ PWM Direct Driver

Part No.	ROM (Kbytes)	Duration (Sec.) @ 4-bit NM4		V_{DD}	CH	Fsys (MHz)	Audio		RAM (Bytes)	LVD	GPIO	PWM Output
		(6 KHz)	(8 KHz)				PWM	DAC				
N588JP062	206	65	49	2.0~5.5V	1	4,6,8	12-bit	-	128	√	16 I/O	3-pair
N588JP082	254	80	60	2.0~5.5V	1	4,6,8	12-bit	-	128	√	16 I/O	3-pair
N588JP122	414	131	98	2.0~5.5V	1	4,6,8	12-bit	-	128	√	16 I/O	3-pair
N588JP172	510	162	121	2.0~5.5V	1	4,6,8	12-bit	-	128	√	16 I/O	3-pair
N588JP202	704	223	167	2.0~5.5V	1	4,6,8	12-bit	-	192	√	24 I/O	3-pair
N588JP252	830	263	197	2.0~5.5V	1	4,6,8	12-bit	-	192	√	24 I/O	3-pair
N588JP342	1020	324	243	2.0~5.5V	1	4,6,8	12-bit	-	192	√	24 I/O	3-pair

• N588H 8-bit µC Base, 3-ch Voice + Melody Synthesizer

Part No.	ROM (Kbytes)	Duration (Sec.) @ 4-bit NM4		V_{DD} (V)	CH	Fsys (MHz)	OSC	Audio		RAM (Bytes)	LVD	GPIO	PWM Output
		(6 KHz)	(8 KHz)					PWM	DAC				
N588H061	206	65	49	2.2~5.5	3	4,6,8	TRIM	12-bit	-	128	√	16 I/O	3-pair
N588H081	254	80	60	2.2~5.5	3	4,6,8	TRIM	12-bit	-	128	√	16 I/O	3-pair
N588H120	414	131	98	2.2~5.5	3	4,6,8	TRIM	12-bit	-	128	√	16 I/O	3-pair
N588H170	510	162	121	2.2~5.5	3	4,6,8	TRIM	12-bit	-	128	√	16 I/O	3-pair
N588H200	704	223	167	2.2~5.5	3	4,6,8	TRIM	12-bit	-	192	√	24 I/O	3-pair
N588H250	830	263	197	2.2~5.5	3	4,6,8	TRIM	12-bit	-	192	√	24 I/O	3-pair
N588H340	1022	324	243	2.2~5.5	3	4,6,8	TRIM	12-bit	-	192	√	24 I/O	3-pair
N588H480	1534	486	364	2.2~5.5	3	4,6,8	TRIM	12-bit	-	192	√	24 I/O	3-pair
N588H650	2044	648	486	2.2~5.5	3	4,6,8	TRIM	12-bit	-	192	√	24 I/O	3-pair

• N588HP (OTP), 8-bit µC Base, 3-ch Voice + Melody Synthesizer

Part No.	ROM (Kbytes)	Duration (Sec.) @ 4-bit NM4		V_{DD} (V)	CH	Fsys (MHz)	OSC	Audio		RAM (Bytes)	LVD	GPIO	PWM Output
		(6 KHz)	(8 KHz)					PWM	DAC				
N588HP062	206	65	49	2.0~5.5	3	4,6,8	TRIM	12-bit	-	128	√	16 I/O	3-pair
N588HP082	254	80	60	2.0~5.5	3	4,6,8	TRIM	12-bit	-	128	√	16 I/O	3-pair
N588HP122	414	131	98	2.0~5.5	3	4,6,8	TRIM	12-bit	-	128	√	16 I/O	3-pair
N588HP172	510	162	121	2.0~5.5	3	4,6,8	TRIM	12-bit	-	128	√	16 I/O	3-pair
N588HP202	704	223	167	2.0~5.5	3	4,6,8	TRIM	12-bit	-	192	√	24 I/O	3-pair
N588HP252	830	263	197	2.0~5.5	3	4,6,8	TRIM	12-bit	-	192	√	24 I/O	3-pair
N588HP342	1022	324	243	2.0~5.5	3	4,6,8	TRIM	12-bit	-	192	√	24 I/O	3-pair

NuSpeech Series

• N589A, 8-bit µC Base, 2-ch Voice or 8-ch MIDI, w/ SPIO, SPIM, ADC, IR Wake-up

Part No.	Duration (Sec) 8KHz	VDD (V)	LVR (V)	Speech/ MIDI CH	ADC	Audio PWM	RAM (Bytes)	GPIO	Interface	PWM Output	Touch I/O	LVD	IR wake up	LRC
N589A150	128	2.0~5.5	1.9	2/8	4ch, 6bit	13-bit	512	28 I/O	SPIO, SPIM	6 pin	6 pin	Yes	Yes	Yes
N589A200	189	2.0~5.5	1.9	2/8	4ch, 6bit	13-bit	512	28 I/O	SPIO, SPIM	6 pin	6 pin	Yes	Yes	Yes
N589A280	250	2.0~5.5	1.9	2/8	4ch, 6bit	13-bit	512	28 I/O	SPIO, SPIM	6 pin	6 pin	Yes	Yes	Yes
N589A400	371	2.0~5.5	1.9	2/8	4ch, 6bit	13-bit	512	32 I/O	SPIO, UART, LED String	6 pin	12 pin	Yes	Yes	Yes
N589A600	614	2.0~5.5	1.9	2/8	4ch, 6bit	13-bit	512	32 I/O	SPIO, UART, LED String	6 pin	12 pin	Yes	Yes	Yes
N589A900	857	2.0~5.5	1.9	2/8	4ch, 6bit	13-bit	512	32 I/O	SPIO, UART, LED String	6 pin	12 pin	Yes	Yes	Yes
N589A1K4	1342	2.0~5.5	1.9	2/8	4ch, 6bit	13-bit	1K	32 I/O	SPIO, UART, LED String	6 pin	12 pin	Yes	Yes	Yes
N589A1K9	1828	2.0~5.5	1.9	2/8	4ch, 6bit	13-bit	1K	32 I/O	SPIO, UART, LED String	6 pin	12 pin	Yes	Yes	Yes

• N589B, 8-bit µC Base, 2-ch Voice, w/ SPIO, SPIM, ADC, IR Wake-up

Part No.	Duration (Sec) 8 KHz	VDD (V)	LVR (V)	Voice CH	ADC	Audio PWM	RAM (Bytes)	GPIO	Interface	PWM Output	Touch I/O	LVD	IR wake up	LRC
N589B120	125	2.0~5.5	1.9	2	4ch, 6bit	13-bit	512	22 I/O	SPIO, SPIM	6 pin	6 pin	Yes	Yes	Yes
N589B170	155	2.0~5.5	1.9	2	4ch, 6bit	13-bit	512	22 I/O	SPIO, SPIM	6 pin	6 pin	Yes	Yes	Yes
N589B200	216	2.0~5.5	1.9	2	4ch, 6bit	13-bit	512	28 I/O	SPIO, SPIM	6 pin	6 pin	Yes	Yes	Yes
N589B250	276	2.0~5.5	1.9	2	4ch, 6bit	13-bit	512	28 I/O	SPIO, SPIM	6 pin	6 pin	Yes	Yes	Yes
N589B340	337	2.0~5.5	1.9	2	4ch, 6bit	13-bit	512	28 I/O	SPIO, SPIM	6 pin	6 pin	Yes	Yes	Yes
N589B480	458	2.0~5.5	1.9	2	4ch, 6bit	13-bit	512	32 I/O	SPIO, UART, LED String	6 pin	12 pin	Yes	Yes	Yes
N589B650	701	2.0~5.5	1.9	2	4ch, 6bit	13-bit	512	32 I/O	SPIO, UART, LED String	6 pin	12 pin	Yes	Yes	Yes
N589B960	944	2.0~5.5	1.9	2	4ch, 6bit	13-bit	512	32 I/O	SPIO, UART, LED String	6 pin	12 pin	Yes	Yes	Yes
N589B1K5	1429	2.0~5.5	1.9	2	4ch, 6bit	13-bit	1K	32 I/O	SPIO, UART, LED String	6 pin	12 pin	Yes	Yes	Yes
N589B2K0	1915	2.0~5.5	1.9	2	4ch, 6bit	13-bit	1K	32 I/O	SPIO, UART, LED String	6 pin	12 pin	Yes	Yes	Yes

• N589C, 8-bit µC Base, 2-ch Voice, with SPIO, IR Wake-up

Part No.	Duration (Sec) 8KHz	VDD (V)	LVR (V)	Voice CH	ADC	Audio PWM	RAM (Bytes)	GPIO	Interface	PWM Output	Touch I/O	LVD	IR wake up	LRC
N589C080	94	2.0~5.5	1.9	2	NO	13-bit	512	16 I/O	NO	3 pin	6 pin	Yes	Yes	Yes
N589C120	125	2.0~5.5	1.9	2	NO	13-bit	512	16 I/O	NO	3 pin	6 pin	Yes	Yes	Yes
N589C170	155	2.0~5.5	1.9	2	NO	13-bit	512	16 I/O	NO	3 pin	6 pin	Yes	Yes	Yes
N589C200	216	2.0~5.5	1.9	2	NO	13-bit	512	22 I/O	SPIO	6 pin	6 pin	Yes	Yes	Yes
N589C250	276	2.0~5.5	1.9	2	NO	13-bit	512	22 I/O	SPIO	6 pin	6 pin	Yes	Yes	Yes
N589C340	337	2.0~5.5	1.9	2	NO	13-bit	512	22 I/O	SPIO	6 pin	6 pin	Yes	Yes	Yes
N589C480	458	2.0~5.5	1.9	2	NO	13-bit	512	32 I/O	SPIO, UART, LED String	6 pin	12 pin	Yes	Yes	Yes
N589C650	701	2.0~5.5	1.9	2	NO	13-bit	512	32 I/O	SPIO, UART, LED String	6 pin	12 pin	Yes	Yes	Yes
N589C960	944	2.0~5.5	1.9	2	NO	13-bit	512	32 I/O	SPIO, UART, LED String	6 pin	12 pin	Yes	Yes	Yes
N589C1K5	1429	2.0~5.5	1.9	2	NO	13-bit	1K	32 I/O	SPIO, UART, LED String	6 pin	12 pin	Yes	Yes	Yes
N589C2K0	1915	2.0~5.5	1.9	2	NO	13-bit	1K	32 I/O	SPIO, UART, LED String	6 pin	12 pin	Yes	Yes	Yes

• N589D, 8-bit µC Base, 1-ch Voice, with SPIO, IR Wake-up

Part No.	Duration (Sec)	V_{DD} (V)	LVR (V)	Speech CH	ADC	Audio	RAM (Bytes)	GPIO	Interface	PWM Output	Touch I/O	LVD	IR wake up	LRC
	8 KHz					PWM								
N589D081	94	2.0~5.5	1.9	1	NO	13-bit	384	16 I/O	SPIO	3 pin	8 pin	Yes	Yes	Yes
N589D121	125	2.0~5.5	1.9	1	NO	13-bit	384	16 I/O	SPIO	3 pin	8 pin	Yes	Yes	Yes
N589D171	155	2.0~5.5	1.9	1	NO	13-bit	384	16 I/O	SPIO	3 pin	8 pin	Yes	Yes	Yes
N589D201	216	2.0~5.5	1.9	1	NO	13-bit	384	25 I/O	SPIO	3 pin	8 pin	Yes	Yes	Yes
N589D251	276	2.0~5.5	1.9	1	NO	13-bit	384	25 I/O	SPIO	3 pin	8 pin	Yes	Yes	Yes
N589D341	337	2.0~5.5	1.9	1	NO	13-bit	384	25 I/O	SPIO	3 pin	8 pin	Yes	Yes	Yes
N589D481	458	2.0~5.5	1.9	1	NO	13-bit	384	25 I/O	SPIO	3 pin	8 pin	Yes	Yes	Yes
N589D650	701	2.0~5.5	1.9	1	NO	13-bit	512	32 I/O	SPIO, UART, LED String	6 pin	12 pin	Yes	Yes	Yes
N589D960	944	2.0~5.5	1.9	1	NO	13-bit	512	32 I/O	SPIO, UART, LED String	6 pin	12 pin	Yes	Yes	Yes
N589D1K5	1429	2.0~5.5	1.9	1	NO	13-bit	1K	32 I/O	SPIO, UART, LED String	6 pin	12 pin	Yes	Yes	Yes
N589D2K0	1915	2.0~5.5	1.9	1	NO	13-bit	1K	32 I/O	SPIO, UART, LED String	6 pin	12 pin	Yes	Yes	Yes

• N589E, 8-bit µC Base, 1-ch Voice Synthesizer

Part No.	Flash (Kbytes)	Duration (Sec.)@ 4-bit NM4		V_{DD} (V)	Voice CH	Audio	RAM (Bytes)	GPIO	PWM Output	Cap Touch	LVD	IR Carrier	LVR (V)
		(6 KHz)	(8 KHz)			PWM							
N589E040	128	40	30	2.0~5.5	1	13-bit	384	8 I/O	3 pin	4 pin	Yes	Yes	1.9
N589E060	192	60	45	2.0~5.5	1	13-bit	384	8 I/O	3 pin	4 pin	Yes	Yes	1.9
N589E080	256	80	60	2.0~5.5	1	13-bit	384	8 I/O	3 pin	4 pin	Yes	Yes	1.9

BandDirector® Series

• W567C 8-bit µC Base, 16-ch Voice + Wavetable Melody Synthesizer

Part No.	ROM (Kbytes)	Duration (Sec.) @ 4-bit NM4		Channel		Fsys (MHz)	OSC	Sub-Clock 32 KHz	Audio		RAM (Bytes)	GPIO	PWM Output	SIM SPI	PAN Stereo
		(6 KHz)	(8 KHz)	Voice	WTM				PWM	DAC					
W567C070	336	99	74	2	16	4~8	Ring/X'tal	X'tal	12-bit	13-bit	512	24 I/O	3-pin	√	-
W567C080	416	124	93	2	16	4~8	Ring/X'tal	X'tal	12-bit	13-bit	512	24 I/O	3-pin	√	-
W567C100	464	139	104	2	16	4~8	Ring/X'tal	X'tal	12-bit	13-bit	512	24 I/O	3-pin	√	-
W567C120	508	152	114	2	16	4~8	Ring/X'tal	X'tal	12-bit	13-bit	512	24 I/O	3-pin	√	-
W567C151	640	193	145	2	16	4~8	Ring/X'tal	X'tal	12-bit	13-bit	512	24 I/O	3-pin	√	-
W567C171	768	233	174	2	16	4~8	Ring/X'tal	X'tal	12-bit	13-bit	512	24 I/O	3-pin	√	-
W567C210	896	272	204	2	16	4~8	Ring/X'tal	X'tal	12-bit	13-bit	512	24 I/O	3-pin	√	-
W567C260	1020	311	233	2	16	4~8	Ring/X'tal	X'tal	12-bit	13-bit	512	24 I/O	3-pin	√	-
W567C300	1232	376	282	2	16	4~8	Ring/X'tal	X'tal	12-bit	13-bit	512	24 I/O	3-pin	√	-
W567C340	1376	421	316	2	16	4~8	Ring/X'tal	X'tal	12-bit	13-bit	512	24 I/O	3-pin	√	-
W567C380	1532	469	352	2	16	4~8	Ring/X'tal	X'tal	12-bit	13-bit	512	24 I/O	3-pin	√	-
W567C126	508	152	114	2	16	4~8	Ring/X'tal	X'tal	12-bit	13-bit	512	24 I/O	3-pin	√	√
W567C266	1020	311	233	2	16	4~8	Ring/X'tal	X'tal	12-bit	13-bit	512	24 I/O	3-pin	√	√
W567C306	1232	376	282	2	16	4~8	Ring/X'tal	X'tal	12-bit	13-bit	512	24 I/O	3-pin	√	√
W567C346	1376	421	316	2	16	4~8	Ring/X'tal	X'tal	12-bit	13-bit	512	24 I/O	3-pin	√	√
W567C386	1532	469	352	2	16	4~8	Ring/X'tal	X'tal	12-bit	13-bit	512	24 I/O	3-pin	√	√
W567CP260 (OTP)	1020	311	233	2	16	4~8	Ring/X'tal	X'tal	12-bit	13-bit	512	24 I/O	3-pin	√	-

• N567G 8-bit µC Base, 4-ch Voice + Wavetable Melody Synthesizer

Part No.	ROM (Kbytes)	Duration (Sec.) @ 4-bit NM4		V_{DD} (V)	CH	Fsys (MHz)	OSC	Audio		RAM (Bytes)	GPIO	PWM Output	SIM SPI
		(6 KHz)	(8 KHz)					PWM	DAC				
N567G030	126	34	26	2.2~5.5	4	4,6,8	TRIM/X'tal	12-bit	13-bit	384	24 I/O	-	√
N567G041	158	44	33	2.2~5.5	4	4,6,8	TRIM/X'tal	12-bit	13-bit	384	24 I/O	-	√
N567G080	286	84	63	2.2~5.5	4	4,6,8	TRIM	12-bit	13-bit	384	24 I/O	-	√
N567G121	416	124	93	2.2~5.5	4	4,6,8	TRIM	12-bit	13-bit	384	24 I/O	-	-
N567G161	528	158	119	2.2~5.5	4	4,6,8	TRIM	12-bit	13-bit	384	24 I/O	-	-
N567G201	638	192	144	2.2~5.5	4	4,6,8	TRIM	12-bit	13-bit	384	24 I/O	-	-
N567G240	768	233	174	2.2~5.5	4	4,6,8	TRIM/X'tal	12-bit	13-bit	384	8I, 24 I/O	3-pair	√
N567G280	896	272	204	2.2~5.5	4	4,6,8	TRIM/X'tal	12-bit	13-bit	384	8I, 24 I/O	3-pair	√
N567G330	1022	311	233	2.2~5.5	4	4,6,8	TRIM/X'tal	12-bit	13-bit	384	8I, 24 I/O	3-pair	√

• N567K 8-bit µC Base, 6-ch Voice + Wavetable Melody Synthesizer

Part No.	ROM (Kbytes)	Duration (Sec.) @ 4-bit NM4		V_{DD} (V)	CH	Fsys (MHz)	OSC	Audio		RAM (Bytes)	LVD	GPIO	PWM Output	SIM SPI
		(6 KHz)	(8 KHz)					PWM	DAC					
N567K030	126	34	26	2.2~5.5	6	4,6,8	TRIM/X'tal	12-bit	13-bit	384	-	24 I/O	-	√
N567K041	158	44	33	2.2~5.5	6	4,6,8	TRIM/X'tal	12-bit	13-bit	384	-	24 I/O	-	√
N567K080	286	84	63	2.2~5.5	6	4,6,8	TRIM	12-bit	13-bit	384	-	24 I/O	-	√
N567K081	254	80	60	2.2~5.5	6	4,6,8	TRIM	12-bit	13-bit	384	√	24 I/O	-	√
N567K121	416	124	93	2.2~5.5	6	4,6,8	TRIM	12-bit	13-bit	384	-	24 I/O	-	-
N567K161	528	158	119	2.2~5.5	6	4,6,8	TRIM	12-bit	13-bit	384	-	24 I/O	-	-
N567K201	638	192	144	2.2~5.5	6	4,6,8	TRIM	12-bit	13-bit	384	-	24 I/O	-	-
N567K240	768	233	174	2.2~5.5	6	4,6,8	TRIM/X'tal	12-bit	13-bit	384	-	8I, 24 I/O	3-pair	√
N567K280	896	272	204	2.2~5.5	6	4,6,8	TRIM/X'tal	12-bit	13-bit	384	-	8I, 24 I/O	3-pair	√
N567K330	1022	311	233	2.2~5.5	6	4,6,8	TRIM/X'tal	12-bit	13-bit	384	-	8I, 24 I/O	3-pair	√

• N567H 8-bit µC Base, 8-ch Voice + Wavetable Melody Synthesizer

Part No.	ROM (Kbytes)	Duration (Sec.) @ 4-bit NM4		V_{DD} (V)	CH	Fsys (MHz)	OSC	Audio		RAM (Bytes)	GPIO	PWM Output	SIM SPI
		(6 KHz)	(8 KHz)					PWM	DAC				
N567H030	126	34	26	2.2~5.5	8	4,6,8	TRIM/X'tal	12-bit	13-bit	384	24 I/O	-	√
N567H041	158	44	33	2.2~5.5	8	4,6,8	TRIM/X'tal	12-bit	13-bit	384	24 I/O	-	√
N567H080	286	84	63	2.2~5.5	8	4,6,8	TRIM	12-bit	13-bit	384	24 I/O	-	√
N567H121	416	124	93	2.2~5.5	8	4,6,8	TRIM	12-bit	13-bit	384	24 I/O	-	-
N567H161	528	158	119	2.2~5.5	8	4,6,8	TRIM	12-bit	13-bit	384	24 I/O	-	-
N567H201	638	192	144	2.2~5.5	8	4,6,8	TRIM	12-bit	13-bit	384	24 I/O	-	-
N567H240	768	233	174	2.2~5.5	8	4,6,8	TRIM/X'tal	12-bit	13-bit	384	8I, 24 I/O	3-pair	√
N567H280	896	272	204	2.2~5.5	8	4,6,8	TRIM/X'tal	12-bit	13-bit	384	8I, 24 I/O	3-pair	√
N567H330	1022	311	233	2.2~5.5	8	4,6,8	TRIM/X'tal	12-bit	13-bit	384	8I, 24 I/O	3-pair	√
N567HP330 (OTP)	1022	311	233	2.2~5.5	8	4,6,8	TRIM/X'tal	12-bit	13-bit	384	8I, 24 I/O	3-pair	√

• N567D 8-bit µC Base, 14-ch Voice + Wavetable Melody Synthesizer

Part No.	ROM (Kbytes)	Duration (Sec.) @ 4-bit NM4		Channel		Fsys (MHz)	OSC	Sub-Clock 32 KHz	Audio		RAM (Bytes)	GPIO	PWM Output	SIM SPI
		(6 KHz)	(8 KHz)	Voice	WTM				PWM	DAC				
N567D070	224	71	53	2	14	4~8	Ring/X'tal	X'tal	12-bit	13-bit	512	24 I/O	3-pin	√
N567D100	336	106	80	2	14	4~8	Ring/X'tal	X'tal	12-bit	13-bit	512	24 I/O	3-pin	√
N567D120	416	132	99	2	14	4~8	Ring/X'tal	X'tal	12-bit	13-bit	512	24 I/O	3-pin	√
N567D140	464	147	110	2	14	4~8	Ring/X'tal	X'tal	12-bit	13-bit	512	24 I/O	3-pin	√
N567D160	508	161	121	2	14	4~8	Ring/X'tal	X'tal	12-bit	13-bit	512	24 I/O	3-pin	√
N567D200	640	203	152	2	14	4~8	Ring/X'tal	X'tal	12-bit	13-bit	512	24 I/O	3-pin	√
N567D240	768	243	183	2	14	4~8	Ring/X'tal	X'tal	12-bit	13-bit	512	24 I/O	3-pin	√
N567D280	896	284	213	2	14	4~8	Ring/X'tal	X'tal	12-bit	13-bit	512	24 I/O	3-pin	√
N567D320	1020	323	242	2	14	4~8	Ring/X'tal	X'tal	12-bit	13-bit	512	24 I/O	3-pin	√
N567D380	1232	390	293	2	14	4~8	Ring/X'tal	X'tal	12-bit	13-bit	512	24 I/O	3-pin	√
N567D420	1376	436	327	2	14	4~8	Ring/X'tal	X'tal	12-bit	13-bit	512	24 I/O	3-pin	√
N567D470	1532	485	364	2	14	4~8	Ring/X'tal	X'tal	12-bit	13-bit	512	24 I/O	3-pin	√
N567DP320 (OTP)	1020	323	242	2	14	4~8	Ring/X'tal	X'tal	12-bit	13-bit	512	24 I/O	3-pin	√

• N567L 1.0~3.6V, 8-bit µC Base, 8-ch Voice + Wavetable Melody Synthesizer

Part No.	ROM (Kbytes)	Duration (Sec.) @ 4-bit NM4		Channel		V_{DD}	Fsys (MHz)	OSC	Audio		Vp (V)	RAM (Bytes)	LVD	GPIO	PWM Output
		(6 KHz)	(8 KHz)	Voice	WTM				PWM	DAC					
N567L080	254	80	60	2	8	1.0~3.6V	4,6,8	TRIM/X'tal	12-bit	-	3.3, 4.2	384	√	16 I/O	3-pair
N567L120	416	132	99	2	8	1.0~3.6V	4,6,8	TRIM/X'tal	12-bit	-	3.3, 4.2	384	√	16 I/O	3-pair
N567L160	528	167	125	2	8	1.0~3.6V	4,6,8	TRIM/X'tal	12-bit	-	3.3, 4.2	384	√	16 I/O	3-pair
N567L200	638	202	152	2	8	1.0~3.6V	4,6,8	TRIM/X'tal	12-bit	-	3.3, 4.2	384	√	16 I/O	3-pair
N567L240	768	243	182	2	8	1.0~3.6V	4,6,8	TRIM/X'tal	12-bit	-	3.3, 4.2	384	√	16 I/O	3-pair
N567L280	896	284	213	2	8	1.0~3.6V	4,6,8	TRIM/X'tal	12-bit	-	3.3, 4.2	384	√	16 I/O	3-pair
N567L330	1022	324	243	2	8	1.0~3.6V	4,6,8	TRIM/X'tal	12-bit	-	3.3, 4.2	384	√	16 I/O	3-pair
N567LP330 (OTP)	1022	324	243	2	8	1.0~3.6V	4,6,8	TRIM/X'tal	12-bit	-	3.3, 4.2	384	√	16 I/O	3-pair

• N566G 8-bit µC Base, 4-ch Voice + Wavetable Melody Synthesizer, w/ LVD

Part No.	ROM (Kbytes)	Duration (Sec.) @ 4-bit NM4		V_{DD} (V)	CH	Fsys (MHz)	OSC	Audio		RAM (Bytes)	LVD	GPIO	PWM Output	Constant Current
		(6 KHz)	(8 KHz)					PWM	DAC					
N566G120	416	124	93	2.2~5.5	4	4,6,8	TRIM	12-bit	-	384	√	24 I/O	2-pin	√
N566G160	528	158	119	2.2~5.5	4	4,6,8	TRIM	12-bit	-	384	√	24 I/O	2-pin	√
N566G200	638	192	144	2.2~5.5	4	4,6,8	TRIM	12-bit	-	384	√	24 I/O	2-pin	√
N566G240	768	233	174	2.2~5.5	4	4,6,8	TRIM	12-bit	-	384	√	24 I/O	2-pin	√
N566G280	896	272	204	2.2~5.5	4	4,6,8	TRIM	12-bit	-	384	√	24 I/O	2-pin	√
N566G320	1022	311	233	2.2~5.5	4	4,6,8	TRIM	12-bit	-	384	√	24 I/O	2-pin	√

• N566GP (OTP), 8-bit µC Base, 4-ch Voice + Wavetable Melody Synthesizer, w/ LVD

Part No.	ROM (Kbytes)	Duration (Sec.) @ 4-bit NM4		V_{DD} (V)	CH	Fsys (MHz)	OSC	Audio		RAM (Bytes)	LVD	GPIO	PWM Output	Constant Current
		(6 KHz)	(8 KHz)					PWM	DAC					
N566GP120	416	124	93	2.2~5.5	4	4,6,8	TRIM	12-bit	-	384	√	24 I/O	2-pin	-
N566GP160	528	158	119	2.2~5.5	4	4,6,8	TRIM	12-bit	-	384	√	24 I/O	2-pin	-
N566GP200	638	192	144	2.2~5.5	4	4,6,8	TRIM	12-bit	-	384	√	24 I/O	2-pin	-
N566GP240	768	233	174	2.2~5.5	4	4,6,8	TRIM	12-bit	-	384	√	24 I/O	2-pin	-
N566GP280	896	272	204	2.2~5.5	4	4,6,8	TRIM	12-bit	-	384	√	24 I/O	2-pin	-
N566GP320	1022	311	233	2.2~5.5	4	4,6,8	TRIM	12-bit	-	384	√	24 I/O	2-pin	-

• N566K 8-bit µC Base, 6-ch Voice + Wavetable Melody Synthesizer, w/ LVD

Part No.	ROM (Kbytes)	Duration (Sec.) @ 4-bit NM4		V_{DD} (V)	CH	Fsys (MHz)	OSC	Audio		RAM (Bytes)	LVD	SIM	GPIO	PWM Output	Constant Current
		(6 KHz)	(8 KHz)					PWM	DAC						
N566K080	254	74	55	2.2~5.5	6	4,6,8	TRIM	12-bit	-	384	√	√	24 I/O	2-pin	√
N566K120	416	124	93	2.2~5.5	6	4,6,8	TRIM	12-bit	-	384	√	-	24 I/O	2-pin	√
N566K160	528	158	119	2.2~5.5	6	4,6,8	TRIM	12-bit	-	384	√	-	24 I/O	2-pin	√
N566K200	638	192	144	2.2~5.5	6	4,6,8	TRIM	12-bit	-	384	√	-	24 I/O	2-pin	√
N566K240	768	233	174	2.2~5.5	6	4,6,8	TRIM	12-bit	-	384	√	-	24 I/O	2-pin	√
N566K280	896	272	204	2.2~5.5	6	4,6,8	TRIM	12-bit	-	384	√	-	24 I/O	2-pin	√
N566K320	1022	311	233	2.2~5.5	6	4,6,8	TRIM	12-bit	-	384	√	-	24 I/O	2-pin	√

• N566KP (OTP), 8-bit µC Base, 6-ch Voice + Wavetable Melody Synthesizer, w/ LVD

Part No.	ROM (Kbytes)	Duration (Sec.) @ 4-bit NM4		V_{DD} (V)	CH	Fsys (MHz)	OSC	Audio		RAM (Bytes)	LVD	SIM	GPIO	PWM Output	Constant Current
		(6 KHz)	(8 KHz)					PWM	DAC						
N566KP081	254	74	55	2.2~5.5	6	4,6,8	TRIM	12-bit	-	384	√	√	24 I/O	2-pin	-
N566KP120	416	124	93	2.2~5.5	6	4,6,8	TRIM	12-bit	-	384	√	-	24 I/O	2-pin	-
N566KP160	528	158	119	2.2~5.5	6	4,6,8	TRIM	12-bit	-	384	√	-	24 I/O	2-pin	-
N566KP200	638	192	144	2.2~5.5	6	4,6,8	TRIM	12-bit	-	384	√	-	24 I/O	2-pin	-
N566KP240	768	233	174	2.2~5.5	6	4,6,8	TRIM	12-bit	-	384	√	-	24 I/O	2-pin	-
N566KP280	896	272	204	2.2~5.5	6	4,6,8	TRIM	12-bit	-	384	√	-	24 I/O	2-pin	-
N566KP320	1022	311	233	2.2~5.5	6	4,6,8	TRIM	12-bit	-	384	√	-	24 I/O	2-pin	-

• N566H 8-bit µC Base, 8-ch Voice + Wavetable Melody Synthesizer, w/ LVD

Part No.	ROM (Kbytes)	Duration (Sec.) @ 4-bit NM4		V_{DD} (V)	CH	Fsys (MHz)	OSC	Audio		RAM (Bytes)	LVD	SIM	GPIO	PWM Output	Constant Current
		(6 KHz)	(8 KHz)					PWM	DAC						
N566H080	254	74	55	2.2~5.5	8	4,6,8	TRIM	12-bit	-	384	√	√	24 I/O	2-pin	√
N566H120	416	124	93	2.2~5.5	8	4,6,8	TRIM	12-bit	-	384	√	-	24 I/O	2-pin	√
N566H160	528	158	119	2.2~5.5	8	4,6,8	TRIM	12-bit	-	384	√	-	24 I/O	2-pin	√
N566H200	638	192	144	2.2~5.5	8	4,6,8	TRIM	12-bit	-	384	√	-	24 I/O	2-pin	√
N566H240	768	233	174	2.2~5.5	8	4,6,8	TRIM	12-bit	-	384	√	-	24 I/O	2-pin	√
N566H280	896	272	204	2.2~5.5	8	4,6,8	TRIM	12-bit	-	384	√	-	24 I/O	2-pin	√
N566H320	1022	311	233	2.2~5.5	8	4,6,8	TRIM	12-bit	-	384	√	-	24 I/O	2-pin	√

• N566HP (OTP), 8-bit µC Base, 8-ch Voice + Wavetable Melody Synthesizer, w/ LVD

Part No.	ROM (Kbytes)	Duration (Sec.) @ 4-bit NM4		V_{DD} (V)	CH	Fsys (MHz)	OSC	Audio		RAM (Bytes)	LVD	SIM	GPIO	PWM Output	Constant Current
		(6 KHz)	(8 KHz)					PWM	DAC						
N566HP081	254	74	55	2.2~5.5	8	4,6,8	TRIM	12-bit	-	384	√	√	24 I/O	2-pin	-
N566HP120	416	124	93	2.2~5.5	8	4,6,8	TRIM	12-bit	-	384	√	-	24 I/O	2-pin	-
N566HP160	528	158	119	2.2~5.5	8	4,6,8	TRIM	12-bit	-	384	√	-	24 I/O	2-pin	-
N566HP200	638	192	144	2.2~5.5	8	4,6,8	TRIM	12-bit	-	384	√	-	24 I/O	2-pin	-
N566HP240	768	233	174	2.2~5.5	8	4,6,8	TRIM	12-bit	-	384	√	-	24 I/O	2-pin	-
N566HP280	896	272	204	2.2~5.5	8	4,6,8	TRIM	12-bit	-	384	√	-	24 I/O	2-pin	-
N566HP321	1022	311	233	2.2~5.5	8	4,6,8	TRIM	12-bit	-	384	√	-	24 I/O	2-pin	-

*N566LP (OTP), 1.0~3.6V, 8-bit µC base, 8-ch Voice/Melody Synthesizer

Part No.	ROM (Kbytes)	Duration (Sec.) @ 4-bit NM4		Channel		V_{DD}	Fsys (MHz)	OSC	Audio		Vp (V)	RAM (Bytes)	LVD	PWM Output
		(6 KHz)	(8 KHz)	Voice	WTM				PWM	DAC				
N566LP120	416	124	93	2	8	1.0~3.6V	4,6,8	TRIM	12-bit	-	3.3, 4.2	384	√	2-pin
N566LP160	528	158	119	2	8	1.0~3.6V	4,6,8	TRIM	12-bit	-	3.3, 4.2	384	√	2-pin
N566LP200	638	192	144	2	8	1.0~3.6V	4,6,8	TRIM	12-bit	-	3.3, 4.2	384	√	2-pin
N566LP240	768	233	174	2	8	1.0~3.6V	4,6,8	TRIM	12-bit	-	3.3, 4.2	384	√	2-pin
N566LP280	896	272	204	2	8	1.0~3.6V	4,6,8	TRIM	12-bit	-	3.3, 4.2	384	√	2-pin
N566LP320	1022	311	233	2	8	1.0~3.6V	4,6,8	TRIM	12-bit	-	3.3, 4.2	384	√	2-pin

* Under Development

ViewTalk® Series

• N531A170 8-bit µC Base, 2-ch Voice + Dual Tone Melody Synthesizer w/ B/W 1K-Dot LCD Driver

Part No.	ROM (Kbytes)	Working RAM (Bytes)	Duration (Sec.)	Dual Page LCD RAM (Bytes)	GPIO	Audio		LCD Resolution (SEGxCOM)	Bias	Duty
						PWM	DAC			
N531A170	509	1K	170	128x2	16 I/O	12-bit	-	64x16	1/4, 1/5	1/8, 1/16

• W539A 8-bit µC Base, 8-ch Voice + Wavetable Melody Synthesizer w/ B/W 1K-Dot LCD Driver

Part No.	ROM (Kbytes)	Working RAM (Bytes)	Duration (Sec.)	Dual Page LCD RAM (Bytes)	GPIO	Audio		LCD Resolution (SEGxCOM)	Bias	Duty
						PWM	DAC			
W539A804	505	1K	120	128x2	24 I/O	12-bit	13-bit	64x16	1/4, 1/5	1/8, 1/16
W539A806	761	1K	180	128x2	24 I/O	12-bit	13-bit	64x16	1/4, 1/5	1/8, 1/16
W539A808	1017	1K	250	128x2	24 I/O	12-bit	13-bit	64x16	1/4, 1/5	1/8, 1/16

• N539T 8-bit µC Base, 8-ch Voice + Wavetable Melody Synthesizer w/ 4-Gray Level, 2K-Dot LCD Driver

Part No.	ROM (Kbytes)	Working RAM (Bytes)	Duration (Sec.)	Dual Page LCD RAM (Bytes)	GPIO	Audio		LCD Resolution (SEGxCOM)	PWM Output	SIM	Bias	Duty
						PWM	DAC					
N539T171	509	1K	120	256x2x2	24 I/O	12-bit	13-bit	64x32 or 72x24	6-pin	√	1/4, 1/5, 1/6, 1/7	1/16, 1/24, 1/32
N539T261	765	1K	180	256x2x2	24 I/O	12-bit	13-bit	64x32 or 72x24	6-pin	√	1/4, 1/5, 1/6, 1/7	1/16, 1/24, 1/32
N539T341	1021	1K	250	256x2x2	24 I/O	12-bit	13-bit	64x32 or 72x24	6-pin	√	1/4, 1/5, 1/6, 1/7	1/16, 1/24, 1/32
N539TP340 (OTP)	1021	1K	250	256x2x2	24 I/O	12-bit	13-bit	64x32 or 72x24	-	√	1/4, 1/5, 1/6, 1/7	1/16, 1/24, 1/32

NuVoice™ Series

• N570H, 32-bit Cortex-M0 with Embedded Flash, 10-bit ADC, Touch Wake-up

Part No.	CPU	APROM Flash	VDD(V)	SRAM	GPIO	I/O Interface	PWM Output	Audio		ADC	Touch Wakeup	Voice Recognition
								Mic.	Speaker			
N570H064	Cortex®-M0 49 MHz	64 KB	1.8~5.5	6 KB	28	SPI x 2, UART	8	√	DPWM	10-bit 5-ch	√	-
N570HC64	Cortex®-M0 49 MHz	64 KB	1.8~5.5	6 KB	28	SPI x 2, UART	8	√	DPWM	10-bit 5-ch	√	√

• N570J, 32-bit Cortex-M0 with Embedded Flash, 10-bit ADC, Touch Wake-up, Long Duration Solution

Part No.	CPU	APROM Flash	Flash Memory	V_{DD} (V)	Duration(Sec)	SRAM	GPIO	I/O Interface	PWM Output	Audio		ADC	Touch Wakeup	Package
					8KHz					Mic.	Speaker			
N570J08AL	Cortex®-M0 49 MHz	64 KB	8Mbit	2.4~5.5	1,000	6 KB	24	SPI, UART	8	√	DPWM	10-bit 5-ch	√	LQFP48
N570J16AL	Cortex®-M0 49 MHz	64 KB	16Mbit	2.4~5.5	2,000	6 KB	24	SPI, UART	8	√	DPWM	10-bit 5-ch	√	LQFP48
N570J32AL	Cortex®-M0 49 MHz	64 KB	32Mbit	2.4~5.5	4,000	6 KB	24	SPI, UART	8	√	DPWM	10-bit 5-ch	√	LQFP48
N570J01GR	Cortex®-M0 49 MHz	64 KB	1Gbit	2.4~5.5	128,000	6 KB	24	SPI, UART	8	√	DPWM	10-bit 5-ch	√	LQFP64

• N572, 32-bit Cortex M0 with Embedded OTP/Flash and 12-bit ADC Solution

Part No.	CPU	APROM Flash	Flash Memory	V_{DD} (V)	Duration(Sec)	SRAM	I/O	I/O Interface	PWM Output	Audio		LDO	ADC	Other	Package
					8KHz					Mic.	Speaker				
N572F072	Cortex®-M0 48 MHz	72 KB	-	2.4~5.5	-	8 KB	32	SPI x 2	4	√	Class-AB (400mW)	√	12-bit 8-ch	-	LQFP64
N572C072	Cortex®-M0 48 MHz	72 KB	-	2.4~5.5	-	8 KB	32	SPI x 2	4	√	Class-AB (400mW)	√	12-bit 8-ch	Voice Recognition	LQFP64
N572F065	Cortex®-M0 48 MHz	64 KB	-	2.4~5.5	-	8 KB	32	SPI x 2	4	√	Class-AB (250mW)	√	12-bit 8-ch	USB 2.0 FS Device	LQFP64
N572S16A	Cortex®-M0 48 MHz	64 KB	16Mbit	2.4~5.5	2,000	8 KB	26	SPI	4	√	Class-AB (400mW)	√	12-bit 8-ch	-	LQFP64
N572S32A	Cortex®-M0 48 MHz	64 KB	32Mbit	2.4~5.5	4,000	8 KB	26	SPI	4	√	Class-AB (400mW)	√	12-bit 8-ch	-	LQFP64
N572S64A	Cortex®-M0 48 MHz	64 KB	64Mbit	2.4~5.5	8,000	8 KB	26	SPI	4	√	Class-AB (400mW)	√	12-bit 8-ch	-	LQFP64
N572U130	Cortex®-M0 48 MHz	64 KB	128Mbit	2.4~5.5	16,000	8 KB	22	SPI	4	√	Class-AB (250mW)	√	12-bit 8-ch	USB 2.0 FS Device	LQFP64

• N573, 32-bit Cortex-M0 with Embedded Flash and 16-bit ADC Solution

Part No.	CPU	APROM Flash	Flash Memory	V_{DD} (V)	Duration(Sec)	SRAM	I/O	I/O Interface	PWM Output	Audio		LDO	ADC	Other	Package
					8KHz					Mic.	Speaker				
N573F128	Cortex®-M0 48 MHz	128 KB	-	1.8~5.5	-	12 KB	32	UART, I²C, I²S, SPI	4	√	DPWM (1W)	√	16-bit sigma delta, 12-bit 10-ch SAR ADC	16-ch Touch Key, PDMA, CRC	LQFP64

* N574F, 32-bit Cortex-M0 with Embedded Flash, 10 bit ADC, Cap Touch

Part No.	CPU	APROM Flash	V_{DD} (V)	Duration (Sec.)		SRAM	GPIO	I/O Interface	PWM Output	Audio		ADC	Cap Touch	Voice Recognition	I2C
				8KHz	12KHz					Mic.	Speaker				
N574F256	Cortex®-M0	256 KB	1.8~5.5	220	146	12 KB	40	SPI, UART, LED String	12	√	DPWM	10-bit 5-ch	12	-	-
N574C256	Cortex®-M0	256 KB	1.8~5.5	220	146	12 KB	40	SPI, UART, LED String	12	√	DPWM	10-bit 5-ch	12	√	-
N574F512	Cortex®-M0	512 KB	1.8~5.5	462	308	12 KB	40	SPI, UART, LED String	12	√	DPWM	10-bit 5-ch	12	-	-
N574C512	Cortex®-M0	512 KB	1.8~5.5	462	308	12 KB	40	SPI, UART, LED String	12	√	DPWM	10-bit 5-ch	12	√	-
N574F1K0	Cortex®-M0	1024 KB	1.8~5.5	948	632	12 KB	40	SPI, UART, LED String	12	√	DPWM	10-bit 5-ch	16	-	√
N574C1K0	Cortex®-M0	1024 KB	1.8~5.5	948	632	12 KB	40	SPI, UART, LED String	12	√	DPWM	10-bit 5-ch	16	√	√
N574F1K5	Cortex®-M0	1536 KB	1.8~5.5	1433	955	12 KB	40	SPI, UART, LED String	12	√	DPWM	10-bit 5-ch	16	-	√
N574C1K5	Cortex®-M0	1536 KB	1.8~5.5	1433	955	12 KB	40	SPI, UART, LED String	12	√	DPWM	10-bit 5-ch	16	√	√

* Under Development

• N575, 32-bit Cortex-M0 with Embedded Flash and 16-bit ADC Solution

Part No.	CPU	APROM Flash	Flash Memory	V_{DD} (V)	Duration(Sec)	SRAM	I/O	I/O Interface	PWM Output	Audio		LDO	ADC	Other	Package
					8KHz					Mic.	Speaker				
N575F145	Cortex®-M0 48 MHz	145 KB	-	2.4~5.5	-	12 KB	24	UART, I²C, I²S, SPI	2	√	DPWM (1W)	√	16-bit, sigma delta	8-ch Touch Key, Temperature Alarm, PDMA, CRC	LQFP48
N575C145	Cortex®-M0 48 MHz	145 KB	-	2.4~5.5	-	12 KB	24	UART, I²C, I²S, SPI	2	√	DPWM (1W)	√	16-bit, sigma delta	8-ch Touch Key, Temperature Alarm, PDMA, CRC, Voice Recognition	LQFP48
N575S64A	Cortex®-M0 48 MHz	145 KB	64 Mbit	2.4~5.5	8,000	12 KB	20	UART, I²C, I²S, SPI	2	√	DPWM (1W)	√	16-bit, sigma delta	8-ch Touch Key, Temperature Alarm, PDMA, CRC	LQFP64

Peripheral Series

■ Nu-Touch

• N55T Capacitor Sensor Controller

Part No.	Input	Wake Up	V_{DD}(V)	Interface
N55T16	16	√	2.1~5.5	I²C, SPI

■ ADC

• N55AD SAR ADC

Part No.	Channel	Resolution	V_{DD}(V)	Conversion Rate
N55AD808	8	8-bit	2.7~5.5	50 KHz

■ I/O Expander

• N55P242 I/O Expander w/ 24 I/O Pins and SPI Interface

Part No.	Interface	GPIO	Wake Up	H/W PWM	Constant Current	Internal OSC
N55P242	SPI	24 I/O	√	24-pin	24-pin	8 MHz

* Under Development

■ MFID Family

• W55MID 13.56MHz MFID w/ Single-Tag/Multi-Tag and Reader

Part No.	Category	Frequency (MHz)	ID type	ID No.	Anti-collision	μC Interface
W55MID15	Single-tag	13.56	Bonding-ID	243	-	-
W55MID35	Multi-tag	13.56	Bonding-ID	243	4~6 tags	-
W55MID50	Reader	13.56	-	-	-	Serial/Parallel

• N55MID, 13.56MHz MFID w/ Single-Tag/Multi-Tag and Reader

Part No.	Category	Frequency (MHz)	ID type	ID No.	Anti-collision	μC Interface
N55MID16	Single-tag	13.56	Bonding-ID	729	-	-
N55MID36	Multi-tag	13.56	Bonding-ID	729	4~6 tags	-
N55MID51	Reader	13.56	-	-	-	Serial/Parallel

■ Serial ROM Family

• N551C Serial Mask ROM

Part No.	ROM (bits)	Access Time	V_{DD}(V)	Interface
N551C161	16M	1us	2.4~5.5	SPI
N551C321	32M	1us	2.4~5.5	SPI

■ PWM Power Amplifier

N55PA, PWM Power Amplifier

Part No.	VDD (V)	Mute Function	Gain Control	MIC Line In	Output Power	Package
N55PA01A	2.0~5.5V	Yes	Ext. R	Yes	1W (@ 5.5V, 8Ω, THD + N =1%)	SOP8
***N55PA03A**	2.0~5.5V	Yes	Ext. R	Yes	3W (@ 5.5V, 4Ω, THD + N =1%)	SOP8

NSP Series

• NSPxx, Embedded Flash, 1-ch Voice for Voice Prompt Application

Part No.	Package	Duration(Sec)		V_{DD} (V)	LVR (V)	Speech CH	Audio	REG Pin	Interface to MCU	ISP	Operation Temperature
		8KHz	12KHz				PWM				
NSP040A	SOP8	60	40	2.0~5.5	1.9	1	13-bit		2-Wire	No	-20°C~ 85°C
NSP081A	SOP8	94	63	2.0~5.5	1.9	1	13-bit		2-Wire	Yes	-20°C~ 85°C
NSP082A	SOP8	94	63	2.0~5.5	1.9	1	13-bit	√	2-Wire	Yes	-20°C~ 85°C
NSP171A	SOP8	155	103	2.0~5.5	1.9	1	13-bit		2-Wire	Yes	-20°C~ 85°C
NSP172A	SOP8	155	103	2.0~5.5	1.9	1	13-bit	√	2-Wire	Yes	-20°C~ 85°C
NSP340A	SOP8	337	225	2.0~5.5	1.9	1	13-bit		2-Wire	Yes	-20°C~ 85°C
NSP341A	SOP8	337	225	2.0~5.5	1.9	1	13-bit	√	2-Wire	Yes	-20°C~ 85°C
NSP481A	SOP8	458	305	2.0~5.5	1.9	1	13-bit		2-Wire	Yes	-20°C~ 85°C
NSP080B	SOP14	94	63	2.0~5.5	1.9	1	13-bit	√	2-Wire	Yes	-20°C~ 85°C
NSP170B	SOP14	155	103	2.0~5.5	1.9	1	13-bit	√	2-Wire	Yes	-20°C~ 85°C
NSP340B	SOP14	337	225	2.0~5.5	1.9	1	13-bit	√	2-Wire	Yes	-20°C~ 85°C
NSP480B	SOP14	458	305	2.0~5.5	1.9	1	13-bit	√	2-Wire, UART	Yes	-20°C~ 85°C
NSP650B	SOP14	701	467	2.0~5.5	1.9	1	13-bit	√	2-Wire, UART	Yes	-20°C~ 85°C
NSP960B	SOP14	944	629	2.0~5.5	1.9	1	13-bit	√	2-Wire, UART	Yes	-20°C~ 85°C

• NSP2xxx, Embedded Flash, 2-ch Voice for Voice Prompt Application w/ I2C and UART

Part No.	Package	Duration(Sec)		V_{DD} (V)	LVR (V)	Speech CH	Audio	REG Pin	Interface to MCU	ISP
		12KHz	16KHz				PWM			
NSP2080A	SOP8	144	108	1.8~5.5	1.9	2	13-bit	√	I2C, UART	Yes
NSP2170A	SOP8	225	168	1.8~5.5	1.9	2	13-bit	√	I2C, UART	Yes
NSP2340A	SOP8	467	350	1.8~5.5	1.9	2	13-bit	√	I2C, UART	Yes

• NSPxx, Embedded OTP, 1-ch Voice for Voice Prompt Application

Part No.	Package	Duration(Sec)		V_{DD} (V)	LVR (V)	Speech CH	Audio
		8KHz	12KHz				PWM
NSP075A	SOP8	81	49	2.0~5.5	2.0	1	12-bit
NSP165A	SOP8	162	97	2.0~5.5	2.0	1	12-bit
NSP335A	SOP8	324	194	2.0~5.5	2.0	1	12-bit
NSP075B	SOP14	81	49	2.0~5.5	2.0	1	12-bit
NSP165B	SOP14	162	97	2.0~5.5	2.0	1	12-bit
NSP335B	SOP14	324	194	2.0~5.5	2.0	1	12-bit

ARM® Cortex®-M Audio SoCs

• AUI Enabled Series-M0

Part No.	CPU	APROM	SRAM	I/O	Timer	SPI	PWM	ADC	RTC	Audio		Developemnt Tools	Other	Package
										MIC.	Speaker			
ISD91032	Cortex®-M0 49 MHz	64 KB	6 KB	22	3	1	8	10-bit SAR ADC	√	1	Class-D (0.45W)	ISD-DMK_91032C	13-bit DAC, UART	LQFP48
ISD91032C	Cortex®-M0 49 MHz	64 KB	6 KB	22	3	1	8	10-bit SAR ADC	√	1	Class-D (0.45W)	ISD-DMK_91032C	VR, 13-bit DAC, UART	LQFP48
ISD9130	Cortex®-M0 49 MHz	68 KB	12 KB	24	2	1	2	Sigma-Delta >92 dB	√	1	Class-D (1W)	ISD-DMK_9160	8-ch Touch Key, Temperature Alarm, UART, I²C, I²S, PDMA, CRC	LQFP48 QFN32
ISD9160	Cortex®-M0 49 MHz	145 KB	12 KB	24	2	1	2	Sigma-Delta >92 dB	√	1	Class-D (1W)	ISD-DMK_9160	8-ch Touch Key, Temperature Alarm, UART, I²C, I²S, PDMA, CRC	LQFP48 QFN32
ISD9160C	Cortex®-M0 49 MHz	145 KB	12 KB	24	2	1	2	Sigma-Delta >92 dB	√	1	Class-D (1W)	ISD-DMK_9160	VR, 8-ch Touch Key,Temperature Alarm,UART, I²C, I²S, PDMA, CRC	LQFP48 QFN32
ISD91230	Cortex®-M0 49 MHz	64 KB	12 KB	32	2	2 (Quad /Dual)	4	Sigma-Delta >90 dB	√	1	Class-D (0.45W)	ISD-DMK_91260	16-ch Touch Key,Temperature Alarm,2*UART, I²C, I²S, PDMA, CRC	LQFP64 QFN32
ISD91230B	Cortex®-M0 49 MHz	64 KB	12 KB	32	2	2 (Quad/ Dual)	4	Bridge Sense ADC, 24-bit	√	-	Class-D (0.45W)	ISD-DMK_91260B	16-ch Touch Key, Temperature Alarm, 2*UART, I²C, I²S, PDMA, CRC	LQFP64
ISD91260	Cortex®-M0 49 MHz	128 KB	12 KB	32	2	2 (Quad /Dual)	4	Sigma-Delta >90 dB	√	1	Class-D (0.45W)	ISD-DMK_91260	16-ch Touch Key,Temperature Alarm, 2*UART, I²C, I²S, PDMA, CRC	LQFP64 QFN32
ISD91260B	Cortex®-M0 49 MHz	128 KB	12 KB	32	2	2 (Quad/ Dual)	4	Bridge Sense ADC, 24-bit	√	-	Class-D (0.45W)	ISD-DMK_91260B	16-ch Touch Key, Temperature Alarm, 2*UART, I²C, I²S, PDMA, CRC	LQFP64
ISD91260C	Cortex®-M0 49 MHz	128 KB	12 KB	32	2	2 (Quad/ Dual)	4	Sigma-Delta >90 dB	√	1	Class-D (0.45W)	ISD-DMK_91260	VR, 16-ch Touch Key, Temperature Alarm, 2*UART, I²C, I²S, PDMA, CRC	LQFP64 QFN32
ISD91331	Cortex®-M0 98 MHz	68 KB	16 KB	32	2	1 (Quad)	6	Sigma-Delta >90 dB	√	1	Class-D (1W)	ISD-DMK_91300	16-ch Touch Key,Temperature Alarm, UART, I²C, I²S, PDMA, CRC	LQFP64
ISD91361	Cortex®-M0 98 MHz	145 KB	16 KB	32	2	1 (Quad)	6	Sigma-Delta >90 dB	√	1	Class-D (1W)	ISD-DMK_91300	16-ch Touch Key, Temperature Alarm, UART, I²C, I²S, PDMA, CRC	LQFP64
ISD91361C	Cortex®-M0 98 MHz	145 KB Flash	16 KB	32	2	1 (Quad)	6	Sigma-Delta >90 dB	√	1	Class-D (1W)	ISD-DMK_91300	VR, 16-ch Touch Key, Temperature Alarm, UART, I²C, I²S, PDMA, CRC	LQFP64
ISD91530	Cortex®-M0 49 MHz	64 KB Flash	12KB	50	3	2 (Quad/ Dual)	2	12-bit SAR ADC	√	1	Class-AB (20mW)	ISD-DMK_91500	USB 2.0 FS	LQFP64 QFN48
ISD91535	Cortex®-M0 49 MHz	64 KB Flash	20KB	50	3	2 (Quad/ Dual)	2	12-bit SAR ADC	√	1	Class-AB (20mW)	ISD-DMK_91500	USB 2.0 FS	LQFP64 QFN348

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• AUI Enabled Series-M4

Part No.	CPU	APROM	SRAM	I/O	Timer	SPI	PWM	ADC	RTC	Audio		Developemnt Tools	Other	Package	Status*
										MIC.	Speaker				
ISD94124A	Cortex®-M4 200 MHz	512 KB	192 KB	57	4	3 (1 x Quad/ Dual)	6	12-bit SAR ADC	√	4x DMIC	DPWM to exteral amp	ISD-DMK_94100_AM ISD-DMK_94100_DM	USB 2.0 FS VAD	LQFP64, QFN48	P
ISD94124B	Cortex®-M4 200 MHz, Basic fetaure	512 KB	192 KB	57	4	3 (1 x Quad/ Dual)	6	12-bit SAR ADC	√	-	-	ISD-DMK_94100_AM ISD-DMK_94100_DM	USB 2.0 FS	LQFP64 QFN48	P

Part No.	CPU	APROM	SRAM	I/O	Timer	SPI	PWM	ADC	RTC	Audio		Developemnt Tools	Other	Package	Status*
										MIC.	Speaker				
ISD94124C	Cortex®-M4 200 MHz	512 KB	192 KB	57	4	3 (1 x Quad/ Dual)	6	12-bit SAR ADC	√	4x DMIC	DPWM to exteral amp	ISD-DMK_94100_AM ISD-DMK_94100_DM	VR, USB 2.0 FS VAD	LQFP64 QFN48	P
ISD94124D	Cortex®-M4 200 MHz	512 KB	192 KB	57	4	3 (1 x Quad/ Dual)	6	12-bit SAR ADC	√	4x DMIC	DPWM to exteral amp	ISD-DMK_94100_AM ISD-DMK_94100_DM	BF+NR, USB 2.0 FS VAD	LQFP64	P
ISD94124P	Cortex®-M4 200 MHz	512 KB	192 KB	57	4	3 (1 x Quad/ Dual)	6	12-bit SAR ADC	√	4x DMIC	DPWM to exteral amp	ISD-DMK_94100_AM ISD-DMK_94100_DM	BF+NR+VR, USB 2.0 FS VAD	LQFP64	P
ISD94124S	Cortex®-M4 200 MHz	512 KB	192 KB	57	4	3 (1 x Quad/ Dual)	6	12-bit SAR ADC	√	4x DMIC	DPWM to exteral amp	ISD-DMK_94100_AM ISD-DMK_94100_DM	AEC+NR, USB 2.0 FS VAD	LQFP64 QFN48	P
ISD941A24A	Cortex®-M4 200MHz, Stereo CODEC MCP	512 KB	192 KB	29	4	3 (1 x Quad/ Dual)	6	12-bit SAR ADC	√	4x DMIC	DPWM to exteral amp	ISD-DEMO941A24	USB 2.0 FS VAD	LQFP64	P
ISD941A24S	Cortex®-M4 200MHz, Stereo CODEC MCP	512 KB	192 KB	29	4	3 (1 x Quad/ Dual)	6	12-bit SAR ADC	√	4x DMIC	DPWM to exteral amp	ISD-DEMO941A24	AEC+NR, USB 2.0 FS VAD	LQFP64	P
ISD94123B	Cortex®-M4 200 MHz	512 KB Flash	128 KB	57	4	3 (1 x Quad/ Dual)	6	12-bit SAR ADC	√	-	-	ISD-DMK_94100_AM ISD-DMK_94100_DM	USB 2.0 FS	LQFP64 QFN48	P
ISD94123S	Cortex®-M4 200 MHz	512 KB	128 KB	41	4	3 (1 x Quad/ Dual)	5	12-bit SAR ADC	√	4x DMIC	DPWM to exteral amp	ISD-DMK_94100_AM ISD-DMK_94100_DM	AEC+NR, USB 2.0 FS VAD	QFN48	P
ISD94113A	Cortex®-M4 200 MHz	256 KB	128 KB	57	4	3 (1 x Quad/ Dual,)	6	12-bit SAR ADC	√	4x DMIC	DPWM to exteral amp	ISD-DMK_94100_AM ISD-DMK_94100_DM	USB 2.0 FS VAD	LQFP64 QFN48	P
ISD94113B	Cortex®-M4 200 MHz	256 KB	128 KB	57	4	3 (1 x Quad/ Dual)	6	12-bit SAR ADC	√	-	-	ISD-DMK_94100_AM ISD-DMK_94100_DM	USB 2.0 FS	LQFP64 QFN48	P
ISD94113S	Cortex®-M4 200 MHz	256 KB	128 KB	57	4	3 (1 x Quad/ Dual)	6	12-bit SAR ADC	√	4x DMIC	DPWM to exteral amp	ISD-DMK_94100_AM ISD-DMK_94100_DM	AEC+NR, USB 2.0 FS VAD	LQFP64 QFN48	P

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Audio Converters

• Mono Codec Series

Part No.	Description	# of		SNR (dB)		THD (dB)		Sample Rate (KHz)	Audio Format	Development Tools	CTRL IF	SPKVDD/ Analog/Digital/ Digital I/O (V)	Package (mm)
		ADC	DAC	ADC	DAC	ADC	DAC						
NAU8810	Mono Codec with 2-wire interface	1	1	91	93	-79	-84	8~48	I²S PCM (Timeslot)	NAU8810-DEMO	2-Wire	2.50~5.50 2.50~3.60 1.71~3.60 1.71~3.60	QFN20 (4x4)
NAU88C10	Mono Codec with 2-wire interface	1	1	91	93	-79	-84	8~48	I²S PCM (Timeslot)	NAU88C10-DEMO	2-Wire	2.50~5.50 2.50~3.60 1.71~3.60 1.71 ~ 3.60	QFN20 (4x4)
NAU88U10	AEC-Q100 Automotive Grade Mono Codec with 2-wire interface.	1	1	91	93	-79	-84	8~48	I²S PCM (Timeslot)	NAU88C10-DEMO	2-Wire	2.50 ~ 5.50 2.50 ~ 3.60 1.71 ~ 3.60 1.71 ~ 3.60	QFN20 (4x4)
NAU8812	Mono Codec with speaker driver	1	1	91	93	-79	-84	8~48	I²S PCM (Timeslot)	NAU8812-DEMO	2-Wire 3-Wire 4-Wire	2.50 ~ 5.50 2.50 ~ 3.60 1.71 ~ 3.60 1.71 ~ 3.60	QFN32 (5x5) SSOP-28
NAU8814	Mono Audio Codec with Equalizer, speaker driver	1	1	91	93	-79	-84	8~48	I²S PCM (Timeslot)	NAU8814-DEMO	2-Wire 3-Wire	2.50 ~ 5.50 2.50 ~ 3.60 1.71 ~ 3.60 1.71 ~ 3.60	QFN24 (4x4)
NAU88C14	Mono Audio Codec with Equalizer, speaker driver	1	1	91	93	-79	-84	8~48	I²S PCM (Timeslot)	NAU88C14-DEMO	2-Wire 3-Wire	2.50 ~ 5.50 2.50 ~ 3.60 1.71 ~ 3.60 1.71 ~ 3.60	QFN24 (4x4)

• Stereo Codec Series

Part No.	Description	# of		SNR (dB)		THD (dB)		Sample Rate (KHz)	Audio Format	Development Tools	CTRL IF	SPKVDD/ Analog/Digital/ Digital I/O (V)	Package (mm)	Status*
		ADC	DAC	ADC	DAC	ADC	DAC							
NAU8822A	Stereo Codec with Speaker Drive	2	2	90	94	-80	-84	8~48	I²S PCM (Timeslot)	NAU8822A-DEMO	2-Wire 3-Wire 4-Wire	2.50 ~ 5.50 2.50 ~ 3.60 1.65 ~ 3.60 1.65 ~ 3.60	QFN32 (5x5)	P
NAU88U22A	AEC-Q100 Automotive Grade Stereo Codec with Speaker Drive	2	2	90	94	-80	-84	8~48	I²S PCM (Timeslot)	NAU8822A-DEMO	2-Wire 3-Wire 4-Wire	2.50 ~ 5.50 2.50 ~ 3.60 1.65 ~ 3.60 1.65 ~ 3.60	QFN32 (5x5)	P
NAU88C22	Stereo Codec with Speaker Drive	2	2	89	89	-78	-84	8~192	I²S PCM (Timeslot)	NAU88C22-DEMO	2-Wire 3-Wire 4-Wire	2.50 ~ 5.50 2.50 ~ 3.60 1.65 ~ 3.60 1.65 ~ 3.60	QFN32 (5x5) QFN32 (4x4)	P
NAU8820	Stereo Codec	2	2	90	94	-80	-84	8~48	I²S PCM (Timeslot)	NAU8820-DEMO	2-Wire 3-Wire 4-Wire	2.50 ~ 5.50 2.50 ~ 3.60 1.65 ~ 3.60 1.65 ~ 3.60	QFN32 (5x5)	P

• Ultra Low Power (ULP) Codec Series

Part No.	Description	# of		SNR (dB)		THD (dB)		Sample Rate (KHz)	Audio Format	Development Tools	CTRL IF	SPKVDD/ MICBIAS/ Analog/Digital/ Digital I/O (V)	Package (mm)	Status*
		ADC	DAC	ADC	DAC	ADC	DAC							
NAU88L21	ULP Stereo CODEC with Class-G Headphone Driver	2	2	103	105	-91	-80	8~192	I²S (TDM) PCM (Timeslot)	NAU88L21-DEMO	I²C	NA 3.0 ~ 3.6 1.62 ~ 1.98 N/A 1.62 ~ 3.6	QFN32 (5x5)	P

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Part No.	Description	# of		SNR (dB)		THD (dB)		Sample Rate (KHz)	Audio Format	Development Tools	CTRL IF	SPKVDD/ MICBIAS/ Analog/Digital/ Digital I/O (V)	Package (mm)	Status*
		ADC	DAC	ADC	DAC	ADC	DAC							
NAU88L11	ULP Mono CODEC with Class-G Headphone Driver	1	1	103	105	-93	-85	8~96	I²S (TDM) PCM (Timeslot)	NAU88L11-DEMO	I²C	NA 3.0 ~ 3.6 1.62 ~ 1.98 N/A 1.62 ~ 3.6	QFN20 (4x4)	P
NAU88L20*	ULP Stereo CODEC with I2S/PCM interface and digital mixer	2	2	98	100	-91	-85	8~96	I²S (TDM) PCM (Timeslot)		I²C	NA 3.0 ~ 3.6 1.6 ~ 3.6 1.6 ~ 3.6 1.6 ~ 3.6	QFN32 (4x4)	2022Q1 MP*
NAU88L24	ULP Stereo CODEC With Advanced Headset Detection and Stereo Class D Amp	2	2	100	103	-85	-77	8~96	I²S (TDM) PCM (Timeslot)	NAU88L24I-DEMO	I²C	2.5 ~ 5.0 2.5 ~ 5.0 1.6 ~ 2.0 1.1 ~ 1.98 1.6 ~ 3.6	QFN48 (6x6)	P
NAU88L25B	Ultra-Low Power Audio CODEC With Advanced Headset Features and 124dB Class G Headphone Drive	1	2	101	124	-91	-89	8~192	I²S / PCM	NAU88L25-DEMO	I²C	NA 2.6 ~ 5.0 1.6 ~ 2.0 1.1 ~ 1.98 1.6 ~ 3.6	QFN32 (5x5)	P

• Stereo ADC Series

Part No.	Description	# of		SNR (dB)		THD (dB)		Sample Rate (KHz)	Audio Format	Development Tools	CTRL IF	Analog/Digital/ Digital I/O (V)	Package (mm)
		ADC	DAC	ADC	DAC	ADC	DAC						
NAU8501	Stereo ADC with Input Mixer and Line Output	2	-	90	-	-80	-	8~48	I²S (TDM) PCM (Timeslot)	NAU8501-DEMO	2-Wire 3-Wire 4-Wire	2.50 ~ 3.60 1.65 ~ 3.60 1.65 ~ 3.60	QFN32 (5x5)
NAU8502	Stereo ADC with Integrated LDO	2	-	90	-	-80	-	8~48	I²S (TDM) PCM (Timeslot)	NAU8502-Card	2-Wire 3-Wire 4-Wire	2.70 ~ 3.60 1.71 ~ 3.60 1.71 ~ 3.60	QFN32 (5x5)

• Ultra Low Power (ULP) ADC Series

Part No.	Description	# of		SNR (dB)		THD (dB)		Sample Rate (KHz)	Audio Format	Development Tools	CTRL IF	MICBIAS/ Analog/Digital/ Digital I/O (V)	Package (mm)
		ADC	DAC	ADC	DAC	ADC	DAC						
NAU85L20	ULP Stereo Audio ADC with integrated FLL and Microphone Preamplifier	2	-	101	-	-91	-	8~96	I²S (TDM)	NAU85L20-DEMO	I²S	1.80 ~ 5.50 1.62 ~ 1.98 1.20 ~ 1.98 1.62 ~ 3.60	QFN28 (4x4)
NAU85L40	ULP Quad Audio ADC with integrated FLL and Microphone Preamplifier	4	-	101	-	-91	-	8~96	I²S (TDM)	NAU85L40-DEMO	I²S	2.50 ~ 5.50 1.62 ~ 1.98 1.20 ~ 1.98 1.62 ~ 3.60	QFN28 (4x4)

• Stereo DAC Series

Part No.	Description	# of		SNR (dB)		THD (dB)		Sample Rate (KHz)	Audio Format	Development Tools	CTRL IF	SPKVDD/ Analog/Digital/ Digital I/O (V)	Package (mm)
		ADC	DAC	ADC	DAC	ADC	DAC						
NAU8401	Stereo DAC with Speaker Drive and Line Input	-	2	-	94	-	-84	8~48	I²S PCM (Timeslot)	NAU8401-DEMO	2-Wire 3-Wire 4-Wire	2.50 ~ 5.50 2.50 ~ 3.60 1.65 ~ 3.60 1.65 ~ 3.60	QFN32 (5x5)
NAU8402	Stereo DAC with 2Vrms Output	-	2	-	98	-	-82	8~96	I²S	NAU8402-Card	-	NA 3.0 ~ 3.6 1.7 ~ 3.6 1.7 ~ 3.6	TSSOP 16

• Precision ADC Series

Part No.	Description	Resolution Bits	Sample Rates (max)	Architectur	Gain	# of Input Channels	Development Tools	ENOB (Gain=1,10SPS)	Package	Satus*
NAU7802	Dual Channel 24-bit ADC	24	10, 20, 40,80 & 320Hz	Sigma-Delta	1x, 2x, 4x,8x, 16x,32x, 64x,128x	2	N/A	23	SOP-16, PDIP-16	P

*Status: P=Mass Production

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Audio Amplifiers

• 2Vrms Line Driver and Class-AB Series

Part No.	Description	SNR (dB)	Output Power		Gain (dB)	Standby Current (uA)	Operating Voltage (V)	Temp (°C)	Development Tools	Package
			Power (W)	THD+N (%)						
NAU8220	2Vrms Line Driver	108	-	0.003	-	-	3.0~3.6	-40~85	NAU8220WG-EVB	SOP14 TSSOP14
ISD8101	1.5W Class-AB Audio Amplifier with Chip Enable, Differential/ Single ended inputs, Low pop and Click	100	0.825 (5.0V)	<1	20	<1	2.4~6.8	-40~85	ISD-DEMO8101	8-pin SOP 8-pin PDIP
			1.1 (5.0V)	<10						
			1.5 (6.8V)	<10						
ISD8102	2W Class-AB Audio Amplifier with Head Phone Sense Input	100	2W into 4Ω at 5V	<10	20	<1	2.0~6.8	-40~85	ISD-DEMO8102	8-pin SOP (Thermal ex-pad)
ISD8104	2W Class-AB Audio Amplifier, Differential/Single ended inputs	100	2W into 4Ω at 5V	<10	20	<1	2.0~6.8	-40~85	ISD-DEMO8104	8-pin SOP (Thermal ex-pad)P

• Class D Series

Part No.	Description	Output Power		Gain (dB)	Standby Current (uA)	Operating Voltage (V)	Temp (°C)	Development Tools	Package	Status*
		Power (W)	THD+N (%)							
NAU82011	3.1W Mono Class-D Audio Amplifier, variable gain with Differential / Single ended inputs	3.1W into 4Ω at 5V	<10	Variable	<1	2.5~5.5	-40~85	NAU82011VG-EVB	QFN16 WCSP-9	P
NAU82039	3.2W Mono Class-D Audio Amplifier, variable gain with Differential / Single ended inputs	3.2W into 4Ω at 5V	<10	12dB	<1	2.5~5.5	-40~85		WLCSP-9	P

• Class D Series

Part No.	Description	Output Power		Gain (dB)	Standby Current (uA)	Operating Voltage (V)	Temp (°C)	Development Tools	Package	Status*
		Power (W)	THD+N (%)							
NAU8223	3.1W Stereo Filer-Free Class-D Audio Amplifier, 5 gain steps with Differential / Single ended inputs	3.1W into 4Ω at 5V	<10	0, 6, 12, 18, 24	<1	2.5~5.5	-40~85	NAU8223-EVB	QFN20	P
NAU8224	3.1W Stereo Filer-Free Class-D Audio Amplifier, 2 wire interface gain control with Differential / Single ended inputs	3.1W into 4Ω at 5V	<10	24 ~ -62	<1	2.5~5.5	-40~85	NAU8224-EVB	QFN20	P
NAU8315	I2S, 3.2W Mono Filer-Free Class-D Audio Amplifier, with I2S input	3.2W into 4Ω at 5V	<10	3, 6, 9, 12	typ. 0.3	SPK_VDD: 2.5 - 5.25 IO_Vdd: 1.8 - 5.25	-40~85	NAU8325-DEMO	QFN20 WLCSP-9 WLCSP-12	P
NAU8325	I2S, 3.1W Stereo Filer-Free Class-D Audio Amplifier, 2 wire interface	3.0W into 4Ω at 5V	<10	24 ~ -62	<2	SPK_VDD: 2.5 - 5.5 A_Vdd: 1.62 - 1.98 IO_Vdd: 1.62 - 3.6	-40~85	NAU8325-DEMO	QFN20	P
NAU83P20	Class D power stage 2x20W into 8Ohms (1% THD)	10Wx4 20Wx2	<0.18	3BTL / 3SE	<1	7.0~24.0	-40~85	NAU83P20-DEMO	QFN48	P

• Smart Amplifier

Part No.	Description	Output Power	Operating Voltage (V)	Speaker Protection	Speaker Channel	Audio Interface	Package	Status
NAU8331VG	8W Mono Boosted Class D Amplifier	8W @ 4Ω 6W @ 8Ω	2.9~5.5	External DSP	Mono	I2S, PCM, TDM	WLCSP 35 Balls with 0.5mm Pitch	P
NAU83G10VG	12W Mono Boosted Class D with Klippel Controlled Sound DSP	8W @ 4Ω 6.5W @ 8Ω	2.9~5.5	Integrated DSP	Mono	I2S, PCM, TDM	WLCSP 50 Balls swith 0.5mm Pitch	P
NAU83G20VG	20W Mono Boosted Class D with Klippel Controlled Sound DSP	20W @ 4Ω 11W @ 8Ω	Up to 14	Integrated DSP	Mono	I2S, PCM, TDM	WLCSP 50 Balls with 0.5mm Pitch	P

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Audio Enhancement

Part No.	Description	HW Configuration					Algorithms									
		I²S Stereo Inputs	ADC Stereo Inputs	I²S Output 2 x Stereo	DAC Single Output	Power Output	Bass	Pro. Eq.	3D	Treble	Volume	Level	Dialog	DRC	V3D	Package
NPCP215F	MaxxAudio	4	0	3	0	20W (8R)	Y	Y	Y	Y	Y	Y	Y	-	-	QFN48
NPCA112D	MaxxAudio	4	0	3	0	-	Y	Y	Y	Y	Y	Y	Y	-	-	QFN32
NPCA110P	MaxxAudio	2	3	3	4	-	Y	Y	Y	Y	Y	Y	Y	-	-	QFN40
NPCA110T	MaxxAudio	3	0	3	3	-	Y	Y	Y	Y	Y	Y	Y	-	-	QFN32
NPCA110D	MaxxAudio	3	0	3	0	-	Y	Y	Y	Y	Y	Y	Y	-	-	QFN32
NPCA110B	MaxxAudio	1	2	1	2	-	Y	Y	-	-	Y	-	-	-	-	QFN32
NPCA120D	DPS	2	0	2	0	-	Y	Y	Y	Y	Y	Y	Y	Y	-	LQFP64
NPCA121D	DPS	3	0	3	0	-	Y	Y	Y	Y	Y	Y	Y	Y	Y	LQFP64

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ChipCorder® Family

• Digital ChipCorder® Series

Part No.	Description	Duration	Sample Rate (KHz)	Operating Voltage (V)	Package	Development Tools	Temp (°C)	Status*
ISD15102	Multi-message record/playback, Flash memory, I²S digital audio and SPI interfaces	2 min	Up to 48	2.7~3.6	LQFP48	ISD-DMK_15100	Industrial -40~85°C	P
ISD15104		4 min						
ISD15108		8 min						
ISD15C00	Multi-message record/playback with I²S digital audio and SPI interfaces	Ext. Flash up to 64 min	Up to 48	2.7~3.6	LQFP48	ISD-DMK_15C00	AEC-Q100	P
ISD15D00	Multi-message playback-only with I²S digital audio and SPI interfaces	Ext. Flash up to 64 min	Up to 48	2.7~5.5	QFN32	ISD-DMK_15D00	AEC-Q100	P
ISD3900	Multi-message record/playback with I²S digital audio and SPI interfaces	Ext. Flash up to 64 min	Up to 48	2.7~3.6	LQFP48	ISD-DMK_3900	Industrial -40~85°C	P
ISD3800	Multi-message playback-only with I²S digital audio and SPI interfaces	Ext. Flash up to 64 min	Up to 48	2.7~5.5	LQFP48 QFN32	ISD-DMK_3800	Industrial -40~85°C	P
ISD2130	Multi-message playback-only with embedded Flash memory	30 sec	Up to 32	2.7~3.6	QFN20 SOP14	ISD-DMK_2100	Industrial -40~85°C	P
ISD2115A		15 sec				ISD-DMK_2100		P
ISD2360	Multi-message, 3-channel audio, playback-only with embedded Flash memory	64 sec	Up to 32	2.4~5.5	QFN32 SOP16	ISD-DMK_2360	Industrial -40~85°C	P
ISD2361	Multi-message, 3-channel audio, playback-only with embedded Flash and SPI Interface	64 sec + Ext. Flash up to 1024 min	Up to 32	2.4~5.5	QFN32 SOP16	ISD-DMK_2361	Industrial -40~105°C	P

• MLS ChipCorder® Series

Part No.	Description	Duration	Sample Rate (KHz)	Operating Voltage (V)	Package	Development Tools	Temp (˚C)
ISD14B20	Multi-message record/playback with internal Flash memory	10~128 sec	4~12	2.4~5.5	DIE	ISD-COB18B20	0~50°C
ISD14B40						ISD-COB18B24	
ISD14B80						ISD-COB18B80	
ISD1916	Multi-message record/playback with internal Flash memory	10~128 sec	4~12	2.4~5.5	SOIC 28	ISD-DEMO1964	Industrial -40~85°C
ISD1932							
ISD1964							

Part No.	Description	Duration	Sample Rate (KHz)	Operating Voltage (V)	Package	Development Tools	Temp (˚C)
ISD1610B	Single-message record/playback with internal Flash memory	6~40 sec	4~12	2.4~5.5	SOIC 16 DIE	I16-COB20	Commercial Industrial
ISD1616B							
ISD1620B							
ISD1730	Multi-message record/playback, internal Flash memory and SPI interface	20~480 sec	4~12	2.4~5.5	SOIC 28 PDIP 28 DIE	ISD-COB1730	Commercial Industrial
ISD1760						ISD-COB17160	
ISD17120						ISD-COB17150	
ISD17240						ISD-COB17240	
ISD1806	Single-message record/playback with internal Flash	6~16 sec	4~8	2.7~4.5	DIE	ISD-COB1810	0~50°C
ISD1810							
ISD18A04	Single-message record/playback with internal Flash memory	4~8 sec	4~8	2.4~5.5	DIE	ISD-COB18A04	0~50°C
ISD18B12	Single-message record/playback with internal Flash memory	6~24 sec	4~8	2.4~5.5	DIE	ISD-COB18B24	0~50°C
ISD18B24							
ISD18C10	Single-message record/playback with internal Flash memory	8-16 sec	4~8	2.7~4.5	DIE	ISD-COB18C10	0~50°C
ISD4002	Multi-message record/playback, internal Flash memory and SPI interface	2~16 min	4,5.3,6.4,8	2.7~3.3	PDIP 28 SOIC 28 DIE	ISD-IPROG-1	Commercial Industrial
ISD4003							
ISD4004							
ISD5102	Multi-message record/playback, internal Flash memory and I²C interface	2~16 min	4,5.3,6.4,8	2.7~3.3	PDIP 28 SOIC 28 DIE	ISD-IPROG-1	Commercial Industrial
ISD5104							
ISD5108							
ISD5116							

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PowerSpeech Family

Ordering No.	Board Name	Content	Description	Picture
PowerSpeech (584, 588) ICE Development System				
ICE-N584H	NHS-584H-ICE	• N584H ICE System	• N584H (Mask) and N584HP/N584P (OTP) ICE Dev. Kit. Provide In-Circuit Emulation with Program, Execute, Verification & Debugging	
ICE-W588D-FS	WHS-588D-ICE	• WHS-MINI-USB-ICE System V1.1 • WHS-588D-ICE System V3.3	• W588C/D ICE Dev. Kit. Provide In-Circuit Emulation with Program, Execute, Verification & Debugging	
ICE-W584A-FS	WHS-584A-ICE	• WHS-584A-ICE-IL System V1.1 • WHS-584A-ICE System V1.2	• W584A ICE Dev. Kit. Provide In-Circuit Emulation with Program, Execute, Verification & Debugging	
ICE-N588H	NHS-588H-ICE	• WHS-MINI-USB-ICE System V1.1 • NHS-588H-ICE System V1.1	• N588H/J (Mask) and N588HP/JP (OTP) ICE Dev. Kit. Provide In-Circuit Emulation w/ Program, Execute, Verification & Debugging.	

Ordering No.	Board Name	Content	Description	Picture
PowerSpeech (584, 588) Evaluation Board, Tiny Board, Writer				
NV-W584A-H	WHS-584AH-16M	• W584A/B/C Series EVB	• W584A/B/C Series Evaluation Board with 16Mbit Flash	
NV-W584AP20	NHS-584AP20	• W584AP065(W584AP20) OTP EVB	• W584AP065(W584AP20) One-Time Programmable (OTP) Evaluation Board (EVB)	
NV-W584AP05	NHS-584AP05	• W584AP017(W584AP05) OTP EVB	• W584AP017(W584AP05) One-Time Programmable (OTP) Evaluation Board (EVB)	
NV-N584H	NHS-584H-16M	• N584H Series EVB	• N584H Series Evaluation Board w/ 16Mbit Flash	
NV-N584HP300	NHS-584HP300	• N584HP300 OTP Demo Board	• N584HP300 (OTP) Demo Board (COB)	
NV-N584L-3V	NHS-584L-16M-3V	• N584L Series EVB with Vp=3V	• N584L Series Evaluation Board w/ 16Mbit Flash for Vp=3V	
NV-N584L-4V	NHS-584L-16M-4V	• N584L Series EVB with Vp=4V	• N584L Series Evaluation Board w/ 16Mbit Flash for Vp=4V	
NV-W588D	WHS-588C/D-16M	• W588C/D Series EVB	• W588C/D series Evaluation Board with 16Mbit Flash	
NV-W588DF20B	WHS-W588DF20-H1	• W588DF060 (W588DF20) EVB	• W588DF060(W588DF20) Evaluation Board	
NV-N588H	NHS-588H-16M	• NHS-588H-16M EVB	• N588H/J series Evaluation Board with 16Mbit Flash Support: N588H061~650/J010~650, and N588HP062~342/JP062~342 (OTP)	
NV-N588H-L	NHS-588H-08ML	• NHS-588H-08ML EVB	• N588H/J Series Evaluation Board w/ 8Mbit Low Voltage Flash Support: N588H061~340 /J010~340, and N588HP062~342/JP062~342 (OTP)	
NV-N588HP080	NHS-588HP080	• N588HP080 OTP EVB	• N588HP080 (OTP) Demo Board (COB)	

Ordering No.	Board Name	Content	Description	Picture
PowerSpeech (584, 588) Evaluation Board, Tiny Board, Writer				
NV-N588HP170	NHS-588HP170	• N588HP170 OTP Demo Board	• N588HP170 (OTP) Demo Board (COB)	
NV-N588HP340	NHS-588HP340	• N588HP340 OTP Demo Board	• N588HP340 (OTP) Demo Board (COB)	
NV-N588HP650	NHS-N588HP650	• N588HP650 OTP Demo Board	• N588HP650 (OTP) Demo Board (COB)	
N588HP082-TB	N588HP082-TB	• N588HP082 Tiny Board	• N588HP082 (OTP) Tiny Demo Board (COB) Support: N588HP062/082, N588JP062/082	
N588HP172-TB	N588HP172-TB	• N588HP172 Tiny Board	• N588HP172 (OTP) Tiny Demo Board (COB) Support: N588HP122/172 and N588JP122/172	
N588HP342-TB	N588HP342-TB	• N588HP342 Tiny Board	• N588HP342 (OTP) Tiny Demo Board (COB) Support: N588HP202/252/342 and N588JP202/252/342	
NV-N588L	NHS-N588L-16M	• N588L Series EVB	• N588L Series Evaluation Board (EVB) with 16Mbit Flash	
NV-N588LP330	NHS-588LP330	• N588LP330 OTP EVB	• N588LP330 (OTP) Demo Board (COB)	
NW-NUOTP-M	NuOTP Gang Writer	• NuOTP Gang Writer Main Board	• New OTP series 1 to 8 Gang Writer. Support for: N566GP/KP-120/160/200/240/280/320 -N566HP-120/160/200/240/280/321 -N588HP/JP-062/082/122/172/202/252/342 -N584P040/070/120/170/210/260/300 -NSP075A/165A/335A	
NW-OTP	Nuvoton OTP Writer	• Old OTP Series Writer	• Old OTP Series 1 on 1 Writer Support: N588HPxx0, N588JPxx0, N567HP330, N566HP320, N584HPxxx	
NW-OTP-SP	NW-OTP-SP	• New OTP Writer	• New OTP Writer Dongle for: N566GP/KP-120/160/200/240/280/320 N566HP-120/160/200/240/280/321 N588HP/JP-062/082/122/172/202/252/342 N584P-030/040/070/120/170/210/260/300	
NW-USB	WHS-USB-Writer	• USB Writer	• EVB USB Writer to Cover PowerSpeech/ViewTalk/ BandDirectorEVB, and NSP-OTP-EVB	

Ordering No.	Board Name	Content	Description	Picture
PowerSpeech (N589) Evaluation Board, Tiny Board, Adaptor, Writer				
NV-N589EVB	NHS-589A340-EVB	• N589A/B/C EVB	• N589A/B/C Series Evaluation Board Support: N589A080~280, B080~340, C080~340	
N589A900-EVB	N589A900-EVB	• N589A900 EVB	• N589A/B/C/D Series Evaluation Board Support: N589A400/600/900, N589B342/480/650/960, N589C480/650/960, N589D342/480/650/960	
N589D171-EVB	N589D171-EVB	• N589D171 EVB	• N589D171 Evaluation Board Support: N589D081, N589D121 and N589D171	
N589D481-EVB	N589D481-EVB	• N589D481-EVB	• N589D481 Evaluation Board Support: N589D201, D251, D341 and D481	
N589A-TB	N589A Tboard	• N589A/B/C (COB) Tiny Board	• N589A/B/C Series Tiny Demo Board Support: N589A080~280, B080~340, C080~340	
N589A900-TB	N589A900-Tboard	• N589A900 (COB) Tiny Board	• N589A/B/C/D Series Tiny Demo Board Support: N589A400/600/900, N589B342/480/650/960, N589C480/650/960, N589D342/480/650/960	
N589D171-TB	N589D171TBoard	• N589D171 (COB) Tiny Board	• N589D171 (COB) Tiny Demo Board Support: N589D081/121/171	
N589D481-TB	N589D481-TB	• N589D481 Tiny Board	• N589D481 Tiny Demo Board Support: N589D201/251/341/481	
N589A-STB	N589A_TOP_BOARD	• N589A Dev Platform Standard Top Board	• N589A/B/C Series Dev. Platform Standard Top Board Support: N589A080~280/B080~340/C080~340	
N589D171-STB	N589D171_TOP_ Board	• N589D171 Top Board	• N589D171 Standard Top Board w/ Passive Parts Support: N589D081/121/171	
N589-1-WTR	N589 1-1 Writer	• N589 1-1 Writer	• N589A/B/C/D Series USB Songle, Supports 1 to 1 Writer and ICE Debug	
N589-8-WTR-M (NW-N589-MAIN)	N589 1-8 Writer	• N589 Gang Writer Main Board	• N589A/B/C/D 1 to 8 Gang Writer (Mother Board)	
N589-8-WTR-F	N589 GANG WRITER 20180724	• N589 1-8 Gang Writer Main Board, SOP14 Adaptor Board x 8, SOP14 Socket x 8	• N589 Gang Writer Full Set, Main Board x 1, Socket Adaptor SOP14 x 8 Support N589B/C-080B/120B/170B/200B/250B/340B (SOP14)	

NSP Family

Ordering No.	Board Name	Content	Description	Picture
NSP-Flash Evaluation Board, Tiny Board, Adaptor, Writer				
NSP171A-TB1	NSP171A-TB1	• NSP171A (SOP8) Tiny Board	• NSP171A (SOP8) Tiny Demo Board Support: NSP081A, NSP171A	
NSP340A-TB1	NSP340A-TB1	• NSP340A (SOP8) Tiny Board	• NSP340A (SOP8) Tiny Demo Board Support: NSP080A, NSP170A, NSP340A	
NSP340B-TB1	NSP340B-TB1	• NSP340B (SOP14) Tiny Board	• NSP340B (SOP14) Tiny Demo Board Support: NSP080B, NSP170B, NSP340B	
NSP960B-TB1	NSP960B-TB1	• NSP960B (SOP14) Tiny Board	• NSP960B (SOP14) Tiny Demo Board Support: NSP480B/650B/960B	
NSP-1-WTR	NSP 1-1 Writer	• NSP-Flash 1 to 1 Writer	• NSP-Flash 1 to 1 Writer to Support NSP080A/081A/170A/171A/ 340A/341A/481A, NSP080B/170B/340B/480B/650B/960B	
NSP-SOP8	Adaptor of NSP-SOP8	• NSP-Flash SOP8 Adaptor	• NSP-Flash SOP8 Adaptor on NSP-8-WTR-M (Gang Writer) Support: NSP080A/081A/170A/171A/340A	
NSP-SOP14	Adaptor of NSP SOP14	• NSP-Flash SOP14 Adaptor	• NSP-Flash SOP14 Adaptor on NSP-8-WTR-M (Gang Writer) Support: NSP080B/170B/340B	
NSP-SOP14-2	Adaptor of NSP-SOP14-2	• NSP-Flash SOP14-2 Adaptor	• NSP-Flash SOP14 Adaptor on NSP-8-WTR-M (Gang Writer) Support: NSP480B/650B/960B	

Ordering No.	Board Name	Content	Description	Picture
NSP-OTP Evaluation Board, Tiny Board, Adaptor, Writer				
NSP-OTP-EVB	NSP-OTP-EVB	• NSP-OTP Series EVB	• NSP-OTP Series Evaluation Board Support: NSP075A/165A/335A, NSP075B/165B/335B	
NSP165A-TB2	NSP165A-TB2	• NSP165A Tiny Board	• NSP165A OTP Tiny Board for NSP165A Chip.	
NW-OTP-SP	NW-OTP-SP	• New OTP Writer	• NSP-OTP 1 to 1 Writer (Dongle) Support: NSP075A/165A/335A, NSP075B/165B/335B	
NSP-OTP-D-S8	NSP-OTP-D-S8	• NSP-OTP SOP8 Adaptor	• NSP-OTP SOP8 Adaptor for NSPO-8-GW-M (Gang Writer) Support: NSP075A, NSP165A and NSP335A	

BandDirector® Family

Ordering No.	Board Name	Content	Description	Picture
BandDirector ICE Development Kit				
ICE-W567C	WHS-BD567C	• WHS-MINI-USB-ICE System V1.1 • WHS-567C-IC System V1.3	• W567C/J In-Circuit Emulation (ICE) Dev. Kit. Provide In-Circuit Emulation with Program, Execute, Step Through Features for Design Development, Verification & Debugging	
ICE-N566H	NHS-566H001-ICE	• WHS-MINI-USB-ICE System V1.1 • WHS-566H001-ICE System V1.0	• N566H/K/G In-Circuit Emulation (ICE) Dev. Kit. Provide In-Circuit Emulation with Program, Execute, Step Through Features for Design Development, Verification & Debugging	
ICE-N567H	WHS-N567H-ICE	• WHS-MINI-USB-ICE System V1.1 • WHS-N567H-ICE System V3.0	• N567G/H/K In-Circuit Emulation (ICE) Dev. Kit. Provide In-Circuit Emulation with Program, Execute, Step Through Features For Design Development, Verification & Debugging	

Ordering No.	Board Name	Content	Description	Picture
BandDirector Evaluation Board (EVB), Writer				
NV-W567C	WHS-567C-16M	• W567C/J Series EVB	• W567C/J Series Evaluation Board (EVB) with 16Mbit Flash	
N566H-EVB	NHS-566H001-16M	• N566H/K/G Series EVB	• N566H/K/G Evaluation Board (EVB) with 16M-bit Parallel Flash	
NV-N567H	WHS-N567-H1	• N567G/H/K Series EVB	• N567G/H/K Series Evaluation Board (EVB) with 16Mbit Flash	
NV-N567L	NHS-N567L-16M	• N567L Series EVB	• N567L Series Evaluation Board (EVB) with 16Mbit Flash	
NV-W567CP80	NHS-W567CP80	• W567CP260(W567CP80) OTP EVB	• W567CP260(W567CP80) One-Time Programmable (OTP) Evaluation Board (EVB)	
N566HP080EVB	NHS-566HP080	• N566HP080 EVB	• N566HP080 OTP EV Board w/ Components	
NV-N566HP320	NHS-N566HP320	• N566HP320 EVB	• N566HP320 COB with Passive Parts	
N566HP321EVB	N566HP321-EVB	• N566HP321 (New OTP) EVB	• N566HP/KP/GP (New OTP) Evaluation Board Support N566HP120/160/200/240/280/321, N566KP120/160, 200/240/320, N566GP120/160/200/240/280/320	
NV-N567HP80	NHS-567HP80	• N567HP330(N567HP80) OTP EVB	• N567HP330(N567HP80) One-Time Programmable (OTP) Evaluation Board (EVB)	
NV-N567LP330	NHS-567LP330	• N567LP330 OTP EVB	• N567LP330 EVB One-Time Programmable (OTP) Evaluation Board (EVB)	

ViewTalk® Family

Ordering No.	Board Name	Content	Description	Picture
ViewTalk Development Kit				
ICE-N539T-FS	NHS-539-ICE	• WHS-MINI-USB-ICE System V1.1 • NHS-539-ICE System V1.2	• N539 In-Circuit Emulation (ICE) Dev. Kit. Provide In-Circuit Emulation with Program, Execute, Verification & Debugging Support: N539T170/171/260/261/340/341, N531A170	
ViewTalk Evaluation Board				
NV-N531-16M	NHS-531-16M	• N531A170 EVB	• N531A170 Evaluation Board with 16Mbit Flash Support: N531A170	
NV-N539T001	NHS-539001-16M	• N539Txx1 Series EVB	• N539Txx1 Series Evaluation Board with 16Mbit Flash Support: N539T171/261/341	
NV-N539T000	NHS-539-16M	• N539Txx0 Series EVB	• N539Txx0 Series Evaluation Board with 16Mbit Flash Support: N539T170/260/340	

NuVoice® Family

Ordering No.	Board Name	Content	Description	Picture
NuVoice® Family				
NuVoice Demo Board, Evaluation Board				
NV-N570C064	NHS-570C064-EVB	• N570F/C064 EVB	• N570F/C064 Evaluation Board (EVB) with I/O Interface & Microphone for Voice Recognition Application Support: N570F064, N570C064	
NV-N569S8K0	NHS-N569S8K0	• N569S8K0 (MCP) EVB	• N569S (w/ 64Mbit Flash) Evaluation Board (EVB) with I/O Interface Support: N569S502/1K0/2K0/4K0/8K0	
NV-N570SC64	NHS-570SC64	• N570SC64 (MCP) EVB	• N570SC64 (w/ 64Mbit Flash) Evaluation Board with I/O Interface & Microphone for Voice Recognition Application Support: N570S08A/16A/32A/64A, N570SC08/16/32/64	

Ordering No.	Board name	Content	Description	Picture
NuVoice Demo Board, Evaluation Board				
N570HC64-EVB	NHS-570H064-EVB	• N570H064 EVB	• N570H064 and N570HC64 Evaluation Board (EVB) with Push Button for Demo	
N570J32A-EVB	NHS-N570J32A	• N570J32A (MCP) EVB VDD: 2.4~5.5V	• N570J32AL (w/ 32Mbit Spi-Flash) Evaluation Board Support: N570J08AL, N570J16AL and N570J32AL	
NV-N572F065	NHS-572F065-EVB	• N572F065 EVB	• N572F065 Evaluation Board (EVB) with I/O Interface	
NV-N572C072	NHS-572C072-EVB	• N572F/C072 EVB	• N572F/C072 Evaluation Board (EVB) with I/O Interface & Microphone for Voice Recognition Application Support: N572F072, N572C072	
NV-N575C145	NHS-575C145	• N575F/C145 EVB	• N575F/C145 Evaluation Board (EVB) with I/O Interface & Microphone for Voice Recognition Application Support: N575F145, N575C145	
NT-N575C145	NHS-575C145	• N575C145-EVB + Daughter Board	• N575F/C145 Evaluation Board (EVB) with I/O Interface & Microphone for Voice Recognition Application with Daughter Board	
NuVoice Dongle, Writer				
NU-NUVOICE	NU-LINK	• Nu-Link Debug Adapter	• NuVoice Series 1 to 1 Writer (Dongle) with Online/Offline In-Circuit Program (ICP), Develop, and Debug. Support: N569, N570, N572, N573, N574, N575	
NW-570H574-F	Flash Gang Writer (Full Set)	• The 2 to 8 Gang Writer Full Set Includes NW-N570H574-M (Mother Board), 8 x LQFP48 Socket with Adaptor Board.	• This 2 to 8 Gang Writer Full Set is for N570H064L (LQFP48)	
NW-570H574-M	Flash Gang Writer (Main Board)	• 2 to 8 Gang Writer Main Board (N570H/N574F)	• 2 to 8 Gang Writer Main Board for N570H064, N570J, N569J, N574F	
NW-570S64A-F	Flash Gang Writer	• N569S/N570S 1-8 Gang Writer	• N569S/N570S (MCP) 1 to 8 Gang Writer Support: N569S502/1K0/2K0/4K0/8K0, and N570S08A/16A/32A/64A	
NW-569SAK2-F	NW-569SAK2-F	• N569SAK2/N570S130 1-8 Gang Writer	• N569SAK2/N570S130 (MCP) 1 to 8 Gang Writer • Support: N569SAK2 and N570S130 (w/ 128Mbit Spi-Flash)	

Peripheral Family

Ordering No.	Board name	Content	Description	Picture
N55T Demo Board, Evaluation Board				
NV-N55T16	NHS-55T16-EV	• N55T16 EVB	• N55T16 Evaluation Board (EVB)	
N55T16-16KEY	NHS-55T16-KEY	• 16 Key Touch Pad Board	• N55T16 16 x Key Touch Pad Evaluation/Demo Board	
IO Expander Evaluation Board, Demo Board				
NV-N55P242	NHS-55P242	• N55P242 EVB	• N55P242 Evaluation Board (EVB)	
NV-N55P242-R	N55P242_RING_TYPE_ DEMO_BOARD_V1.0	• N55P242 Demo Board (Circle)	• N55P242 Circle Demo Board w/ 16 RGB LEDs	
NV-N55P242-S	N55P242_SINGLE_STRIP_ DEMO_BOARD_V1.0	• N55P242 Demo Board (Rectangle)	• N55P242 Rectangle Demo Board w/ 8 RGB LEDs	
MFID Evaluation Board, Demo Board				
NV-MFID50	WHS-55MID50-002	• W55MID50 Demo Board	• W55MID50 MFID Reader Demo Board with PCB Antenna (42mm*34.5mm)	
NV-W55MID15	WHS-55MID15	• W55MID15 Demo Board	• W55MID15 MFID Single Tag Demo Board w/ ANT (20mm*20mm)	
NV-W55MID35	WHS-55MID35	• W55MID35 Demo Board	• W55MID35 MFID Mult-Tag Demo Board w/ ANT (15mm*15mm)	

Development Tools for AUI Enabler Series

Ordering No.	Part No.	Supported Devices	Content	Description	Picture
Development Kit					
NM-I94100_AM	**ISD-DMK_94100_AM**	ISD941xx Series	• NL-ISD94124A • NP-I94124_AM • Speaker	• Evaluation, Debugging and Demo Kit for ISD941xx • Connect with Analog Microphone Adaptor	
NM-I94100_DM	**ISD-DMK_94100_DM**	ISD941xx Series	• NL-ISD94124A • NP-I94124_DM • Speaker	• Evaluation, Debugging and Demo Kit for ISD941xx • Connect with Digital Microphone Adaptor	
NV-ISD94100	**DEMO-I94100-NAU88C22**	ISD941xx Series	• DEMO-I94100-NAU88C22	• ISD94100* Demo Board with Audio CODEC (NAU88C22) on Board • Connect to PC Via ISD-NU-LINK for Programming and Debugging * P/N ISD94100 is for Demo Board Use Only	
NL-ISD94124A	**EVB-I94124**	ISD94124	• EVB-I94124	• ISD94124PDI Eval Board with Nu-Link ICE Bridge on Board for Drag and Drop Programming	
NP-I94124_AM	**EVB-I94124-NAU85L40**	ISD94124	• EVB-I94124-NAU85L40	• Analog Microphone Adaptor for NL-ISD94124A	
NP-I94124_DM	**EVB-I94124-Audio**	ISD94124	• EVB-I94124-Audio	• Digital Microphone Adaptor for NL-ISD94124A	
NV-ISD941A24	**ISD-DEMO941A24**	ISD941A24	• ISD-DEMO941A24	• Demo Board for ISD941A24SDI	
NU-NULINKISD	**ISD-NU-LINK**	ISD9160 ISD91032 ISD91260	• ISD-NU-LINK	• USB Dongle for ISD-DEMO9160, for Evaluation and Debugging. • Support ICP(In-Circuit Programming)	

Ordering No.	Part No.	Supported Devices	Content	Description	Picture
Development Kit					
NM-ISD91260	**ISD-DMK_91260**	ISD91260CRI	• ISD-DEMO91260 • ISD-NU-LINK • Speaker	• Evaluation and Demo Kit for ISD91260CRI	
NM-ISD91260B	**ISD-DMK_91260B**	ISD91260BRI	• ISD-DEMO91260B • ISD-NU-LINK • Speaker	• Evaluation and Demo Kit for ISD91260BRI	
NM-ISD91032C	**ISD-DMK_91032C**	ISD91032CFI	• ISD-DEMO91032C • ISD-NU-LINK • Speaker	• Evaluation and Demo Kit for ISD91032CFI	
NM-ISD9160	**ISD-DMK_9160**	ISD9160	• ISD-DEMO9160 • ISD-NU-LINK • ISD-9160-Touch • ISD-9160-KB • Speaker	• Evaluation, Debugging and Demo Kit for ISD9160 • Keil RV/MDK Available on Keil Website • Supports ICP (In-Circuit Programming)	
NM-ISD91300	**ISD-DMK_91300**	ISD913xx	• ISD-DEMO91300 • ISD-91300-Touch • Speaker	• Evaluation, Debugging and Demo Kit for ISD91300 • Keil RV/MDK Available on Keil Website • Supports ICP (In-Circuit Programming)	
NM-ISD91500	**ISD-DMK_91500**	ISD91500ADI	• NT-ISD91500 • ISD-NU-Link • Speaker	• Evaluation and Demo Kit for ISD91500ADI	

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Ordering No.	Part No.	Supported Devices	Content	Description	Picture
Programmer/Writer					
NW-ISD9160	**ISD-ES9160__Prog_F**	ISD9160 Series LQFP Pakcage	• ISD-ES9160__Prog_F	• ISD9160 LQFP Single Socket Programmer • Connect to PC Via ISD NU-LINK for Programming and Evaluation	
NG-ISD9160	**ISD-9160_GANG_Prog_F**	ISD9160	• ISD-9160_GANG_Prog_F	• ISD9160 LQFP Standalone Gang Programmer	
NW-ISD91300	**ISD-ES91300_PROG_F**	ISD913xx	• ISD-ES91300_PROG_F	• ISD913xx LQFP Single Socket Programmer for Programming and Evaluation	
NG-ISD91300	**ISD-91300_GANG_Prog_F**	ISD913xx	• ISD-91300_GANG_Prog_F	• ISD913xx LQFP Standalone Gang Programmer	
NT-ISD91260B	**ISD-DEMO91260B**	ISD91260B	• ISD-DEMO91260B	• ISD91260BRI Demo Board • Connect to PC Via ISD-NU-LINK for Programming and Debugging	
NT-ISD91260	**ISD-DEMO91260**	ISD91261	• ISD-DEMO91260	• ISD91260CRI Demo Board • Connect to PC Via ISD-NU-LINK for Programming and Debugging	
NT-ISD91032C	**ISD-DEMO91032C**	ISD91032	• ISD-DEMO91032C	• ISD91032CFI Demo Board • Connect to PC Via ISD-NU-LINK for Programming and Debugging	
NT-ISD9160	**ISD-DEMO9160**	ISD9160	• ISD-DEMO9160	• ISD9160CFI Demo Board • Connect to PC Via ISD-NU-LINK for Programming and Debugging	
NP-ISD9160-T	**ISD-9160-TOUCH**	ISD9160	• ISD-9160-TOUCH	• 8-Input Touch Pad for ISD-DEMO9160	
NP-ISD9160-K	**ISD-9160-KB**	ISD9160	• ISD-9160-KB	• 8-Input Key Pad for ISD-DEMO9161	

Development Tools for Audio Converters

Ordering No.	Part No.	Supported Devices	Content	Description	Picture
Evaluation Board					
NV-NAU88C10	NAU88C10-DEMO	NAU88C10	• NAU88C10-DEMO	• Compact Audio Base Board + NAU88C10YG Daughter Card	
NV-NAU8810	NAU8810-DEMO	NAU8810	• NAU8810-DEMO	• Compact Audio Base Board + NAU8810YG Daughter Card	
NV-NAU8812	NAU8812-DEMO	NAU8812	• NAU8812-DEMO	• Compact Audio Base Board + NAU8812RG Daughter Card	
NV-NAU88C14	NAU88C14-DEMO	NAU88C14	• NAU88C14-DEMO	• Compact Audio Base Board + NAU88C14YG Daughter Card	
NV-NAU8814	NAU8814-DEMO	NAU8814	• NAU8814-DEMO	• Compact Audio Base Board + NAU8814YG Daughter Card	
NT-NAU88C10	NAU88C10-Card	NAU88C10	• NAU88C10-Card	• NAU88C10YG Daughter Board	
NT-NAU8810	NAU8810-Card	NAU8810	• NAU8810-Card	• NAU8810YG Daughter Board	
NT-NAU8812	NAU8812-Card	NAU8812	• NAU8812-Card	• NAU8812YG Daughter Board	
NT-NAU88C14	NAU88C14-Card	NAU88C14	• NAU88C14-Card	• NAU88C14YG Daughter Board	
NT-NAU8814	NAU8814-Card	NAU8814	• NAU8814-Card	• NAU8814YG Daughter Board	

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Ordering No.	Part No.	Supported Devices	Content	Description	Picture
Evaluation Board					
NL-NAU88L25	NAU88L25-DEMO	NAU88L25	• NAU88L25-DEMO	• Demo Board for NAU88L25YGB	
NU-NAU88L25	NAU-Audio_ Control_ USB	NAU88L21 NAU88L24I NAU88L25 NAU85L40	• NAU-Audio_ Control_USB	• Micro USB Audio Control Board for Connecting NL-NAU88L21, NL-NAU88L24I, NL-NAU88L25 and NL - NAU85L40 to PC	
NL-NAU88L24I	NAU88L24I-DEMO	NAU88L24	• NAU88L24I-DEMO	• Demo Board for NAU88L24IG	
NL-NAU88L21	NAU88L21-DEMO	NAU88L21	• NAU88L21-DEMO	• Demo Board for NAU88L21YG	
NL-NAU88C22	NAU88C22-DEMO	NAU88C22	• NAU88C22-DEMO	• Demo Board for NAU88C22YG	
NU-NAUSB2I2C	USB-To-I2C/I2S_V1.1	NAU88C22 NAU8315/8315B NAU8325 NAU88L21 NAU88L24/88L25 NAU85L40/85L20 NPCA120/121	• USB-To-I2C/I2S_ V1.1	• USB-To-I2C/I2S Control Board for Audio Amplifier & Audio Codec Demo Board	
NV-NAU8822A	NAU8822A-DEMO	NAU8822A NAU88U22A	• NAU8822A-DEMO	• Compact Audio Base Board + NAU8822AYG Daughter Card	
NV-NAU8820	NAU8820-DEMO	NAU8820	• NAU8820-DEMO	• Compact Audio Base Board + NAU8820YG Daughter Card	
NV-NAU8401	NAU8401-DEMO	NAU8401	• NAU8401-DEMO	• Compact Audio Base Board + NAU8401YG Daughter Card	
NV-NAU8501	NAU8501-DEMO	NAU8501	• NAU8501-DEMO	• Compact Audio Base Board + NAU8501YG Daughter Card	

Ordering No.	Part No.	Supported Devices	Content	Description	Picture
Evaluation Board					
NL-NAU7802	NAU7802-EVB	NAU7802	• NAU7802-DEMO	• Evaluation Board for NAU7802	
NL-NAU88L11	NAU88L11-DEMO	NAU88L11	• NAU88L11-DEMO	• Demo Board for NAU88L11YG	
NL-NAU85L40S	NAU85L40S-DEMO	NAU85L40S	• NAU85L40S-DEMO	• Demo Board fo NAU85L40YGB with Single Ended MIC.	
NL-NAU85L40	NAU85L40-DEMO	NAU85L40	• NAU85L40-DEMO	• Demo Board for NAU85L40YGB	
NL-NAU85L20	NAU85L20-DEMO	NAU85L20	• NAU85L20-DEMO	• Demo Board for NAU85L20YGB	
NT-NAU85L40	NAU85L40-Card	NAU85L40	• NAU85L40-Card	• NAU85L40YG Daughter Board	
NT-NAU88L24I	NAU88L24I-Card	NAU88L24	• NAU88L24I-Card	• NAU88L24IG Daughter Board	
NT-NAU8822A	NAU8822A-Card	NAU8822A NAU88U22A	• NAU8822A-Card	• NAU8822AYG Daughter Board	
NT-NAU8820	NAU8820-Card	NAU8820	• NAU8820-Card	• NAU8820YG Daughter Board	
NT-NAU8401	NAU8401-Card	NAU8401	• NAU8401-Card	• NAU8401YG Daughter Board	
NT-NAU8501	NAU8501-Card	NAU8501	• NAU8501-Card	• NAU8501YG Daughter Board	
NT-NAU8402	NAU8402-Card	NAU8402	• NAU8402-Card	• NAU8402WG Daughter Board	
NT-NAU8502	NAU8502-Card	NAU8502	• NAU8502-Card	• NAU8502YG Daughter Board	

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Development Tools for Audio Amplifiers

Ordering No.	Part No.	Supported Devices	Content	Description	Picture
Power Amplifier					
NE-NAU82011V	NAU82011V-EVB	NAU82011	• NAU82011V-EVB	• Evaluation Board for NAU82011VG	
NE-NAU82011Y	NAU82011Y-EVB	NAU82011	• NAU82011Y-EVB	• Evaluation Board for NAU82011YG	
NT-ISD8101	ISD-DEMO8101	ISD8101	• ISDI8101-DEMO	• Demo Board for I8101SYI	
NT-ISD8102	ISD-DEMO8102	ISD8102	• ISD8102-DEMO	• Demo Board for I8102SYI	
NL-NAU8315	NAU8315-DEMO	NAU8315	• NAU8315-DEMO	• Demo Board for NAU8315YG	
NL-NAU8315B	NAU8315B-DEMO	NAU8315	• NAU8315-DEMO	• Demo Board for NAU8315B31VG WLCSP-12	
NL-NAU8325	NAU8325-DEMO	NAU8325	• NAU8325-DEMO	• Demo Board for NAU8325YG	
NE-NAU8223	NAU8223-EVB	NAU8223	• NAU8223-EVB	• Evaluation Board for NAU8223YG	
NE-NAU8224	NAU8224-EVB	NAU8224	• NAU8224-EVB	• Evaluation Board for NAU8224YG	
NU-NAU8224	NAU-ES_MINI_USB	NAU8224	• NAU-ES_MINI_USB	• USB to I²C Bus Dongle for NAU8224-EVB	

Ordering No.	Part No.	Supported Devices	Content	Description	Picture
Power Amplifier					
NE-NAU8220	NAU8220WG-EVB	NAU8220	• NAU8220WG-EVB	• Evaluation Board for NAU8220WG	
NV-NAU83G10S	NAD-NAU83G10	NAU83G10	• NAD-NAU83G10	• Stereo NAU83G10 EVAL Board	
NV-NAU83G20S	NAD-NAU83G20	NAU83G20	• NAD-NAU83G20	• Stereo NAU83G20 EVAL Board	
NM-N83G10MA	NAD-NAU83G10_BRS-161200	NAU83G10	• NAD-NAU83G10_BRS-161200	• Mono NAU83G10 with Bujeon BRS-161200	
NM-N83G10MB	NAD-NAU83G10_BRS-181300	NAU83G10	• NAD-NAU83G10_BRS-181300	• Mono NAU83G10 with Bujeon BRS-181300	
NM-N83G10SA	NAD-NAU83G10_2*BRS-161200	NAU83G10	• NAD-83G10_2*BRS-161200	• Stereo NAU83G10 with 2x Bujeon BRS-161200	
NM-N83G10SB	NAD-NAU83G10_2*BRS-181300	NAU83G10	• NAD-83G10_2*BRS-181300	• Stereo NAU83G10 with 2x Bujeon BRS-181300	
NM-N83G20MA	NAD-NAU83G20_BUF-4203	NAU83G20	• NAD-NAU83G20_BUF-4203	• Mono NAU83G20 with Bujeon BUF-4203	
NM-N83G20SA	NAD-NAU83G20_2*BUF-4203	NAU83G20	• NAD-NAU83G20_2*BUF-4203	• Stereo NAU83G20 with 2x Bujeon BUF-4203	

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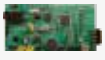
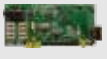
Development Tools for ChipCorder® Family

Ordering No.	Part No.	Supported Devices	Content	Description	Picture
Development Kit					
NU-ISDMINUSB	ISD-ES_Mini_USB	ISD-ES_Mini_USB	• ISD2130/2115 • ISD2360 • ISD15012/4/8 • ISD15C00/3900 • ISD15D00/3800	• USB Dongle for Connecting Digital ChipCorder Demo Board to PC	
NM-ISD15100	ISD-DMK_15100	ISD15102/04/08	• ISD-DEMO15100 • ISD-ES_MINI_USB • Speaker	• Evaluation and Demo Kit for ISD15102/4/8	
NM-ISD15C00	ISD-DMK_15C00	ISD15C00	• ISD-DEMO15C00 • ISD-ES_MINI_USB • Speaker	• Evaluation and Demo Kit for ISD15C00	
NM-ISD15D00	ISD-DMK_15D00	ISD15D00	• ISD-DEMO15D00 • ISD-ES_MINI_USB • Speaker	• Evaluation and Demo Kit for ISD15D00	
NM-ISD2100Q	ISD-DMK_2100	ISD2100YYI	• ISD-DEMO2100_Q • ISD-ES_MINI_USB • Speaker	• Evaluation and Demo Kit for ISD2100Y	
NM-ISD2360Q	ISD-DMK_2360_Q	ISD2360YYI	• ISD-DEMO2360_Q • ISD-ES_MINI_USB • Speaker	• Evaluation and Demo Kit for ISD2360Y	
NM-ISD2360S	ISD-DMK_2360_S	ISD2360SYI	• ISD-DEMO2360_S • ISD-ES_MINI_USB • Speaker	• Evaluation and Demo Kit for ISD2360S	
NM-ISD3800	ISD-DMK_3800	ISD3800	• ISD-DEMO3800 • ISD-ES_MINI_USB • Speaker	• Evaluation and Demo Kit for ISD3800	
NM-ISD3900	ISD-DMK_3900	ISD3900	• ISD-DEMO3900 • ISD-ES_MINI_USB • Speaker	• Evaluation and Demo Kit for ISD3900	

Development Tools for ChipCorder® Family

Ordering No.	Part No.	Supported Devices	Content	Description	Picture
Evaluation/Demo/Development Board					
NT-ISD1964	ISD-DEMO1964	ISD1916/32/64 Class-D Output	• ISD-DEMO1964	• ISD1900 Demo Board with I1964SYI on Board	
NT-ISD1964A	ISD-DEMO1964_AUX	ISD1916/32/64 AUX Output	• ISD-DEMO1964_AUX	• ISD1900 AUX Output Demo Board with ISD1964SYI01 on Board	
NT-ISD15100	ISD-DEMO15100	IAD15108/04/02	• ISD-DEMO15100	• ISD15108 LQFP Demo Board • Connect to PC Via ISD-ES_Mini_USB for Programming and Evaluation	
NT-ISD15C00	ISD-DEMO15C00	IAD15C00	• ISD-DEMO15C00	• ISD15C00 LQFP Demo Board • Connect to PC Via ISD-ES_Mini_USB for Programming and Evaluation	
NT-ISD3900	ISD-DEMO3900	IAD3900	• ISD-DEMO3900	• ISD3900 LQFP Demo Board • Connect to PC Via ISD-ES_Mini_USB for Programming and Evaluation	
NT-ISD15D00	ISD-DEMO15D00	IAD15D00	• ISD-DEMO15D00	• ISD15D00 QFN Demo Board • Connect to PC Via ISD-ES_Mini_USB for Programming and Evaluation	

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Ordering No.	Part No.	Supported Devices	Content	Description	Picture
Evaluation/Demo/Development Board					
NT-ISD3800	ISD-DEMO3800	ISD3800	• ISD-DEMO3800	• ISD3800 LQFP Demo Board • Connect to PC Via ISD-ES_Mini_USB for Programming and Evaluation	
NT-ISD2100Q	ISD-DEMO2100_Q	ISD2130/2115	• ISD-DEMO2100_Q	• ISD2130 QFN Demo Board • Connect to PC Via ISD-ES_Mini_USB for Programming and Evaluation	
NT-ISD2100S	ISD-DEMO2100_S	ISD2130/2115	• ISD-DEMO2100_S	• ISD2130 SOP Demo Board • Connect to PC Via ISD-ES_Mini_USB for Programming and Evaluation	
NT-ISD2361	ISD-DEMO2361_Q	ISD2361	• ISD-DEMO3361_Q	• ISD2361 QFN Demo Board • Connect to PC Via ISD-ES_Mini_USB for Programming and Evaluation	
NT-ISD2360Q	ISD-DEMO2360_Q	ISD2360	• ISD-DEMO2360_Q	• ISD2360 QFN Demo Board • Connect to PC Via ISD-ES_Mini_USB for Programming and Evaluation	
NT-ISD2360S	ISD-DEMO2360_S	ISD2360	• ISD-DEMO2360_S	• ISD2360 SOP Demo Board • Connect to PC Via ISD-ES_Mini_USB for Programming and Evaluation	
NC-ISD18B24	ISD-COB18B24	ISD18B12/24	• ISD-COB18B24	• ISD18B24/12 Demo Board	

Development Tools for ChipCorder® Family

Ordering No.	Part No.	Supported Devices	Content	Description	Picture
Evaluation/Demo/Development Board					
NC-ISD18C10	ISD-COB18C10	ISD18C10	• ISD-COB18C10	• ISD18C06/18C10 Demo Board (SPK/MICSharing)	
NC-ISD1810	ISD-COB1810	ISD1806/10	• ISD-COB1810	• ISD1806/1810 Demo Board	
NC-ISD17240	ISD-COB17240	ISD17240/210/180	• ISD-COB17240	• ISD17240/210/180 Demo Board	
NC-ISD17150	ISD-COB17150	ISD17150	• ISD-COB17150	• ISD17150/120/090 Demo Board	
NC-ISD1760	ISD-COB1760	ISD1760	• ISD-COB1760	• ISD1760/50/40 Demo Board	
NC-ISD1730	ISD-COB1730	ISD1730	• ISD-COB1730	• ISD1730 Demo Board	
NC-ISD1620B	I16-COB20	ISD1600 Series	• I16-COB20	• ISD1610/16/20 Demo Board	
Programmer/Writer					
NW-ISD15100	ISD-ES15100_Mini_PROG_F	ISD15102/04/08	• ISD-ES15100_Mini_PROG	• ISD15102/04/08 LQFP Single Socket Programmer • Connect to PC Via ISD-ES_Mini_USB for Programming and Evaluation	
NW-ISD2100Q	ISD-ES2100_Mini_PROG_Q	ISD2100 Series QFN Package	• ISD-ES2100_Mini_PROG_Q	• ISD2100 QFN Single Socket Programmer • Connect to PC Via ISD-ES_Mini_USB for Programming and Evaluation	
NW-ISD2100S	ISD-ES2100_Mini_PROG_S	ISD2100 Series SOP Package	• ISD-ES2100_Mini_PROG_S	• ISD2100 SOP Single Socket Programmer • Connect to PC Via ISD-ES_Mini_USB for Programming and Evaluation	
NG-ISD2100Q	ISD-2100_GANG_Prog_Q	ISD2100 Series QFN Package	• ISD-2100_GANG_Prog_Q	• ISD2100 QFN Standalone Gang Programmer	

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Development Tools for ChipCorder® Family

Ordering No.	Part No.	Supported Devices	Content	Description	Picture
Evaluation/Demo/Development Board					
NG-ISD2100S	ISD-2100_GANG_Prog_S	ISD2100 Series Package SOP	• ISD-2100_ GANG Prog_S	• ISD2100 SOP Standalone Gang Programme	
NW-ISD2360Q	ISD-ES2360_MINI_PROG_Q	ISD2360	• ISD-ES2360_ MINI_PROG_Q	• ISD2360 QFN Single Socket Programmer, Used with ISD-ES_Mini_USB • Connect to PC Via ISD-ES_Mini_USB for Programming and Evaluation	
NW-ISD2360S	ISD-ES2360_MINI_PROG_S	ISD2360	• ISD-ES2360_ MINI_PROG_S	• ISD2360 SOP Single Socket Programme • Connect to PC Via ISD-ES_Mini_USB for Programming and Evaluatio	
NG-ISD2360S	ISD-2360_GANG_PROG_S	ISD2360 PackageP SO	• ISD-2360_ GANG PROG_S	• ISD2360 SOP Rstandalone Gang Programme	
NG-ISD2360Q	ISD-2360_GANG_PROG_Q	ISD2360 QFN Package	• ISD-2360_ GANG PROG_Q	• ISD2360 QFN Standalone Gang Programmer	

Development Tools for ChipCorder® Family

Ordering No.	Part No.	Supported Devices	Content	Description	Picture
Evaluation/Demo/Development Board					
NW-ISDPROG	ISD-PROG	ISD2100 Series ISD15100 Series ISD15D00 Series Winbond SPI Flash	• ISD-PROG	• Stand Alone Programmer for Digital ChipCorder	
NW-ISDIPROG1	ISD-IPROG-1	ISD4000/5000/1700	• ISD-PROG-1	• Single Chip Programming Board Support ISD4000/5000/1700 Series	
NW-P1700	P1700	ISD1700	• P1700	• Programmer Adapter of ISD-IPROG-1 for ISD1700 Series	
NE-ISD1700	ISD-ES17XX_USB_PB	ISD1700 Serie	• ISD-ES17XX_ USB_PB	• Eval Board for 1700 Series	
NE-ISD1900	ISD-ES1900_USB_PROG	ISD1900 Serie	• ISD-ES1900_ USB_PROG	• USB Evaluation Board for ISD1900 Series	
NE-ISD1600	ISD-ES1600_USB_PROG	ISD1600 Serie	• ISD-ES1600_ USB_PROG	• USB Evaluation Board for ISD1600 Series	
Software					
	VPE	ISD2130/15 ISD2360 ISD15C00/3900 ISD15C00/3900/15102/4/8 ISD15D00/3800	• Development Software	• Download Link: http://www.nuvoton.com/hq/products/isd-voice-ics/isd-chipcorder-family/Software/?__locale=en&resourcePage=Y	
	SDK for Audio SoC	ISD91xxx	• Development Software	• http://www.nuvoton.com/hq/products/application-specific-socs/arm-based-audio/Software/?__locale=en&resourcePage=Y&category=%2f_categories%2fsupport%2ftool-and-software%2fsoftware%2f&pageIndex=1	

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Development Tools for Audio Enhancement Series

Ordering No.	Part No.	Supported Devices	Content	Description	Picture
Evaluation/Demo/Development Board					
NE-NPCA120	EVB-NPCA120_V1.0	NPCA120DD	• NPCA120DD Evaluation Board	• NPCA120 Audio Enhancement, Bongiovi DPS, Standard Level Evaluation Board	
NE-NPCA121	EVB-NPCA121_V1.0	NPCA121DD	• NPCA121DD Evaluation Board	• NPCA121 Audio Enhancement, Bongiovi DPS, Premium Level Evaluation Board	
NL-NPCA120	DEMO-NPCA12X-V2.0	NPCA120DD	• NPCA120DD Demo Board	• NPCA120DD LQFP-64 Audio Enhancement, Bongiovi DPS, Standard Level Demo Board	
NL-NPCA121	DEMO-NPCA12X-V2.0	NPCA121DD	• NPCA121DD Demo Board	• NPCA121DD LQFP-64 Audio Enhancement, Bongiovi DPS, Standard Level Demo Board	
NL-NPCA120DY	DEMO-NPCA120_V3.0	NPCA120DY	• NPCA120DY Demo Board	• NPCA120DY QFN-48 Audio Enhancement, Bongiovi DPS, Standard Level Demo Board	
NE-NPCA110XB	NPCA110x Evaluation Board	NPCA110x device	• NPCA110x Evaluation Board	• NPCA110x 1 Watt Base Board	
NT-NPCA110PP	NPCA110P/M Piggy Board	NPCA110P	• NPCA110P/M Evaluation Board	• NPCA110P Piggy Board	
NU-NPUSB2I2C	USB-To-I²C/I²S	NPCA110x & NPCP215x	• USB-To-I²C/I²S	• USB2I2C Board for NPCA110x & NPCP215x	
NE-NPCP215F	NPCP215x Evaluation Board	NPCP215F	• NPCP215x Evaluation Board	• NPCP215F Evaluation Board	
NU-NPUSB2I2C	USB-To-I2C/I2S_V1.1	NPCA120DD/ 121DD/120DY	• USB-To-I2C/I2S_V1.1	• USB2I2C Control Board for NPCA120/121 Eval & Demo Board	

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云计算與安全

高整合性内嵌式控制器

用于便携式应用的内嵌式控制器

安全

可信平台模块 (TPM)

硬件监控

台式和服务器系列
笔记本电脑和网络/存储系列

接口逻辑

开关和多路复用器
接口逻辑系列

输出入

通用型 I/O 系列
超级 I/O 系列
eSIO 系列

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高整合性内嵌式控制器

用于便携式应用的内嵌式控制器

新唐高度集成的嵌入式控制器 (EC) 芯片具有嵌入式 32 位、高性能 RISC 内核和集成進階功能，專為便携式应用設計，提供了不同组合的整合功能且滿足传统 I/O 的低引脚数 (LPC) 接口规范、增强型串行外设接口 (eSPI) 或 I²C 主机接口，完整地涵盖了现有广泛的可携式应用装置所需，并提供同类型中最佳、最完整的内建式控制器功能。

Part No.	Core Type	Core Max Freq.	Internal Flash Memory	SRAM	SPI Flash I/F	eSPI	LPC	SMBus /I²C	I3C	Core UART	Peripheral SPI Ctrl	PECI	ADC	Host I/F Ch.	8042 KBC	Host Mailbox	PWM Ch./ with HB	Fan TACHs	KBD Scan	PS/2	JTAG	Package
NPCE6mnx	CR16CPlus	50 MHz	Up to 512 KB	32 KB	Up to 64 MB	√	√	5 Controllers/ 7 Ports	-	1	Master	3.1	Up to 10-bit / Up to 10 inputs	4	√	4	8 / 8	6	18 x 8	3	Standard/ Serial	LQFP128 VFBGA128
NPCX796FA	Arm® Cortex®-M4	100 MHz	1 MB	256 KB	N/A	√	√	8 Controllers/ 10 Ports	-	1	Master/ Slave	3.1	Up to 10-bit / Up to 10 inputs	4	√	4	10 / 8	4	18 x 8	4	Standard/ SWD	VFBGA144
NPCX796FB	Arm® Cortex®-M4	100 MHz	1 MB	256 KB	N/A	√	√	8 Controllers/ 10 Ports	-	2	Master/ Slave	3.1	Up to 10-bit / Up to 10 inputs	4	√	4	10 / 8	4	18 x 8	4	Standard/ SWD	VFBGA144
NPCX796FC	Arm® Cortex®-M4	100 MHz	512 KB	256 KB	N/A	√	√	8 Controllers/ 10 Ports	-	2	Master/ Slave	3.1	Up to 10-bit / Up to 10 inputs	4	√	4	10 / 8	4	18 x 8	4	Standard/ SWD	VFBGA144
NPCX797FC	Arm® Cortex®-M4	100 MHz	512 MB	384 KB	N/A	√	√	8 Controllers/ 10 Ports	-	2	Master/ Slave	3.1	Up to 10-bit / Up to 10 inputs	4	√	4	10 / 8	4	18 x 8	4	Standard/ SWD	VFBGA144
NPCX998FA	Arm® Cortex®-M4	100 MHz	1 MB	512KB	NA	√	√	8 controllers / 10 ports	1	4	Master/ Slave	4.0	10-bit / Up to 12 inputs	4	V	4	10 / 8	4	18x8	4	Standard/ SWD	VFBGA144

硬件监控

台式和服务器系列

新唐台式和服务器硬件监控 IC 系列，是新唐最受欢迎的电脑产品类别之一。硬件监控 IC 广泛用于台式机和服务器主板以及工业电脑应用中。硬件监控芯片可监控重要的硬件参数，包括电压、温度和风扇转速。当检测到异常事件时，能够发出警报或警告信号，以避免系统损坏。

Part No.	System Interface	On-chip Thermal Sensor	Remote Thermal Sensor Inputs	Voltage Monitor Inputs	Fan Tachometer Inputs	Fan Speed Control Outputs	Operation Voltage	PECI I/F	Package
NCT7802Y	SMBus/I²C	Y	3(max)	5(max)	3	3	3.3V	3.1	QFN20
NCT7906D	SMBus/I²C	Y	4(max)	16(max)	8	4	3.3V	3.1	TQFP64
NCT7904D	SMBus/I²C	Y	4(max)	17(max)	12(max)	4	3.3V	3.1	LQFP48
W83795ADG	SMBus/I²C	N	6	18(max)	14(max)	2	3.3V	2.0	LQFP48
W83795G	SMBus/I²C	N	6	21(max)	14(max)	8(max)	3.3V	2.0	LQFP64
NCT7201Y/W	SMBus/I2C	N	N	8 (max)	N	N	3.3V	N	QFN16/TSSOP16
NCT7202Y/W	SMBus/I2C	N	N	12 (max)	N	N	3.3V	N	QFN20/TSSOP20
NCT7362Y	SMBus/I2C	N	N	N	16	16	2.7V-5.5V	N	QFN24

笔记本电脑和网络/存储系列

新唐笔记本电脑和网络 / 存储硬件监控 IC 系列，被业界广泛采用，用於监控重要硬件参数，包括电压、温度和风扇转速。当检测到异常事件时，这些设备发出警报或警告信号，以避免系统损坏。

Part No.	System Interface	On-chip Thermal Sensor	Remote Thermal Sensor Inputs	Voltage Monitor Inputs	Fan Tachometer Inputs	Fan Speed Control Outputs	Operation Voltage	PECI I/F	Package
NCT7511Y	SMBus/I²C	Y	2 (max)	N	1	1	3.3V	N	QFN16
NCT7717U	SMBus/I²C	Y	N	N	N	N	3.3V	N	SOT23-5
NCT7718W	SMBus/I²C	Y	1	N	N	N	3.3V	N	MSOP8
NCT7719W	SMBus/I²C	Y	2	N	N	N	3.3V	N	MSOP10
W83773G	SMBus/I²C	Y	2	N	N	N	3.3V	N	MSOP8
NCT7601Y/W	SMBus/I²C	N	8 (max)	N	N	N	3.3V	N	QFN16/TSSOP16
NCT7602Y/W	SMBus/I²C	N	12 (max)	N	N	N	3.3V	N	QFN20/TSSOP20
NCT7716Y/U	SMBus/I²C	Y	N	N	N	N	3.3V	N	DFN6/SOT23-6
NCT7728W/S	SMBus/I²C	Y	N	N	N	N	3.3V	N	MSOP8/SOP8

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输出入

通用型 I/O 系列

新唐通用 I/O 扩展 IC 系列允许使用者透過标准 SMBus 接口，轻松添加多个 GPIO 功能。 这些芯片提供可绑定地址设置、输入中断以及 LED 和 BEEP 功能。

Part No.	Supply Voltage	GPIO	Interface	Package
NCT5655W/Y	2.3V ~ 5.5V	16	SMBus	TSSOP24/QFN24
NCT5635W/Y	2.3V ~ 5.5V	16	SMBus	TSSOP24/QFN24
NCT5605Y	3.3V	14	SMBus	QFN20
W83L604G	3.3V	14	SMBus	SSOP20
W83L603G	3.3V	8	SMBus	SOP14
W83601G	5V	15	SMBus	SSOP20

超级 I/O 系列

新唐超级 I/O 系列被广泛应用于主板、工业电脑、一体机电脑和工作站应用中，支持传统輸出入功能（串行端口、并行端口、KBC 和通用 I/O）和高级硬件监控与控制功能。

Part No.	Interface	KBC	UART	Parallel Port	Hardware Monitor	ACPI	SMBus Master	PECI I/F	SB-TSI I/F	EuP Power Saving	Port 80	Package
NCT5104D	LPC	N	4	N	N	N	N	N	N	N	N	LQFP48
NCT5124D	LPC / eSPI	N	4	N	N	N	N	N	N	N	N	LQFP48
NCT5567D-B	LPC	Y	1	N	Y	Y	Y	3.1	Y	Y	N	LQFP64
NCT5581D	LPC	Y	1	N	Y	Y	Y	3.1	Y	Y	Y	LQFP64
NCT5585D	LPC / eSPI	Y	1	N	Y	Y	Y	3.1	Y	Y	Y	LQFP64
NCT6793D	LPC	Y	2	Y	Y	Y	Y	3.1	Y	Y	Y	LQFP128
NCT6796D	LPC	Y	2	Y	Y	Y	Y	3.1	Y	Y	Y	LQFP128
NCT6796D-E	LPC / eSPI	Y	2	Y	Y	Y	Y	3.1	Y	Y	Y	LQFP128
NCT6106D	LPC	Y	6	Y	Y	Y	Y	3.1	Y	Y	Y	LQFP128
NCT6126D	LPC / eSPI	Y	6	Y	Y	Y	Y	3.1	Y	Y	Y	LQFP128

eSIO 系列

新唐 eSIO 家族系列，在单个芯片中结合了内置微控制器和传统的超级 I/O 功能。这些芯片可以执行传统的超级 I/O 功能，支持可编程内核允许丰富的客制化自定义功能，包括高级风扇控制和灵活的电源時序控制等。 eSIO 系列产品广泛应用于游戏 电脑、一体机电脑、工作站、数据中心和 入门级服务器应用。

Part No.	Interface	KBC	UART	Parallel Port	Hardware Monitor	ACPI	SMBus Master	SPI I/F	PECI I/F	SB-TSI I/F	EuP Power Saving	Port 80	Built-in uC	Package
NCT6683D-T	LPC	Y	2	Y	Y	Y	Y	Y	3.1	Y	Y	Y	Y	LQFP128
NCT6685D	LPC	Y	2	Y	Y	Y	Y	Y	3.1	Y	Y	Y	Y	LQFP128
NCT6686D	LPC / eSPI	Y	2	Y	Y	Y	Y	Y	3.1	Y	Y	Y	Y	LQFP128

安全

可信赖平台模块 (TPM)

NPCT75x 芯片信赖平台模块 (TPM) 是新唐科技 第七代 SafeKeeper ™系列产品 . 此系列芯片符合信赖计算群组 (TCG, Trusted Computing Group) 所制订之个人计算机客户端 TPM 2.0 最新规格，同时通过共同准则 Common Criteria (CC) EAL 4+ 安全等级认证及美国美国联邦信息处理标准 FIPS 140-2 level 2 密码安全认证，为业界提供最高等级之 TPM 2.0 硬件安全防护。

Part No.	Description	TPM Main Specification Version Compliance	TCG PC Client Specific TIS Version	Compliances	Interface	Operation Temperature (°C)	Package Options
NPCT7xx	SafeKeeper™ Trusted Platform Module (TPM)	Version 2.0 revision 01.16	PTP v1.03 Rev 22	CC EAL4+ and FIPS 140-2 Level 2	SPI, I²C (1.8V-3.3V)	0 ~ 70 or -40 ~ 85	QFN32 UQFN16
		Version 2.0 revision 01.38	PTP v1.04 Rev 0.37	CC EAL4+ and FIPS 140-2 Level 2 with Physical security level 3	SPI, I²C (1.8V-3.3V)	0 ~ 70 or -40 ~ 85	QFN32 UQFN16
		Version 2.0 revision 01.59	PTP v1.05 Rev 14	CC and FIPS certifications in progress	SPI, I²C (1.8V-3.3V)	0 ~ 70 or -40 ~ 85	QFN32 UQFN16

接口逻辑

电压电平转换器

新唐电压电平切换器系列，提供接口连接有不同工作电压的各种芯片的能力。支持高 ESD 静电防护和接口速度。这些芯片适用于台式机、工作站、工业电脑、服务器和云计算应用。

Part No.	Operation Voltage	Interface	Inputs	Outputs	Operation Temperature (°C)	Package
NCT5927W	0.8V-5.5V/ 2.2V-5.5V	SMBus/I²C	1	1	-40~85	MSOP 8
NCT5914W	0.5V-6.0V	GTL to LVTTL	4	4	-40~85	TSSOP14

开关和多路复用器

新唐开关和多路复用器允许连接在不同电压水平下运行但共享同一总线的设备，以及在不使用时隔离设备以减少整个系统的电容负载。广泛应用于工作站、工业电脑、服务器和云计算应用。

Part No.	Frequency	Operation Voltage	Interface	Inputs	Outputs	Operation Temperature (°C)	Package
NCT5945W/Y	1 MHz	2.3-5.5V	SMBus/I²C	1	4	-40~85	TSSOP20/QFN20
NCT5946W/Y	1 MHz	2.3-5.5V	SMBus/I²C	1	4	-40~85	TSSOP16/QFN16
NCT5948W/Y	1 MHz	2.3-5.5V	SMBus/I²C	1	8	-40~85	TSSOP24/QFN24
NCT1901D	380Mbit	0.8-3.6V	NC-SI	2	3	-40~85	LQFP64

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电源管理

TCPC (Type C Port Controller)

TCPC (Type C Port Controller) 系列

电源开关

电源开关系列

电压调节器

DDR 總線终端稳压系列
风扇驱动系列
线性稳压系列

TCPC (Type C Port Controller)

TCPC (Type C Port Controller) Series

Part No.	Description	Main Specification Version Compliance	Interface	Power Role	VCONN Switch	Type-C Ports	No. of GPIOs		Package
							Multiplexed	Dedicated	
NCT3807A0YX	Type-C Port Controller with integrated VCONN switch and GPIO expander	Type-C Cable and Connector, Revision 2.0 Power Delivery (PD), Revision 3.0, v2.0 Type-C Port Controller Interface (TCPCI), Revision 2.0, v1.1	I2C, up to 1MHz	Sink, Source and Dual Power Role	Integrated, up to 1.5W with automatic turn-off protection	1	7	9	QFN32, 5x5
NCT3808A0YX	Type-C Port Controller with integrated VCONN	Type-C Cable and Connector, Revision 2.0 Power Delivery (PD), Revision 3.0, v2.0 Type-C Port Controller Interface (TCPCI) Revision 2.0, v1.1	I2C, up to 1MHz	Sink, Source and Dual Power Role	Integrated, up to 1.5W with automatic turn-off protection	2	10	-	QFN32, 5x5

电源开关

电源开关系列

新唐电源开关系列是高集成度与性价比的解决方案。我们的产品可节省 PCB 空间，支持高边电源过流保护和系统节能应用的最佳选择。产品系列具有低导通阻抗、低输入电压和 丰富的保护，如过电流、短路、过温保护和反向电压 / 电流保护。

Part No.	Input Voltage (VIN)	Features	Rdson (typ.)	Output Current (typ.)	Flag indicator	OCP Adjustable	Output Discharge	Package
NCT3521U	2.7V ~ 5.5V	Enable; Adj. Soft-start & Shutdown Output Discharge, UVLO, OCP, RCP, RVP, OTP	80 m-ohm	2.0A	Y	N	Y	SOT23-5 SOT23-6
NCT3521U-2	2.7V ~ 5.5V	Enable; Adj. Soft-start & Shutdown Output Discharge, UVLO, OCP, RCP, RVP, OTP	80 m-ohm	2.0A	Y	N	Y	SOT23-5 SOT23-6
NCT3527U	3.0V ~ 5.5V	Enable; OCP adjustable, UVLO, OCP, RCP, RVP, OTP; Output Latched off when Flag# Alerted	70 m-ohm	2.5A	Y	Y	Y	TSOT23-6
NCT3527U-A	3.0V ~ 5.5V	Enable; OCP adjustable, UVLO, OCP, RCP, RVP, OTP; Output cycle by cycle re-try when Flag# Alerted	70 m-ohm	2.5A	Y	Y	Y	TSOT23-6
NCT3530Y	4.5V ~ 5.5V	Enable; OCP, UVLO, OCP, RCP, RVP, OTP; HDMI/DVI DDC I²C, HPD Level Shifters	0.6 ohm	0.25A	Y	N	Y	DFN10
NCT3532Y	3.0V ~ 5.5V	Enable; OCP, UVLO, OCP, RCP, RVP, OTP; Dual Mode Display Port (DP++) Auxiliary Channels Splitter with HDMI DDC I²C, HPD Voltage Level Translators	0.2 ohm	0.5A	N	N	N	QFN16

电压调节器

DDR 總線终端稳压系列

新唐 DDR 总线终端稳压器系列产品提供了双向 (吸收 / 提供) 电流给高速总线电源终端器应用。此系列提供了 DDR、DDR2、DDR3x 与 DDR4 稳定的终端电源与快速的瞬时响应。使用新唐 DDR 终端电源稳压器设计，您可以获得高性能和具有成本效益的优势。

Part No.	Input Voltage (VIN)	Features	Control Voltage	Memory Supported	VTT Output offset (max)	Sink/Source Current (max)	Package
NCT3103S	1.0V ~ 5.5V	Sleep S3 & DDR VTT Enable Control Signals, OCP & OTP	3.0V ~ 5.5V	DDRII, DDRIII, DDRIV	-20mV ~ +20mV	2A	SOP8 with Exposed Pad
NCT3105Y	1.0V ~ 3.6V	EN with Suspend to RAM (STR) Functionality, Power Good, OCP & OTP	2.3V ~ 5.5V	DDRII, DDRIII, DDRIV	-20mV ~ +20mV	2A	DFN10
NCT3101S	1.0V ~ 5.5V	OCP & OTP	3.0V ~ 5.5V	DDRI, DDRII, DDRIII, DDRIV	-20mV ~ +20mV	2A	SOP8 with Exposed Pad

风扇驱动系列

新唐风扇驱动 IC 系列产品提供了电路板与 BOM 成本节省，高度整合且具有成本效益的解决方案。
此系列产品可以与新唐超级 IO 系列风扇控制技术搭配使用，用来驱动具成本优势的 DC 风扇或是 PWM 风扇。新唐风扇驱动系列产品具有过电流保护、短路保护与过温保护，这些保护可提供使用者更安全的应用环境。

Part No.	Input Voltage (VIN)	Output Voltage	Features	V_{SET} / DCIN	Current Limit Trigger	Output Current (typ.)	Package
NCT3941S	8.0V ~ 17.6V	Follow V_{SET} *4.0 times	OCP, SCP & OTP EN: NCT3941S FON#: NCT3941S-A	1.0 ~ VIN	1.6A (typ.)	0.5A	SOP8 with Exposed Pad
NCT3941S-A	8.0V ~ 17.6V	Follow V_{SET} *4.0 times	OCP, SCP & OTP EN: NCT3941S FON#: NCT3941S-A	1.0 ~ VIN	1.6A (typ.)	0.5A	SOP8 with Exposed Pad
NCT3947S-A	10.8V ~ 13.2V	DC Mode: 3.8 * DCIN; PWM Mode: follows VIN	Auto Fan Type Detection (DC/PWM Fan), Manual Mode, Fault#, OCP, SCP & OTP	0 ~ 3.6V	3.0A ~ 4.0A	2.0A	SOP8 with Exposed Pad

线性稳压系列

新唐线性稳压系列提供高性能、低输入电压与低压差产品特性。此产品提供电源开关控制 (致能接脚) 可以达到节电功能并且有过电流保护、短路保护与过温保护，这些保护可提供使用者更安全的应用环境。

Part No.	Input Voltage (VIN)	Features	Control Voltage	Dropout (typ.)	Output Current (typ.)	Package
NCT3720S	1V ~ 5.5V	EN, PG, UVLO, OCP, SCP & OTP	3V ~ 5.5V	150mV	2A	SOP8 with Exposed Pad
NCT3730S	1V ~ 5.5V	EN, PG, UVLO, OCP, SCP & OTP	3V ~ 5.5V	210mV	3A	SOP8 with Exposed Pad

Contact us: ComputerIC@nuvoton.com

NuMotor MCU

NuMotor MCU

NuMotor MCU 系列

NuMotor MCP(MCU + Gate driver)

NuMotor MCP 系列

NuMotor MCU

NuMotor MCU Series

全系列内建模拟比较器 , rail to rail OPA or PGA(NM1200 除外)

工作电压：2.5V ~ 5.5V

工作温度：-40° C ~ 105° C

• NM1200 系列(适用: 风扇, 吊扇, 水泵...等)

Part No.	Flash ROM (kB)	SRAM (kB)	I/O	Timer 32-bits	EPWM 16-bit	ADC ch 10-bit	Comp	UART SPI I2C	MAX HCLK	Package Type
NM1100FBAE	17.5	2	17	2	6	8	2	1/0/0	48	TSSOP20
NM1200ZBAE	17.5	2	29	2	6	12	2	2/1/1	48	QFN33 (5x5)
NM1200LBAE	17.5	2	33	2	6	12	2	2/1/1	48	LQFP48(7x7)

• NM1120 系列(适用: 风扇, 散热风扇, 电动工具机, 园林工具机, 水泵...等)

Part No.	Flash ROM (kB)	SRAM (kB)	I/O	Timer 32-bits	EPWM 16-bit	ADC ch 12-bit	Comp	UART SPI I2C	MAX HCLK	BPWM 16-bit	ECAP 24-bit	PGA	SPROM (kB)	Package Type
NM1120XC1AE	29.5	4	18	2	6	8	2	2/2/2	48	2	3	1	3x0.5	QFN20 (4x4)
NM1120FC1AE	29.5	4	18	2	6	8	2	2/2/2	48	2	3	1	3x0.5	TSSOP20
NM1120EC1AE	29.5	4	22	2	6	8	2	2/2/2	48	2	3	1	3x0.5	TSSOP28

• NM1244 系列(适用: 家电风扇, 吊扇, Ebike, 滑板车, 工业缝纫机, 电动工具机, 园林工具机...等)

Part No.	Flash ROM (kB)	SRAM (kB)	I/O	Timer 32-bits	EPWM 16-bit	ADC ch 12-bit	Comp	UART SPI I2C	MAX HCLK	BPWM 16-bit	ECAP 24-bit	GDMA	SPROM (kB)	OPA	DAC ch 12-bit	Package Type
NM1244D48	64	8	44	3	6	20	1	2/1/2	60	2	3	2	3x0.5	1	2	LQFP48 (7x7)
NM1244Y48	64	8	44	3	6	20	1	2/1/2	60	2	3	2	3x0.5	1	2	QFN48 (7x7)
NM1244Y	64	8	29	3	6	16	1	2/1/2	60	2	3	2	3x0.5	1	2	QFN33 (4x4)

• NM1234 系列(适用: 具编码器接口, 家用风扇, 吊扇, Ebike, 工业缝纫机, 白色家电...等)

Part No.	Flash ROM (kB)	SRAM (kB)	I/O	Timer 32-bits	EPWM 16-bit	ADC ch 12-bit	Comp	UART SPI I2C	MAX HCLK	BPWM 16-bit	ECAP 24-bit	PGA	SPROM (kB)	OPA	QEI (A/B/IDX)	DAC ch 12-bit	Package Type
NM1234D	64	16	44	4	6	16	2	3/2/3	72	2	3	1	3x0.5	3	1	2	LQFP48 (7x7)
NM1234Y	64	16	44	4	6	16	2	3/2/3	72	2	3	1	3x0.5	3	1	2	QFN48 (7x7)

• NM1530 系列(适用: 具编码器接口, CAN bus, 双马达控制, 电动机车, 工业缝纫机, 白色家电...等)

Part No.	Flash ROM (kB)	SRAM (kB)	I/O	Timer 32-bits	EPWM 16-bit	ADC ch 12-bit	Comp	UART SPI I2C	MAX HCLK	BPWM 16-bit	ECAP 24-bit	CAN2.0	MDU	OPA	QEI (A/B/IDX)	Package Type
NM1520LD2AE	64	8	38	4	9	9	1	2/1/1	72	0	3	1	√	2	1	LQFP48 (7x7)
NM1520RD2AE	64	8	51	4	12	14	2	2/1/1	72	1	3	1	√	2	1	LQFP64 (10x10)
NM1520RC2AE	32	8	51	4	12	14	2	2/1/1	72	1	3	1	√	2	1	LQFP64 (10x10)
NM1530VD3AE	64	16	82	4	12	16	3	2/3/1	72	2	6	1	√	2	2	LQFP100 (14x14)
NM1530VE3AE	128	16	82	4	12	16	3	2/3/1	72	2	6	1	√	2	2	LQFP100 (14x14)

Refer to the following web site for more information
www.nuvoton-mcu.com/forum.php?mod=viewthread&tid=1819&fromuid=177288

NuMotor MCP(MCU + Gate driver)

NuMotor MCP Series

工作温度：-40° C ~ 105° C

• NM18107 系列 (NM1120 + 40V_Gate Driver)

(适用：使用电池系统之工具机, 手持式吸尘器/电动工具机/园林工具机/筋膜枪, 风扇...等)

Part No.	Flash ROM (kB)	SRAM (kB)	I/O	Timer 32-bits	EPWM 16-bit	ADC ch 12-bit	Comp	UART SPI I2C	MAX HCLK	BPWM 16-bit	ECAP 24-bit	PGA	SPROM (kB)	LDO	Package Type
NM18107Y	29.5	4	14	2	6	8	2	2/1/2	48	2	3	1	3x0.5	5V & 12V	QFN33 (5x5)

• NM1817 系列 (NM1120 + 600V_Gate Driver)

(适用：中压电池系统之应用, 家用风扇...等)

Part No.	Flash ROM (kB)	SRAM (kB)	I/O	Timer 32-bits	EPWM 16-bit	ADC ch 12-bit	Comp	UART SPI I2C	MAX HCLK	BPWM 16-bit	ECAP 24-bit	PGA	SPROM (kB)	LDO	Package Type
NM1817NT	29.5	4	15	2	6	8	2	2/2/2	48	2	3	1	3x0.5	5V	LQFP44 (10x10)

• NM18407 系列 (NM1244 + 40V_Gate Driver)

(适用：使用电池系统之工具机, 手持式吸尘器/电动工具机/园林工具机/筋膜枪, 风扇...等)

Part No.	Flash ROM (kB)	SRAM (kB)	I/O	Timer 32-bits	EPWM 16-bit	ADC ch 12-bit	Comp	UART SPI I2C	MAX HCLK	BPWM 16-bit	ECAP 24-bit	GDMA	SPROM (kB)	OPA	DAC ch 12-bit	LDO	Package Type
NM18407Y*	64	8	29	3	6	17	1	2/1/2	60	2	3	2	3x0.5	1	2	5V	QFN48 (7x7)

* 开发中

Refer to the following web site for more information
www.nuvoton-mcu.com/forum.php?mod=viewthread&tid=1819&fromuid=177288

nuvoTon

Component

MOSFET

低抗阻 锂离子电池保护电路用途 MOSFET

超小尺寸 开关电路用途 MOSFET

激光二极管

蓝紫色

MOSFET

可为客戶提供的主要益处

1. 更久电池续航以及优质快充性能
2. 设计自由度高
3. 高散热性
4. 高信赖性
5. 低噪声
6. 降低电路震动

产品目录

· 锂电池保护电路用途 CSP MOSFET
· 开关电路用途 CSP MOSFET

低抗阻 锂离子电池保护电路用途 MOSFET

产品优势

1. 更久电池续航以及优质快充性能
   · 低抗阻 ; 13mΩ
2. 设计自由度高
   · 超小尺寸封装 ; 0.6 x 0.6mm
3. 防止锂电池深度放电
   · 低漏电 ; IGSS=0.1uA
4. 高安全性
   · 低故障率 ; 0PPM (依据 Nuvoton 数据)

● 12V-30V Nch Dual MOSFET

• VSS: 12V to 30V
• Size: 0.6 x 0.6mm to 6 x 3mm
• Rss(on) Typ @VGS=3.8V: 1.1mΩ to 100mΩ

Part No.	Type	VSS [V]	VGS [V]	IS*1 [A]	Rss(on)Typ.[mΩ]				Package Size[mm]		
					VGS 4.5V	VGS 3.8V	VGS 3.1V	VGS 2.5V	x	y	t
KFCAB21860L	N-Dual	12	±8	17	1.35	1.5	1.7	2.25	2.52	2.3	0.095
KFCAB21520L	N-Dual	12	±8	16	1.45	1.6	1.8	2.3	3.54	1.77	0.11
KFCAB21890L	N-Dual	12	±8	14.5	1.75	1.95	2.25	2.9	2.98	1.49	0.075
KFCAB21770L	N-Dual	12	±8	14.5	1.8	2	2.2	2.7	3.54	1.77	0.11
KFCAB21260L	N-Dual	12	±8	12	2	2.2	2.4	3.1	3.54	1.77	0.11
KFCAB21740L	N-Dual	12	±8	13.6	2.1	2.2	2.6	3.5	1.96	1.84	0.08
KFCAB21350L	N-Dual	12	±8	12	2.1	2.2	2.4	3.1	3.05	1.77	0.11
KFCAB21490L	N-Dual	12	±8	13.5	2.1	2.2	2.4	3.1	2.98	1.49	0.11
KFCAB21A50L	N-Dual	12	±8	13.5	2.1	2.2	2.4	3.1	2.98	1.49	0.11
KFC6B21150L	N-Dual	12	±10.5	8	4	4.3	4.8	5.9	2.14	1.67	0.11
KFC6B21810L	N-Dual	12	±8	9	4.2	4.6	5.4	7.4	1.89	1.24	0.08
KFC4B21210L	N-Dual	12	±8	4.7	12	13	14	17	1.29	1.29	0.1
KFC4B21220L	N-Dual	12	±8	3	21	23	26	33	0.97	0.97	0.1
KFC4B21080L	N-Dual	12	±12	2.9	27	30	39	60	1.11	1.11	0.1
KFC4B21320L	N-Dual	12	±8	2.5	36	39	45	58	0.8	0.8	0.1
KFC4A21300L	N-Dual	12	±8	1.5	70	80	90	115	0.6	0.6	0.2
KFC4B21300L	N-Dual	12	±8	1.5	70	80	90	115	0.6	0.6	0.1
KFC4B21330L	N-Dual	12	±8	1.5	95	100	115	145	0.8	0.8	0.1
KFCAB22370L	N-Dual	20	±12	10	3.1	3.3	3.8	4.6	3.05	1.77	0.11
KFC6B22160L	N-Dual	20	±8	8	4.7	4.9	5.2	6	2.65	1.67	0.11

Part No.	Type	VSS [V]	VGS [V]	IS*1 [A]	Rss(on)Typ.[mΩ]				Package Size[mm]		
					VGS 4.5V	VGS 3.8V	VGS 3.1V	VGS 2.5V	x	y	t
KFC4B22180L	N-Dual	20	±8	5	9.4	10	11.1	13.4	1.74	1.74	0.11
KFC4B22270L	N-Dual	20	±12	4	17	18	19	22	1.29	1.29	0.1
KFC4B22690L	N-Dual	20	±12	3.4	28	30.5	33	36	1.1	1.1	0.1
KFC4B22670L	N-Dual	20	±12	2.9	35	37.5	42	64	1.1	1.1	0.1
KFCAB22630L	N-Dual	23	±12	13.8	2.2	2.4	2.8	5	3.4	1.96	0.095
KFCAB22680L	N-Dual	23	±12	13	2.45	2.65	3	3.85	3.2	2.1	0.095
KFC6B22100L	N-Dual	24	±12	6	8.2	8.7	9.7	12.5	2.56	1.67	0.1
KFC6B22220L	N-Dual	24	±12	13*2	8.2	8.7	9.7	12.5	2.56	1.67	0.1
KFC6B22090L	N-Dual	24	±12	12*2	8.5	9	10	13	2.56	1.67	0.1
KFC4B22070L	N-Dual	24	±12	3.5	17.5	-	20	23	1.67	1.67	0.1
KFC7P23440L	N-Dual	30	±20	19	3.4	-	-	-	6	3	0.345

∗1 FR4 board (25.4mm×25.4mm×t1.0mm), Full Cu
∗2 Mounted on Ceramic substrate (70mm x 70mm x t1.0mm)

超小尺寸 开关电路用途 MOSFET

产品优势

1. 设计自由度高
   超小尺寸封装 ; 0.6 x 0.6mm
2. 低噪声 / 降低电路震动
   超低电感 ; 比树脂封装产品低 99%
3. 高安全性
   低故障率 ; 0PPM (依据 Nuvoton 数据)

• 12V Nch/Pch Single MOSFET

• VDS: 12V
• Size: 0.6 x 0.6mm to 1 x 1mm
• Rds(on) Typ @VGS=4.5V: 34mΩ to 118mΩ

Part No.	Type	VDS [V]	VGS [V]	ID*1 [A]	Rds(on)Typ.[mΩ]				Package Size[mm]		
					VGS 4.5V	VGS 2.5V	VGS 1.8V	VGS 1.5V	x	y	t
KFJ4B01110L	P-Single	-12	±8	-2.2	118	141	169	199	0.6	0.6	0.1
KFJ4B01100L	P-Single	-12	±8	-3.3	57	68	82	97	0.8	0.8	0.1
KFJ4B01120L	P-Single	-12	±8	-4.2	34	40	48	57	1	1	0.1

∗ 1 FR4 board (25.4mm×25.4mm×t1.0mm), Full Cu

激光二极管

藍紫色

Nuvoton Technology Corporation Japan (NTCJ) 所研发的蓝紫色激光二极管，以其特有的化合物半导体工艺制程及低能耗结构设计特点，实现了激光的高效输出、高可靠性，在工业领域收到业界好评。

• KLC4 系列

KLC4 系列产品，峰值波长为 402nm 提供 TO-CAN 封装形式。
工作温度范围广，是工业级应用的首选。

• KLC431FS01WW

振荡波长：402nm
多模横向振荡
封装形式： Φ5.6 TO 管
条宽：7um x 1um
额定输出功率：800mW
工作管壳温度（Tc）：0 ~+50 °C

Part No.	Wavelength [Typ] (nm)	Rated Operating Power(mW)	Operating Case Temperature(°C)	Package
KLC431FS01WW	402	800(CW)	0 ~ 50	Φ5.6CAN

Visual Sensing

图像传感器

2D 视图传感器
3D TOF 传感器

DSP / ISP

人机界面显示 LSI
音响用统合 LSI

图像传感器

2D 视图传感器

• 在医疗、广播、电影拍摄用相机市场拥有三十几年的批量生产与出货总量业绩
• 特化于医疗、产业、电影摄影取向的相机，高清，高帧率，小型，低功耗传感器

KM344 系列

我们开发图像传感器，来实现高感度、低噪、高色彩还原。
· 超低照度、可实现鲜艳颜色的高色彩还原度
· 实现逆光场景的完美拍摄
· 抑制高速运动物体的拖影
本系列产品可满足多样化的应用需求。

特点

· 高感度，低噪	超低照度还原鲜艳图像
· 抑制混色实现色彩高还原度	还原鲜艳图像，无色斑
· WDR 模式搭载	完美逆光摄影
· 实现高帧率	捕捉活动迅速的物体
· 近红外高感度	实现物体高可视化

• KM34427ALJ
实现了感动画质 (高感度 / 高信噪比) 1/3" 2.4M 图像传感器
· 黑白图像传感器
· 实现了抑制果冻效应的高动态范围
高动态范围 : 120dB (采用 Line-by-Line 方式可以体现 4 张图像的帧率)
· 具有低功耗和易于热设计的特点
210mW(1080p60fps)
· 采用小型封装，易于封装机构设计
QFN 封装 (8.30 毫米 x 9.40 毫米 x 1.53 毫米)

• KM34450PLJ
实现了高清 / 全画幅 8k-60fps 的图像传感器
· 高分辨率 / 抑制果冻效应，并忠实的还原图像画面
8k(47.8M 像素) / 高帧率 60fps
· 可从暗部到明亮部完整还原高画质图像
搭载大型像素 (4.3um)，实现动态范围的捕捉
· 在低照度下也能还原高画质图像
通过切换两个增益 (低增益 / 高增益) 提高低照度信噪比

Part No.	Series	Applications	Number of pixels	Optical size	Filter	Output frame rate	Package	Halogen Free
KM34427ALJ	CMOS	Security and Industrial, Medical Camera Use	2.4M	1/3 type	B/W	1080p/120fps	WQFN046-C-0809C	Yes
KM34450PLJ	CMOS	Broadcast,Drone and Industrial Cameras	48M(8k)	Full-frame	RGB	8k4k/12bit_60fps	LGA632-C-379505-IA	Yes

3D TOF 传感器

- 在汽车市场及产业市场累计相当的出货业绩
- 具备高度空间识别功能可实现大范围的空间感应
- 室内室外皆能使用

KM349 系列

· 特别适合用于物体的识别与检测
· 也可针对高速运动的物体进行检测
· 太阳光或温度的变化中也能保持高度鲁棒性
· 在太阳照射或高温环境中也能发挥良好性能

- KM34906BRA

  光学尺寸：1/4 英寸
  像素数： VGA
  TOF 分类：间接 TOF
  提供方式：裸片

- KM34906B1S（车载用）

  光学尺寸：1/4 英寸
  像素数： VGA
  TOF 分类：间接 TOF
  提供方式：封装

- KM34906BLJ5Z

  光学尺寸：1/4 英寸
  像素数： VGA
  TOF 分类：间接 TOF
  提供方式：封装

- KM34930BRA

  光学尺寸：1/8 英寸
  像素数： QVGA
  TOF 分类：间接 TOF
  提供方式：裸片
  · 预计将在 CY2022 年第二季度开始量产出货

KW330 系列

· 特别适合用于物体的识别与检测
· 也可针对高速运动的物体进行检测
· 太阳光或温度的变化中也能保持高度鲁棒性
· 在太阳照射或高温环境中也能发挥良好性能
· 内置深度处理器可以减少电子控制器的数据流量以及处理资源的消耗
· 预计将在 CY2022 年第二季度开始量产出货

- KW33000ARA

光学尺寸：1/4 英寸
像素数： VGA
TOF 分类：间接 TOF
提供方式：裸片

- KW33000A1T（车载用）

光学尺寸：1/4 英寸
像素数： VGA
TOF 分类：间接 TOF
提供方式：封装

- KW33000A1K

光学尺寸：1/4 英寸
像素数： VGA
TOF 分类：间接 TOF
提供方式：封装

Part No.	Number of pixels	Optical size	Filter	Output frame rate	Depth range (m) / FoV(deg)	Package
KM34906BRA	640x480	1/4	No	30fps	Type-1)0.2m-1.0m/51x38deg Type-2)0.2m-1.2m(mode 1), 1.0m-6.0m(mode 2)/88x66deg Type-3)0.3m-4.0m/108x79deg	CHIP/WAFER
KM34906B1S	640x480	1/4	No	30fps	Type-1)0.2m-1.0m/51x38deg Type-2)0.2m-1.2m(mode 1), 1.0m-6.0m(mode 2)/88x66deg Type-3)0.3m-4.0m/108x79deg	FBGA057-P-0808
KM34906BLJ5Z	640x480	1/4	No	30fps	Type-1)0.2m-1.0m/51x38deg Type-2)0.2m-1.2m(mode 1), 1.0m-6.0m(mode 2)/88x66deg Type-3)0.3m-4.0m/108x79deg	WQFN038-C-0708
KM34930BRA	320x240	1/8	No	60fps	0.1m-3.0m/108x89deg	CHIP/WAFER
KW33000ARA	640x480	1/4	B/W	60fps	Type 1)0.2m-1.2m/51x38deg Type 2)0.2m-1.2m/137x107deg Type3)0.5m-10m/108x79deg	CHIP/WAFER
KW33000A1T	640x480	1/4	B/W	60fps	Type 1)0.2m-1.2m/51x38deg Type 2)0.2m-1.2m/137x107deg Type3)0.5m-10m/108x79deg	iBGA, 9.5mm x 10mm, 97pins
KW33000A1K	640x480	1/4	B/W	60fps	Type 1)0.2m-1.2m/51x38deg Type 2)0.2m-1.2m/137x107deg Type3)0.5m-10m/108x79deg	iBGA, 9.5mm x 10mm, 97pins

DSP / ISP
人机界面显示LSI

· 拥有十年以上量产实绩，累计销量超过 5500 万台
· 丰富的内置图像 (Graphics) 功能可以让车辆信息终端以更高级的方式展现；对各种视频 (Video) 输入接口的支持可以提高系统设计的扩展性
· Gerda® 为我们的商标

特点

· 将车辆信息以高级的二维 / 三维图像展现于汽车显示终端
· 提供开机快速、高画质 (高端显示功能) 的舒适使用体验
· 支持 AV 端子的模拟信号输入和最新制式的数字视频输入可以满足系统扩展和高低端系列产品开发
· 内置微处理器可以执行生成人机交互界面的程序和实现应用扩展 (比如 : 互联汽车)

• Gerda™-EINS 系列

· High resolution system（ recommendation：1920x480 ）/ 高分辨率系统 (推荐尺寸：1920x480 ）
· Enhanced 2.5D graphics / 增强 2.5D
· Camera I/F: Analog, Digital & MIPI / 相机 I/F 2 频道 (模拟 / 数字 & MIPI)
· Display output after image processing / 图像处理后进行显示输出
· Image quality processing engine / 图像质量处处理器
  High visibility under foggy, dark or dirty lens condition / 在镜头起雾、进光量少、或镜头脏污的情况下也能实现高可视化
· Warping Engine/ 图像扭转
· Embedded frame buffer memory / 嵌入式帧缓冲存储器

• Gerda™-C 系列

· High resolution system（ WXGA + WVGA ）/ 高分辨率系统 (WXGA + WVGA ）
· Enhanced 2.5D/3D graphics / 增强 2.5D/3D 图形
· Camera I/F 2ch(Analog/Digital) / 相机 I/F 2 频道 (模拟 / 数字)
· Dual display output after image processing / 图像处理后进行双显示输出
· Distortion compensation for HUD / 平视显示器·(HUD) 的图像校正
· Operating System（ RTOS, RTOS/Linux Dual ）/ 可装操作系统（ RTOS, RTOS/Linux Dual ）

• Gerda™-Cdash 系列

· High resolution system（ FullHD + WVGA ）/ 高分辨率系统 (FullHD + WVGA ）
· Enhanced 2.5D/3D graphics / 增强 2.5D/3D 图形
· Camera I/F 2ch(Analog/Digital & Ethernet AVB) / 相机 I/F 2 频道 (模拟 / 数字 & Ethernet AVB)
· Dual display output after image processing / 图像处理后进行双显示输出
· Distortion compensation for HUD/ 平视显示器·(HUD) 的图像校正
· Operating System（ RTOS, RTOS/Linux Dual, INTEGRITY® ）/ 可装操作系统（ RTOS, RTOS/Linux Dual, INTEGRITY® ）

Part No.	Series Name	CPU	Graphics	OpenGL	Display size	Video input	Mipi-Rx	Video output channel	LVDS-Tx	Audio DSP	Video decoder	External Memory IF	Boot Memory	Embedded Memory	USB	Ethernet	CAN-FD	Package
KM2KSZ100UA	Gerda™-EINS	ARM Cortex®-M7 Single	2.5D	-	1920 x 480 (recommend)	Analog, Digital	Mipi-CSI2	1ch	Dual	-	-	S-Flash	S-Flash	Embedded	(option)	-	(option)	QFP 24mm□ 216pins
KM2KSZ110UA	Gerda™-EINS	ARM Cortex®-M7 Single	2.5D	-	1920 x 480 (recommend)	Analog, Digital	Mipi-CSI2	1ch	Dual	-	-	S-Flash	S-Flash	Embedded	(option)	-	(option)	QFP 24mm□ 216pins
KM2KSZ120UA	Gerda™-EINS	ARM Cortex®-M7 Single	2.5D	-	1920 x 480 (recommend)	Analog, Digital	Mipi-CSI2	1ch	Single	-	-	S-Flash	S-Flash	Embedded	(option)	1ch	(option)	QFP 24mm□ 216pins
KM2KSZ130UA	Gerda™-EINS	ARM Cortex®-M7 Single	2.5D	-	1920 x 480 (recommend)	Analog, Digital	Mipi-CSI2	1ch	Single	-	-	S-Flash	S-Flash	Embedded	(option)	1ch	(option)	QFP 24mm□ 216pins
KM2KSC100UB	Gerda™-C	ARM Cortex®-A9 Dual	2.5D, 3D	ES1.1	WXGA + WVGA	Analog, Digital	-	2ch	Single	HiFiEP	H.264	S-Flash, eMMC, DDR3	S-Flash	-	USB2.0	-	-	BGA 21mm□ 538pins
KM2KSC15K08U	Gerda™-Cdash	ARM Cortex®-A9 Dual	2.5D	-	WXGA	Digital	-	1ch	Single	-	H.264	S-Flash, eMMC, DDR3	S-Flash	-	USB2.0	2ch	-	BGA 21mm□ 538pins
KM2KSC15D00U	Gerda™-Cdash	ARM Cortex®-A9 Dual	2.5D	-	FullHD + WVGA	Analog, Digital	-	2ch	Dual	HiFiEP	H.264	S-Flash, eMMC, DDR3	S-Flash	-	USB2.0	-	-	BGA 21mm□ 538pins
KM2KSC15D0GU	Gerda™-Cdash	ARM Cortex®-A9 Dual	2.5D	-	FullHD + WVGA	Analog, Digital	-	2ch	Dual	HiFiEP	H.264	S-Flash, eMMC, DDR3	eMMC	-	USB2.0	-	-	BGA 21mm□ 538pins
KM2KSC15E0GU	Gerda™-Cdash	ARM Cortex®-A9 Dual	2.5D, 3D	ES2.0	FullHD + WVGA	Analog, Digital	-	2ch	Dual	HiFiEP	H.264	S-Flash, eMMC, DDR3	eMMC	-	USB2.0	2ch	-	BGA 21mm□ 538pins
KM2KSC15010U	Gerda™-Cdash	ARM Cortex®-A9 Dual	2.5D, 3D	ES2.0	FullHD + WVGA	Analog, Digital	-	2ch	Dual	HiFiEP	H.264	S-Flash, eMMC, DDR3	S-Flash	-	USB2.0, USB3.0	2ch	-	BGA 21mm□ 538pins
KM2KSC15003U	Gerda™-Cdash	ARM Cortex®-A9 Dual	2.5D, 3D	ES2.0	FullHD + WVGA	Analog, Digital	-	2ch	Dual	HiFiEP	H.264	S-Flash, eMMC, DDR3	S-Flash	-	USB2.0, USB3.0	2ch	√	BGA 21mm□ 538pins

音响用统合 LSI

本系列 LSI 是应对多通道映像信号处理的统合 LSI。搭载复数 DSP 核心可进行丰富多彩的音响输出与输入，并内建 32 位元 CPU 处理器，实现单一晶片即可进行各种主要音响处理与控制连接装置的音响功能。

应用例

- 车载用音响系统
- 组合扬声器系统：3D 环绕立体声
- 拾音麦克风阵列：声音**UI**（用户界面）、声音检测

• KM103S Audio 系列

KM103S Audio 系统是应对多通道映像信号处理的统合 LSI。

特点

- 通过丰富的输入与输出接口（模拟，数位）以及取样率转换器 (ASRC) 支援多种频道。
- 复数 DSP 核心实现更丰富的音讯处理，可搭载原创功能。
- 内建 CPU 以及各种外围设备（GPIO/ 通用型之輸入輸出，SPI/ 串行外设接口，I2C/IC 间音频，UART/ 通用非同步收发传输器），可操控周边系统或作为辅助处理器使用。

• KM103S0G0Q

· 双路音频 DSP
· Cadence® Tensilica® HiFi EP Single
· TDM, I2S, PCM, SPDIF / 时分复用 · IC 间音频 · 脉冲编码调制 · SPDIF
· 音频模数转换器 / 数字模拟转换器
· 取样率转换器
· AM32 (32 位 CPU) Single
· GPIO, SPI, UART, I2C / 通用型之輸入輸出 · 串行外设接口 · 通用非同步收发传输器 · IC 间音频
· HQFP216 24 毫米 x24 毫米

• KM103S0H0Q

· Audio DSP Dual / 双路音频 DSP
· Cadence® Tensilica® HiFi EP Single
· TDM, I2S, PCM, SPDIF / 时分复用 · IC 间音频 · 脉冲编码调制 · SPDIF
· 音频模数转换器 / 数字模拟转换器
· 取样率转换器
· AM32 (32 位 CPU) Single
· GPIO, SPI, UART, I2C / 通用型之輸入輸出 · 串行外设接口 · 通用非同步收发传输器 · IC 间音频
· LQFP128 18 毫米 x18 毫米

Part No.	CPU	DSP	Digital input	Analog input	Digital output	Analog output	Sampling Rate Converter	Peripherals	Package
KM103S0G0Q	AM32 (original CPU) Single	ACORE (original DSP) Dual Tensilica® HiFi EP Single	TDM, I2S, PCM, SPDIF	ADC 6ch	TDM, I2S, PCM, SPDIF	DAC 6ch	2ch x 9	GPIO, SPI, UART, I2C	HQFP216 24x24
KM103S0H0Q	AM32 (original CPU) Single	ACORE (original DSP) Dual Tensilica® HiFi EP Single	TDM, I2S, PCM, SPDIF	ADC 6ch	TDM, I2S, PCM, SPDIF	DAC 6ch	2ch x 9	GPIO, SPI, UART, I2C	LQFP128 18x18

nuvoTon

Battery and Analog Solutions

模拟 IC

电池监视 IC
马达驱动 IC
DC/DC 开关稳压器
LED 驱动器
RF 和微波
LCD电源管理
显示驱动IC

模拟IC

电池监视IC

我司电池监控 IC 系列通过搭载实时测量电芯电压，温度，电流的高精度 ADC，提高电池利用效率。
使用 SOI (Silicon on Insulator) 耐高压工艺，实现了多串数的对应以及信赖性的提升。
我司电池监控 IC 系列种类丰富可以适应客户的各种电池应用需求。

• KA49 系列

锂离子电池因为其高能量密度比、记忆效果较小等优点，不仅在电动车领域， 同时在电池驱动器及光伏等储能领域得到广泛应用
为了更加安全、高效的使用锂电池， 需要对内置在电池中的充电电芯进行管理及控制。
我们的电池监控 IC* 内置了最大支持 22 串的高精度 ADC 转换器， 可对电池电压 / 充放电电流进行精确的计算，同时也可均衡电芯电压等。
此监视 IC 也具备过压、过电流等保护功能，大大提高了电池应用的安全性。
另外，我们也可提供支持 BMS 通讯功能的 MCU 和模拟 IC 及功率器件等。

特征

- 最大支持 22 串电芯的监控
- 采用 SOI(Silicon on Insulator) 工艺，性能更佳
  1. 可以在全温度范围内提供高精度的测量
  2. 抗噪效果更好，大幅提高安全性
  3. 无寄生电路派生的误动作（Latch-up free）
- 芯片高度集成电芯的计量及控制功能，可大幅减少 BOM 器件数，PCB 面积和低成本化。

• KA49503A

KA49503A 是搭载了高精度 ADC，可以准确测量电芯电压 / 电流的电池监控 IC。
MCU 可以通过 SPI 通讯，读取 KA49503A 的电芯电压，电流以及状态值。
KA49503 适合最大 16 串电芯，电源电压 85Vmax 的应用（电瓶车，UPS 等）

• KA49511A

KA49511A 是支持最大 10 串电芯，电源电压 45Vmax 的多串应用的电池监控 IC。
KA49511A 适用于电瓶车，UPS 和电动工具等。
内嵌了外围电路需要的电源，和 MCU 组合可以方便的实现电池均衡开关控制和充放电管理

• KA49517A

KA49517A 是搭载了高精度 ADC，可以准确测量电芯电压 / 电流的电池监控 IC。
MCU 可以通过 SPI 通讯，读取 KA49517A 的电芯电压，电流以及状态值。
而且为了提高 IC 的可靠性，加入了 FET OFF 的异常检测功能，加强了安全检测功能
KA49517 适合最大 17 串电芯，电源电压 85Vmax 的应用（大型电瓶车，UPS，储能系统等）

- **KA49522A**

KA49522A 是搭载了高精度 ADC，可以准确测量电芯电压 / 电流的电池监控 IC。
MCU 可以通过 SPI 通讯，读取 KA49522A 的电芯电压，电流以及状态值。
而且为了提高 IC 的可靠性，加入了 FET OFF 的异常检测功能，加强了安全检测功能
KA49522 适合最大 22 串电芯，电源电压 110Vmax 的应用（大型电瓶车，UPS，储能系统等）

- **KA49625A**

KA49625A 是一款 20 通道多节堆叠的电池管理 IC，可测量高达 100V。
因此，它非常适合需要高压监控的应用，例如 UPS、ESS。
该 IC 的另一个重要特性是支持功能安全标准要求的冗余设计。
电池电压由两个独立的系统测量，即高精度测量系统和故障监测系统。

Part No.	Description	Operating Voltage [Min] (V)	Operating Voltage [Max] (V)	Operating Temperature [Min] (°C)	Operating Temperature [Max] (°C)	Max Series Cells	Cell Voltage Measurement Accuracy (mV)	Monitoring Function	Daisy Chain Connection	High-Side NchFET	Protective Function	Package
KA49503A	BM-IC for Industrial	12.5	85	-40	105	16	±10	Voltage/ Current/ Temperature	N/A	Available	Over and Under Voltage/ Over Current in Charge/ Over Current in Discharge/ Short Circuit in Discharge	LQFP080-P-1414FZ
KA49511A	BM-IC for Industrial	12.5	45	-40	105	10	±10	Voltage	N/A	Available	Over Voltage	TQFP056-P-1010
KA49517A	BM-IC for Industrial	12.5	85	-40	105	17	±10	Voltage/ Current/ Temperature	N/A	Available	Over and Under Voltage/ Over Current in Charge/ Over Current in Discharge/ Short Circuit in Discharge.Diagnostic function check	HQFP064-P-1010DZ
KA49522A	BM-IC for Industrial	12.5	110	-40	85	22	±10	Voltage/ Current/ Temperature	N/A	Available	Over and Under Voltage/ Over Current in Charge/ Over Current in Discharge/ Short Circuit in Discharge.Diagnostic function check	HQFP064-P-1010DZ
KA49625A	BM-IC for Industrial	12.5	100	-40	105	20	±10	Voltage	15	-	Over and Under Voltage Detection / Diagnostic function check	LQFP080-P-1414F

马达驱动IC

我司的马达驱动 IC 系列产品，可以最大限度使用马达性能，使用自动相位控制（APC；Auto Phase Control）帮助减少马达开发时间实现平台化开发。
我司的马达驱动 IC 系列产品可以适用于搭载 APC 的单项直流马达和三相直流马达。

• 一相无刷直流 KA44 系列

本产品主要是，白色家电和美容家电，打印机等 OA 机器，基站和服务器等工业设备，散热风扇用单相直流无刷马达驱动 IC。
目前，马达模组设计时不同应用产生不同感应电动势导致电流相位偏差，转动效率低下。
本产品采用自动相位控制，实时检测马达电流保持转动效率处于合适，提高效率降低损耗。

特征

1. 自动相位控制
2. 内置软开关功能和保护电路，精简外围电路实现小型化

• KA44168A

KA44168A 是内嵌 PWM Soft-Switching 功能，通过在相位切换时马达电流的软切换，实现了单相马达静音高效驱动的 IC。
搭载了实现马达电流相位的自动检出 / 自动调整的 APC（Auto Phase Control）功能，减少了外围器件数量，而且不依赖于马达种类和使用环境，实现静音高效的驱动。
适用于输入电压 12/24V 的家电，OA 机器，FA 机器

• KA44169A

KA44169A 是内嵌 PWM Soft-Switching 功能，通过在相位切换时马达电流的软切换，实现了单相马达静音高效驱动的 IC。
搭载了实现马达电流相位的自动检出 / 自动调整的 APC（Auto Phase Control）功能减少了外围器件数量，而且不依赖于马达种类和使用环境，实现静音高效的驱动。
KA44169A 可以通过直接 PWM 输入进行速度控制选择
适用于输入电压 12/24V 的家电，OA 机器，FA 机器

• KA44169AB

KA44169AB 是内嵌 PWM Soft-Switching 功能，通过在相位切换时马达电流的软切换，实现了单相马达静音高效驱动的 IC。
搭载了实现马达电流相位的自动检出 / 自动调整的 APC（Auto Phase Control）功能减少了外围器件数量，而且不依赖于马达种类和使用环境，实现静音高效的驱动。
KA44169AB 可以通过 DC 输入进行速度控制选择
适用于输入电压 12/24V 的家电，OA 机器，FA 机器

• KA44170A

KA44170A 是内嵌 PWM Soft-Switching 功能，通过在相位切换时马达电流的软切换，实现了单相马达静音高效驱动的 IC。
搭载了实现马达电流相位的自动检出 / 自动调整的 APC（Auto Phase Control）功能减少了外围器件数量，而且不依赖于马达种类和使用环境，实现静音高效的驱动。
KA44170A 可以通过直接 PWM 输入进行速度控制选择
适用于输入电压 12/24V 的家电，OA 机器，FA 机器 (高转速 FAN 马达 ~15k)

• KA44171A

KA44171A 是内嵌 PWM Soft-Switching 功能，通过在相位切换时马达电流的软切换，实现了单相马达静音高效驱动的 IC。
搭载了对应 PWM，DC 输入的 Pre-Driver，而且工作电压范围大，可以适合多种功率 MOS。
KA44171A 搭载了优化高转速马达性能的 "APRaS (Advanced Phase and Rapid Soft switching)" 功能
适用于输入电压 12/24V 以及 48V 的数据中心，基站等工业机器，以及 FA 机器（高转速 FAN 马达 ~100krpm）

Part No.	Control Circuit	Interface	Protection Circuit	Operating Voltage [VCC] (V)	Rated Voltage (V)	Rated Current (A)	RDS(on) (Ω)	Operating Temperature [Min] (°C)	Operating Temperature [Max] (°C)	Package
KA44168A	PWM (Voltage Drive)		Low Voltage, Heat, Locking, Overcurrent	12V/24V System	35	1	1.6	-40	90	MSOP008-P-0150XZL
KA44169A	PWM (Voltage Drive)	PWM	Low Voltage, Heat, Locking, Overcurrent	12V/24V System	36	1.4 (1sec)	1.6	-40	90	MSOP014-P-0225XZL
KA44169AB	PWM (Voltage Drive)	DC	Low Voltage, Heat, Locking, Overcurrent	12V/24V System	36	1.4 (1sec)	1.6	-40	105	MSOP014-P-0225XZL
KA44170A	PWM (Voltage Drive)	PWM	Low Voltage, Heat, Locking, Overcurrent	12V/24V System	36	1.6 (1sec)	1.25	-40	105	MSOP014-P-0225XZL
KA44171A	PWM (Voltage Drive)	PWM/DC	Low Voltage, Heat, Locking, Overcurrent	12V/24V/48V System	39	Pre-Dr	Pre-Dr	-40	95	HQFN020-A-0303XZL

• 三相无刷直流 KA44 系列

我们三相直流马达驱动 IC 在通过 1 个霍尔传感器产生正弦波 PWM 驱动的同时实现了马达模组的省部件、小型化及静音化。
拥有冷却风扇用马达 IC 的优良性能，同样也适用于空调、风扇等家电产品的马达驱动。

特征

通过单霍尔器件检测转子位置并采用正弦波 PWM 控制方式，通过自动相位控制实现下记效果

1. 实现马达模组低成本，小型化
2. 不需要霍尔器件的安装调试，缩短马达开发周期
3. 实现低噪音，低震动马达驱动
4. 通过待机功能降低待机损耗，实现高效率驱动

• KA44143A

KA44143A 是搭载了实现马达电流相位的自动检出 / 自动调整的 APC（Auto Phase Control）功能，适用于各种 3 相无刷风扇电机的驱动 IC。
通过单霍尔器件检测转子位置并采用正弦波 PWM 控制方式，实现模组低成本，小型化，低噪音，低震动而且低功耗的驱动。
适用于输入电压 12/24V 的家电，OA 机器，FA 机器

Part No.	Control Circuit	Interface	Protection Circuit	Operating Voltage [VCC] (V)	Rated Voltage (V)	Rated Current (A)	RDS(on) (Ω)	Operating Temperature [Min] (°C)	Operating Temperature [Max] (°C)	Package
KA44143A	PWM (Voltage Drive)	DC/PWM	Low Voltage, Heat, Overvoltage, Locking, Overcurrent	12V/24V System	28	2.2	1	-40	95	HQFN024-A-0404AZ

• 步进电机驱动IC

新唐科技的步进电机驱动 IC 通过微步和混合衰减控制实现高效率和低噪声，最适合用于打印机、FA、监控摄像头和其他家用电器。

特征

1. 通过低导通电阻功率晶体管实现简单的热设计和小型基板
2. 通过低 EMI 电源驱动降低开关噪声
3. 通过过流保护、温度保护和低电源电压实现安全性能
4. 通过微步和混合衰减控制实现低振动和低功耗

• KA44180A

KA44180A 是一款双通道 H 桥驱动 IC. 双极步进电机可由单个驱动 IC 控制 .
界面为 “并联中频” ，可选择两相励磁、半步励磁、1-2 相励磁、W1-2 相励磁。

Part No.	Control Circuit	Interface	Protection Circuit	Operating Voltage [VCC] (V)	Rated Voltage (V)	Rated Current (A)	RDS(on) (Ω)	Operating Temperature [Min] (°C)	Operating Temperature [Max] (°C)	Package
KA44180A	PWM (Current Drive)	Parallel	Low Voltage, Heat, Overcurrent, thermal	12V/24V System	37	1.5	0.95	-20	85	SSOP032-P-0300D

• 镜头电机驱动IC

新唐科技的镜头电机驱动 IC 适用于具有变焦、对焦控制和光圈控制的产品。

特征

1. 这款单 IC 集成了变焦、对焦和光圈功能，显著缩小了封装尺寸和减少了外部零件。
   因此，该 IC 实现了安装板的小型化，从而减小了相机尺寸。

2. 采用微步驱动，内置变焦和对焦校正电路，实现超低噪音。
   CAP（ Correction Amplitude & Phase: 幅度和相位校正 ）功能
   - 幅度校正电路： 通过每相的电流调整来纠正每个线圈发生的反电动势不平衡。
   - 相位校正电路： 以 0.7 度的调整分辨率校正线圈之间的相位差 .

3. 光圈驱动采用 PWM 驱动，实现低功耗。
   内置可变截止频率的 LPF 和 PID 控制电路周围的降噪电路显著降低噪声对各种虹膜机械特性的影响

• KA41908B

KA41908B 是一款用于监控摄像头、网络摄像头的镜头电机驱动 IC，具有光圈控制功能。
电压驱动系统和 CAP 功能实现超低噪声微步驱动

Part No.	Control Circuit	Interface	Protection Circuit	Operating Voltage [VCC] (V)	Rated Voltage (V)	Rated Current (A)	RDS(on) (Ω)	Operating Temperature [Min] (°C)	Operating Temperature [Max] (°C)	Package
KA41908B	PWM (Voltage Drive)	Serial data communication for 4 line both sides	Low Voltage, Heat	3.3V/5V System	4.0/6.0	0.25	Max2.5 / Max5.0	-20	85	QFN 44L

DC / DC开关稳压器

开关稳压器是能够以最高效率将输入直流电压转换为其他输出直流电压的方法。
新唐科技的 DC/DC 开关稳压器以领先业界的电源转换效率来实现低功耗的系统。

• 降压开关稳压器

降压开关稳压器的功能是有效的将输入电压转换为较低的输出电压，以适合用作各种电子系统的电源。
新唐科技的降压开关稳压器通过运用宽范围的工作电压和业界领先独特控制的负载瞬态响应，以提供稳定的输出电压，为各种电子系统的稳定运行做出了贡献。

特征

- 支持宽广的工作电压范围（输入电压 4.5V 至 80V，输出电压 2.5V 至 18V）
- 采用独创的控制方法，提供业界一流的高速负载瞬态响应

• KA83111UA

KA83111UA 是一颗单通道降压同步整流 DC-DC 稳压器 , 内置大功率 MOSFET 以及采用磁滞控制系统。
宽范围的工作电压和低电流消耗模式是适用于车载电子系统和电池应用电子系统。

Part No.	Channel number	MOSFET	Rectification system	Operating Voltage (V)	Rated voltage (V)	Output Voltage (V)	Max. Output Current (A)	SW Frequency (MHz)	Control System	Control Mode	5V Regulator	Protection Circuit	Operating Temperature (°C)	Package Type
KA83111UA	1	H/L-side Built in	Synchronous	4.5~80	90	2.5~18	1	0.25~1	Hysteretic	Skip mode or FCCM	Built in	UVLO,TSD, XOVP, PGOOD,OCP, SCP	-40~125	HSOP20

LED 驱动器

新唐科技的 LED 驱动器 IC 系列拥有独特的 LED 驱动技术，从消费类产品的 RGB 灯光到汽车大灯控制器。
新唐科技的 LED 驱动器 IC 帮助客户设计 各种 LED 灯光效果。

• RGB LED 驱动器

新唐科技的 RGB LED 驱动器 IC 产品阵容包括灯串式 LED 驱动器和矩阵 LED 驱动器，采用了多达 256 细分的电流控制以及独特的调光控制技术来实现高质量的灯光效果以及更平滑的转换。
新唐科技的 LED 驱动器 IC 提供了音乐同步和视觉持久性（POV）等功能，可适用于各种 LED 应用，包括移动，可穿戴，视听设备，家用电器等。
Nuvoton RGB LED 驱动器能满足客户设备的通信接口和减少电源系统布线的需求， 并实现最佳 LED 灯光效果。

特征

- 新的 LED 驱动器电路可呈现超过 6700 万 RGB 色彩
- 通过独特的照明控制方法自由地控制亮度
- 通过内置 LDO 减少电源线接线或线束 / 连接器

• KA32180A

KA32180A 是一个 16 点（4 x 4）矩阵 LED 驱动器。它最多可以驱动 4 个 RGB LED。

特征

- 4 x 4 LED 矩阵驱动器（可驱动的 LED 总数 = 16）
- LED 可选择的最大电流
- LED 音乐同步功能
- I2C 接口（标准模式，快速模式和快速模式增强版）
  （4 个从站地址可选）
- 16 引脚塑料四方扁平无铅封装（QFN 型）

• KA32182A

KA32182A 是一个 36 点（6 x 6）矩阵 LED 驱动器。它最多可以驱动 12 个 RGB LED。

特征

- 6 x 6 LED 矩阵驱动器（可驱动的 LED 总数 = 36）
- LED 可选择的最大电流
- LED 音乐同步功能
- I²C 接口（标准模式，快速模式和快速模式增强版）
  （4 个从站地址可选）
- 20 引脚塑料四方扁平无铅封装（QFN 型）

• KA32183A

KA32183A 是一个 81 点（9 x 9）矩阵 LED 驱动器。它最多可以驱动 27 个 RGB LED。

特征

- 9 x 9 LED 矩阵驱动器（可驱动的 LED 总数 = 81）
- LED 可选择的最大电流
- LED 音乐同步功能
- I²C 接口（标准模式，快速模式和快速模式增强版）
  （4 个从站地址可选）
- 24 引脚热缩小尺寸封装（SSOP 型）

• KA37775A

KA37775A 是一款用于 LED 恒流驱动 IC

该 IC 配备 24 路恒流输出端子、SPI、I²C 接口，可通过寄存器设置对每路进行 PWM 调制进行调光。此外，R、G、B 组电流可以通过寄存器设置进行调整。

最大电流值可以通过外部电阻进行调整。

特征

- 内置 LDO，节省 PCB 空间和功耗
- 控制简单，降低软件控制复杂度
- 提高对外界干扰的免疫

• KA37777A

KA37777A 是一款用于 LED 恒流驱动 IC

该 IC 配备 9 路恒流输出端子，SPI 接口，可通过寄存器设置对每路进行 PWM 调制进行调光。此外，R、G、B 组电流可通过寄存器设置进行调整。

最大电流值可以通过外部电阻进行调整。

特征

- 内置 LDO，节省 PCB 空间和功耗
- 控制简单，降低软件控制复杂度
- 提高对外界干扰的免疫

Part No.	Series	Matrix LEDs	number of channels	Number of PWM step	Number of Current step	constant current control	Host I/F	Operating Voltage [Min] (V)	Operating Voltage [Max] (V)	Package
KA32180A	LED Matrix Driver	4 x 4	-	256	16	-	I2C	3.1	5.5	QFN016-P-0304C
KA32182A	LED Matrix Driver	6 x 6	-	256	16	-	I2C	3.1	5.5	QFN020-P-0304C
KA32183A	LED Matrix Driver	9 x 9	-	256	16	-	I2C	3.1	5.5	SSOP024-P-0300F
KA37775A	Constant Current LED Driver	-	24	256	-	Available	SPI/I2C	4.5	28	HQFP048-P-0707E
KA37777A	Constant Current LED Driver	-	9	256	-	Available	SPI	4.5	28	SSOP020-P-0225FZ

RF和微波

新唐科技的 RF 产品通过使用高性能 CMOS 工艺技术及电路设计技术，帮助客户开发高性能，小型化和低功耗的模块设计。
新唐科技的产品系列支持采用 2.4GHz / 5GHz 无线局域网的小型便携式设备及以电池供电的消费类应用。

• RF模拟前端IC

新唐科技提供的 RF 前端 IC 极适用于定制第三方产品的模块化设计。
LNA（低噪声放大器）的产品具备高线性度及低噪声系数的特性，不会使接收端的输入信号失真。
此外，TX 模式，RX 模式 / 高增益和 RX 模式 / 低增益之间的切换可借由内置开关和逻辑电路进行控制。 新唐科技也提供用于无线 LAN，蓝牙和通用中功率无线设备的单极三投（SP3T）RF 开关 IC。 此 RF 开关 IC 可通过低电压控制实行关断模式，以阻止来自其他高功率无线设备的干扰。

特征

- 具备高线性度的 LNA，确保接收端的输入信号不会失真
- TX 模式，RX 模式 / 高增益，RX 模式 / 低增益可通过内置逻辑电路进行控制切换
- 可通过关断模式来阻止干扰（需搭配 RF 开关 IC）

• KA29222K

KA29222K 是一款 5GHz 频段用且内置集成单极二投（SPDT）开关的 LNA（低噪声放大器）IC。
TX 模式，RX 模式 / 高增益，RX 模式 / 低增益之间的切换可借由集成 CMOS 逻辑电路进行控制。
它使用带有焊料凸点的小尺寸芯片封装以实现小型化。

此 IC 极适用于 5GHz 的无线 LAN。

• KA29223K

KA29223K 是一款 2.4GHz 频段用且内置集成单极三投（SP3T）开关的 LNA（低噪声放大器）IC。
TX 模式，RX 模式 / 高增益，RX 模式 / 低增益之间的切换可借由集成 CMOS 逻辑电路进行控制。
它使用带有焊料凸点的小尺寸芯片封装以实现小型化。

此 IC 极适用于 2.4GHz 的无线 LAN 及蓝牙应用。

• KA29242K

KA29242K 是一款用于无线 LAN，蓝牙和通用中功率无线设备的单极三投（SP3T）开关 IC。
可通过低电压进行开关控制，并且可借由关断模式来阻止来自其他大功率无线设备的干扰波。
此外，它也使用带有焊料凸點的小尺寸芯片封装以實現小型化。

KA29242K 极适用于 2.4GHz 频段无线 LAN，蓝牙及通用中功率无线设备。

Part No.	Application	Frequency [GHz]	Operating Voltage [Min] (V)	Operating Voltage [Max] (V)	Gani1 (High Gain Mode) [dB]	Gani2 (Low Gain Mode) [dB]	IIP3 (Gain1) [dBm]	NF (High Gain Mode) [dB]	Insertion Loss (SW) [dB]	ICC(Typ) [mA]	Package
KA29222K	LNA+SW(SPDT)-IC for WLAN	WLAN5GHz Band	3	3.6	11	-8.5	8	2.5	0.7	12	Chip Size Package with solder bump (11Pin, Size : 0.711 x 0.923 mm2 x 0.3 t mm)
KA29223K	LNA+SW(SP3T)-IC for WLAN	WLAN2.4GHz Band	3	3.6	12.5	-8	4	1.7	0.6	11.5	Chip Size Package with solder bump (11Pin, Size : 0.711 x 0.923 mm2 x 0.3 t mm)
KA29242K	SW(SP3T)-IC for WLAN etc.	WLAN2.4GHz Band	2.7	5	-	-	-	-	0.5	0.012	Chip Size Package with solder bump (10Pin, Size : 0.807 x 0.601 mm2 x 0.3 t mm)

LCD电源管理

新唐的 LCD 电源管理可提供 TFT - LCD 驱动所需的全部电源，有助于减少外围部件， 适用于空间受限应用所需的紧凑设计。
新唐的 LCD 电源管理满足您对工业和消费类应用的 LCD 设计要求。

• LCD电源IC

新唐的 LCD 电源 IC 是液晶显示器用的电源 IC，提供时序控制器、源极驱动器和栅极驱动器所需的电源。
可以通过 I²C 接口设置命令，并可以通过调整内置电源来配合各种尺寸的显示屏。

特征

- 为时序控制器、源极驱动器和栅极驱动器、VCOM 生成各种电源
- Gamma 电压校正控制（断点电压控制，Gamma 移位）

• KN32094AA-BJ

KN32094AA-BJ 集成了一个降压 DCDC 转换器、一个升压 DCDC 转换器和电荷泵电路，可以产生驱动 LCD 显示器所需的全部电压。
此外，由于在内置的非易失性存储器中（MTP 多次可编程）储存了各种电源设置，IC 可以无指令启动。
KN32094AA-BJ 是平板电脑和笔记本电脑等消费类应用以及其他医疗和工业应用的理想选择。

Part No.	Serial I/F	Operating Voltage (V)	Output Logic Voltage [DVDD] (V)	Output Source Voltage [AVDD] (V)	Output Gate Voltage [VGH/VGL] (V)	VCOM Volatage (V)	Gamma Correction (ch)	Internal Memory	Operating Temperature [Min] (°C)	Operating Temperature [Max] (°C)	Package
KN32094AA-BJ	I²C	2.7V to 3.6V	1.2	8.5V to 15V	15V to 32V (VGH)-4V to 10V (VGL)	VREFH×0.2705 to VREFH×0.5524 (VREFH=AVDD-0.5V)	18	MTP (1Kbit×2)	-40	95	HQFP100-P-1414C

显示驱动IC

新唐科技的显示驱动 IC 可根据显示尺寸、分辨率和清晰度进行驱动。
它有助于降低 EMI 噪声、功耗和电路板面积。
新唐科技的显示驱动 IC 可应用于各种工业和消费类应用中的显示器 .

• 源极驱动IC

新唐科技的源极驱动 IC 配备高速接口，可进行差分传输。
它有助于降低通信过程中的 EMI 噪声，最适合驱动高分辨率显示器。
此外，它还具有切换输出数量的功能，可以根据显示器的分辨率进行驱动

• KM838996

KM838996 支持 10 位高分辨率数据。
适用于游戏和医疗应用的高清大型显示器。

特征

- 1056 / 1050 / 1026 / 966 / 960 / 900 / 864 / 768 输出通道
- 接口 : mini-LVDS™, 数据结构 : 10-bit/8pairs
- 22 个伽玛校正输入

Part No.	Digital Operating Voltage (V)	Analog Operating Voltage (V)	Gamma Correction Voltage (V)	Analog Output Voltage (V)	Operating Frequency [Max] (MHz)	Operating Temperature [Min] (°C)	Operating Temperature [Max] (°C)	Package
KM838996	2.3V to 3.6V	AVDD : 11.0V to 15.5V	Vrf1 to Vrf11 : 0.4*AVDD to AVDD-0.2 Vrf12 to Vrf22 : AVSS+0.2 0.6*AVDD	AVSS+0.2 to AVDD-0.2	310 MHz	-20	85	COF

nuvoTon

IoT with Security

微控制器

8位 KM101 微控制器
32位 KM103 微控制器
Arm Cortex-M7 微控制器

通信与接口 LSI

NFC 标签芯片

微控制器

8位 KM101 微控制器

Nuvoton Japan 的 KM101 家族，搭载 Nuvoton Japan 独创的 8-bit CPU 内核，具有低功耗，高效率指令系统，高性能等特点，其性能可与其他公司的 16-bit CPU 内核的产品相媲美。

• 超低功耗 KM101L 系列

KM101L 系列 MCU 搭载本公司独创的 8-bit CPU 内核，是一款同时具有高处理能力及低功耗性能的 MCU。该 MCU 采用 ReRAM，从而实现了高速 , 低功耗的擦写及大容量数据领域，非常适用于利用电池供电的间歇运行系统。

• KM101LR03D/KM101LR04D/KM101LR05D

特长

- 内置独创的 8-bit CPU 内核，具有超低功耗的特性
- 内置 ReRAM，与传统的闪存相比，具有高速 / 低功耗读写的能力
- 低功耗设计，可同时实现高性能与低功耗

附加价值

- 通过实现系统的低功耗，从而延长电池的使用寿命
- 使用可以以字节为单位擦写的 ReRAM 存储器，从而减小 EEPROM
- 高速擦写特性可帮助缩短生产周期

Part No.	Applications	ROM Size (KB)	ROM Type	RAM Size (KB)	Pin Count	Max Operating Frequency (MHz)	8-bit Timer (channel)	16-bit Timer (channel)	PWM (channel)	3-Phase PWM Output Function (set)	Serial I/F [Clock Synchronous] (channel)	Serial I/F [UART] (channel)	Serial I/F [I2C] (channel)	Serial I/F [LIN] (channel)	Serial I/F [CAN] (channel)	Serial I/F [Remarks] (channel)	DMA (channel)	ADC [10bit] (channel)	ADC [12bit] (channel)	ADC [Remarks]	DAC [8bit] (channel)	Op Amp	Min Instruction Exec. Time / Voltage (ns/V)	Max Operating Voltage (V)	Min Operating Voltage (V)	Number of I/O Ports (channel)	Interrupt Sources (channel)	External Interrupt (channel)	LCD [SEG] (channel)	LCD [COM] (channel)	External Bus Expansion	RTC	High Speed On Chip Oscillator Frequency (MHz)	Low Speed On Chip Oscillator Frequency (kHz)	Power On Reset	Low Voltage Detection	Watch Dog Timer (channel)	Package
KM101LR03D	LCD Driver Built-in Type	64	ReRAM	4	48	10	6	3	6		4	2	2			Sync./ UART x2,Sync./ I2C x2	1		4	12bit x 1unit			100 / 1.8 to 3.6	3.6	1.1	38	39	8	21	4		Yes	10,8	40	Yes	Yes	1	TQFP 048-P -0707
KM101LR04D	LCD Driver Built-in Type	64	ReRAM	4	64	10	6	3	6		4	2	2			Sync./ UART x2,Sync./ I2C x2	1		6	12bit x 1unit			100 / 1.8 to 3.6	3.6	1.1	53	39	8	31	4		Yes	10,8	40	Yes	Yes	1	TQFP 064-P -1010
KM101LR05D	LCD Driver Built-in Type	64	ReRAM	4	80	10	6	3	6		4	2	2			Sync./ UART x2,Sync./ I2C x2	1		8	12bit x 1unit			100 / 1.8 to 3.6	3.6	1.1	69	39	8	43 (39)	4 (8)		Yes	10,8	40	Yes	Yes	1	TQFP 080-P -1212

• 低功耗 KM101E 系列

KM101E 系列是通用的 8 位闪存微控制器，内置 NTCJ 独创的 8-bit CPU 内核 “AM13E”
并具有简单而紧凑的外围功能，例如 LCD 驱动器等。丰富的产品组合中包含不同的引脚数以及不同的内存容量，适应客户各种系统的需要。

Part No.	Applications	ROM Size (KB)	ROM Type	RAM Size (KB)	Pin Count	Max Operating Frequency (MHz)	8-bit Timer (channel)	16-bit Timer (channel)	PWM (channel)	3-Phase PWM Output Function (set)	Serial I/F [Clock Synchronous] (channel)	Serial I/F [UART] (channel)	Serial I/F [I2C] (channel)	Serial I/F [LIN] (channel)	Serial I/F [CAN] (channel)	Serial I/F [Remarks] (channel)	DMA (channel)	ADC [10bit] (channel)	ADC [12bit] (channel)	ADC [Remarks]	DAC [8bit] (channel)	Op Amp	Min Instruction Exec. Time / Voltage (ns/V)	Max Operating Voltage (V)	Min Operating Voltage (V)	Number of I/O Ports (channel)	Interrupt Sources (channel)	External Interrupt (channel)	LCD [SEG] (channel)	LCD [COM] (channel)	External Bus Expansion	RTC	High Speed On Chip Oscillator Frequency (MHz)	Low Speed On Chip Oscillator Frequency (kHz)	Power On Reset	Low Voltage Detection	Watch Dog Timer (channel)	Package
KM101EF50D	LCD Driver Built-in Type	64	FLASH	4	64	20	7	2	5	1	4	3	1			Sync./ UART x3,Sync./ I2C x1		12		10bit x 1unit			50 / 2.7 to 5.5	5.5	1.8	55	30	5	24	8			20,16		Yes	Yes	1	LQFP 064-P -1414
KM101EF51A	ADC Built-in Type	32	FLASH	1	44,48	20	5	2	3	1	3	2	1			Sync./ UART x2,Sync./ I2C x1		12		10bit x 1unit			50 / 2.7 to 5.5	5.5	1.8	36	25	5					20,16	30	Yes	Yes	2	QFP044-P-1010, TQFP048-P-0707
KM101EF52A	ADC Built-in Type	32	FLASH	1	32	20	5	2	3	1	3	2	1			Sync./ UART x2,Sync./ I2C x1		8		10bit x 1unit			50 / 2.7 to 5.5	5.5	1.8	24	22	5					20,16	30	Yes	Yes	2	TQFP 032-P -0707
KM101EF56K	LCD Driver Built-in Type	256	FLASH	10	100	20	7	3	5	1	5	4	1			Sync./ UART x4,Sync./ I2C x1	1	24		10bit x 1unit	4		50 / 2.7 to 5.5	5.5	1.8	90	36	5	55	4			20,16	30	Yes	Yes	2	QFP 100-P -1818
KM101EF57G	LCD Driver Built-in Type	128	FLASH	6	80	20	7	3	5	1	4	3	1			Sync./ UART x3,Sync./ I2C x1	1	16		10bit x 1unit	2		50 / 2.7 to 5.5	5.5	1.8	70	34	5	41	4			20,16	30	Yes	Yes	2	LQFP080-P-1414, TQFP080-P-1212
KM101EF59R	Voice Control	928	FLASH	8	100	20	7	3	6		5	4	2			Sync./ UART x4,Sync./ I2C x1,I2C x1	2	12		10bit x 1unit	4		50 / 2.2 to 5.5	5.5	2.2	85	36	5	55	4	Yes				Yes		1	QFP 100-P -1818
KM101EF76K	LCD Driver Built-in Type	256	FLASH	10	128	20	7	3	5	1	5	4	1			Sync./ UART x4,Sync./ I2C x1	1	24		10bit x 1unit	4		50 / 2.7 to 5.5	5.5	1.8	104	36	5	55	4			20,16	30	Yes	Yes	2	LQFP 128-P-1818
KM101EF77G	Audio Amplifier Built-in Type	128	FLASH	2	48	10	5	2	4		3	2	1			Sync./ UART x2,Sync./ I2C x1		9		10bit x 1unit	2		62.5 / 2.7 to 3.6	3.6	1.8	35	24	5					16	5	Yes		2	HQFP 048-P-0707
KM101EF79G	ADC Built-in Type	128	FLASH	2	48	8	5	1	3		1	1				Sync./ UART x1		6		10bit x 1unit	2		125 / 2.0 to 3.6	3.6	1.8	26	17	5					16	5	Yes	Yes	2	HQFP 048-P-0707
KM101EF93G	ADC Built-in Type	128	FLASH	6	80	20	6	2	4		4	3	1			Sync./ UART x3,Sync./ I2C x1		12		10bit x 1unit			50 / 4.0 to 5.5	5.5	4	72	25	5					16		Yes		1	LQFP 080-P-1414
KM101EF94F	LCD Driver Built-in Type	96	FLASH	6	100	20	7	3	5	1	6	5	1			Sync./ UART x5,Sync./ I2C x1	1	19		10bit x 1unit			50 / 2.7 to 5.5	5.5	1.8	86	35	5	55	8			16	32.5	Yes	Yes	2	LQFP 100-P-1414

Part No.	Applications	ROM Size (KB)	ROM Type	RAM Size (KB)	Pin Count	Max Operating Frequency (MHz)	8-bit Timer (channel)	16-bit Timer (channel)	PWM (channel)	3-Phase PWM Output Function (set)	Serial I/F [Clock Synchronous] (channel)	Serial I/F [UART] (channel)	Serial I/F [I2C] (channel)	Serial I/F [LIN] (channel)	Serial I/F [CAN] (channel)	Serial I/F [Remarks] (channel)	DMA (channel)	ADC [10bit] (channel)	ADC [12bit] (channel)	ADC [Remarks]	DAC [8bit] (channel)	Op Amp	Min Instruction Exec. Time / Voltage (ns/V)	Max Operating Voltage (V)	Min Operating Voltage (V)	Number of I/O Ports (channel)	Interrupt Sources (channel)	External Interrupt (channel)	LCD [SEG] (channel)	LCD [COM] (channel)	External Bus Expansion	RTC	High Speed On Chip Oscillator Frequency (MHz)	Low Speed On Chip Oscillator Frequency (kHz)	Power On Reset	Low Voltage Detection	Watch Dog Timer (channel)	Package
KM101EFA1A	ADC Built-in Type	32	FLASH	1	44	20	5	2	3	1	3	2	1			Sync./ UART x2,Sync./ I2C x1		12		10bit x 1unit			50 / 4.0 to 5.5	5.5	4	36	27	5					16		Yes		1	QFP 044-P -1010
KM101EFA2D	ADC Built-in Type	64	FLASH	4	64	20	6	3	4	1	4	3	1			Sync./ UART x3,Sync./ I2C x1		12		10bit x 1unit			50 / 4.0 to 5.5	5.5	4	55	32	5					16		Yes		1	LQFP064 -P-1414, TQFP064- P-1010
KM101EFA2G	ADC Built-in Type	128	FLASH	6	64	20	6	3	4	1	4	3	1			Sync./ UART x3,Sync./ I2C x1		12		10bit x 1unit			50 / 4.0 to 5.5	5.5	4	55	32	5					16		Yes		1	LQFP064 -P-1414, TQFP064 -P-1010
KM101EFA3D	ADC Built-in Type	64	FLASH	4	80	20	6	3	4	1	4	3	1			Sync./ UART x3,Sync./ I2C x1		16		10bit x 1unit			50 / 4.0 to 5.5	5.5	4	70	28	5					16		Yes		1	LQFP080- P-1414, TQFP080 -P-1212
KM101EFA3G	ADC Built-in Type	128	FLASH	6	80	20	6	3	4	1	4	3	1			Sync./ UART x3,Sync./ I2C x1		16		10bit x 1unit			50 / 4.0 to 5.5	5.5	4	70	28	5					16		Yes		1	LQFP080 -P-1414, TQFP080 -P-1212 (ES Available)
KM101EFA8D	Touch Key Control	64	FLASH	4	80	20	6	3	4	1	4	3	1			Sync./ UART x3,Sync./ I2C x1		16		10bit x 1unit			50 / 4.0 to 5.5	5.5	4	70	36	5					16		Yes		1	LQFP080 -P-1414, TQFP080 -P-1212
KM101EFC3D	Automotive Network	76	FLASH	6	64	20	7	3	5	1	4	3	1	1		Sync./ UART x3,Sync./ I2C x1	1	12		10bit x 1unit			50 / 2.7 to 5.5	5.5	1.8	54	33	5	32	4			20,16	30	Yes	Yes	2	LQFP064 -P-1414, TQFP064 -P-1010
KM101EFC3G	Automotive Network	128	FLASH	6	64	20	7	3	5	1	4	3	1	1		Sync./ UART x3,Sync./ I2C x1	1	12		10bit x 1unit			50 / 2.7 to 5.5	5.5	1.8	54	33	5	32	4			20,16	30	Yes	Yes	2	LQFP064 -P-1414, TQFP064 -P-1010
KM101EFC3Z	Automotive Network	128	FLASH	10	64	20	7	3	5	1	4	3	1	1		Sync./ UART x3,Sync./ I2C x1	1	12		10bit x 1unit			50 / 2.7 to 5.5	5.5	1.8	54	33	5	32	4			20,16	30	Yes	Yes	2	LQFP064 -P-1414, TQFP064 -P-1010
KM101EFD3G	Automotive Network	128	FLASH	10	64	20	7	3	5	1	4	3	1	1	1	Sync./ UART x3,Sync./ I2C x1	1	12		10bit x 1unit			50 / 2.7 to 5.5	5.5	1.8	54	33	5	32	4			20,16	30	Yes	Yes	2	LQFP064 -P-1414, TQFP064 -P-1010
KM101EFG0D	ADC Built-in Type	64	FLASH	4	56	20	6	3	4	1	4	3	1			Sync./ UART x3,Sync./ I2C x1		12		10bit x 1unit			50 / 4.0 to 5.5	5.5	4	48	26	4					16		Yes		1	TQFP056 -P-1010
KM101EFG0G	ADC Built-in Type	128	FLASH	6	56	20	6	3	4	1	4	3	1			Sync./ UART x3,Sync./ I2C x1		12		10bit x 1unit			50 / 4.0 to 5.5	5.5	4	48	26	4					16		Yes		1	TQFP056 -P-1010
KM101EFG1H	ADC Built-in Type	164	FLASH	8	80	20	7	2	5		4	3	2			Sync./ UART x3,Sync./ I2C x1,I2C x1	1	12		10bit x 1unit			50 / 2.7 to 5.5	5.5	1.8	70	29	6							Yes	Yes	1	LQFP080 -P-1414

32位 KM103 微控制器

KM103 系列搭载 NTCJ 独创的 32 位 CPU 内核 “ AM32R” ，是一款同时具有高处理能力及低功耗性能的 MCU，适用于电机控制。
该 MCU 内置高性能 PWM，高速 AD 以及反馈控制辅助功能，可实现高效率高性能的电机控制。

• KM103H 逆变器控制 系列

KM103H 系列搭载独创的 32-bit CPU 内核，是一款同时具有高处理能力及低功耗性能的 MCU。
该系列内置高性能 PWM，高速 AD 变换器，变频器 / 转换器专用计算器 (3 相 -2 相转换器，三角函数，平方根，n 阶计算），闪存专用缓存器，可实现高效率高性能的控制。

• KM103S 逆变器控制 系列

KM103S 系列 MCU 搭载独创的 32-bit CPU 内核，是一款同时具有高处理能力及低功耗性能的 MCU。
该系列 MCU 内置互补 3 相 PWM 电路，高速 A/D 变换器，扩张演算器（高速乘除算，逆变器控制专用演算），以及高精度震荡电路，时钟监视等机能，可比较容易实现安全性规格（IEC60730）的要求，可用于构建高效率高性能的逆变器控制系统。

Part No.	Applications	ROM Size (KB)	ROM Type	RAM Size (KB)	Pin Count	Max Operating Frequency (MHz)	8-bit Timer (channel)	16-bit Timer (channel)	PWM (channel)	3-Phase PWM Output Function (Set)	Serial I/F [Clock Synchronous] (channel)	Serial I/F [UART] (channel)	Serial I/F [I2C] (channel)	Serial I/F [LIN] (channel)	Serial I/F [CAN] (channel)	Serial I/F [Remarks]	DMA (channel)	ADC [10bit] (channel)	ADC [12bit] (channel)	ADC [Remarks]	Op Amp	Comparator	Min Instruction Exec. Time / Voltage (ns/V)	Max Operating Voltage (V)	Min Operating Voltage (V)	Number of I/O Ports (channel)	Interrupt Sources (channel)	External Interrupt (channel)	High Speed On Chip Oscillator Frequency (MHz)	Power On Reset	Low Voltage Detection	Watch Dog Timer (channel)	Package
KM103HFB5K	Invertor & Converter control	264	FLASH	20	80	80	12	6	6	2	4	4	1	1		Sync./UART x2,Sync./UART/I2C x1, Sync./UART/LIN x1	2		16	12bit x 3units	2	4	12.5 / 2.9 to 5.5	5.5	2.9	54	104	10	10	Yes	Yes	2	LQFP080-P-1414, TQFP080-P-1212
KM103HFD8N	Invertor & Converter control	512	FLASH	64	144	120	20	4	10	3	7	7	1	1		Sync./UART x5,Sync./UART/I2C x1, Sync./UART/LIN x1	3		28	12bit x 3units	3	6	8.33 / 2.9 to 5.5	5.5	2.9	124	163	16	10	Yes	Yes	2	LQFP144-P-2020
KM103SFE4K	Invertor motor control	256	FLASH	8	80	60	12	6	4	2	3	3				Sync./UART x3		16		10bit x 3units			16.7 / 3.6 to 5.5	5.5	3.6	61	56	9		Yes		1	LQFP080-P-1414
KM103SFJ9D	Invertor motor control	64	FLASH	4	44	60	8	3	2	1	2	2				Sync./UART x2		8	8	10bit x 1unit, 12bit x 1unit			16.7 / 3.7 to 5.5	5.5	3.7	30	38	8	10	Yes		1	QFP044-P-1010
KM103SFK0K	Invertor motor control	256	FLASH	8	100	60	12	7	7	2	4	3	1			Sync./UART x3,Sync./I2C x1		20		10bit x 3units			16.7 / 3.7 to 5.5	5.5	3.7	84	70	16	10	Yes		1	QFP100-P-1818
KM103SFK1K	Invertor motor control	256	FLASH	8	80	60	12	7	5	2	4	3	1			Sync./UART x3,Sync./I2C x1		20		10bit x 3units			16.7 / 3.7 to 5.5	5.5	3.7	64	66	12	10	Yes		1	LQFP080-P-1414, TQFP080-P-1212

Arm Cortex-M7 微控制器

KM1M7 系列 MCU 搭载 Arm® Cortex® M7 内核，是一款同时具有高处理能力及低功耗性能的 MCU
该 MCU 内置适用于马达 / 电源控制的高性能 PWM，高速高精度 AD 以及反馈控制辅助功能，可用于构建高效率 / 低功耗 / 小型化的电源管理系统。

• KM1M7 数字电源 系列

KM1M7 系列 MCU 搭载 Arm® Cortex® M7 内核，是一款同时具有高处理能力及低功耗性能的 MCU。
该 MCU 内置适用于，电源控制的高速，高精度模拟模块以及辅助功能，并采用具有 RWW（Read while Write）功能的存储器，使 EEPROM 的读写更有效。可用于构建高效率 / 低功耗 / 小型化的电源管理系统。

• KM1M7 逆变器控制 系列

KM1M7 系列 MCU 搭载 Arm® Cortex® M7 内核，是一款同时具有高处理能力及低功耗性能的 MCU。
该 MCU 内置适用于马达控制的高速，高精度模拟模块以及辅助功能，并采用具有 RWW（Read while Write）功能的存储器，使 EEPROM 的读写更有效。可用于构建高效率 / 低功耗 / 小型化的电源管理系统。

Part No.	Applications	ROM Size (KB)	ROM Type	RAM Size (KB)	Pin Count	Max Operating Frequency (MHz)	16-bit Timer (channel)	PWM (channel)	3-Phase PWM Output Function [use 3 PWMs] (Set)	Serial I/F [Clock Synchronous] (channel)	Serial I/F [UART] (channel)	Serial I/F [I2C] (channel)	Serial I/F [LIN] (channel)	Serial I/F [CAN] (channel)	Serial I/F [Remarks]	DMA (channel)	ADC [12bit] (channel)	Op amp	Comparator	Min Instruction Exec. Time / Voltage (ns/V)	Max Operating Voltage (V)	Min Operating Voltage (V)	Number of I/O Ports (channel)	External Interrupt (channel)	High Speed On Chip Oscillator Frequency (MHz)	Power On Reset	Low Voltage Detection	Watch Dog Timer (channel)	Other Special Function	Package
KM1M7AF02N	Invertor & Converter control	512	FLASH	128	100	160	20	10	3	7	6	2	1		Sync/I2C x1,Sync/UART/LIN x1,Sync/UART x2, Sync/SPI/UART x2, Sync/SPI/UART/I2C x1	16	23	5	10	6.25 / 3.5 to 5.5	5.5	3.5	82	18	10	Yes	Yes	1	Double-precision floating-point arithmetic, ROM/RAM-ECC,Clock monitor,High resolution PWM	HQFP100 -P-1414
KM1M7AF52N	Invertor & Converter control	512	FLASH	128	100	160	20	10	3	7	6	2	1	2	Sync/I2C x1,Sync/UART/LIN x1,Sync/UART x2, Sync/SPI/UART x2, Sync/SPI/UART/I2C x1	16	23	5	10	6.25 / 3.5 to 5.5	5.5	3.5	82	18	10	Yes	Yes	1	Double-precision floating-point arithmetic, ROM/RAM-ECC,Clock monitor,High resolution PWM	HQFP100 -P-1414
KM1M7BF02N	Invertor & Converter control	512	FLASH	128	100	160	20	10	3	7	6	2	1		Sync/I2C x1,Sync/UART/LIN x1,Sync/UART x2, Sync/SPI/UART x2, Sync/SPI/UART/I2C x1	16	23	5	10	6.25 / 3.5 to 5.5	5.5	3.5	82	18	10	Yes	Yes	1	Double-precision floating-point arithmetic, ROM/RAM-ECC,Clock monitor,High resolution PWM	HQFP100 -P-1414

通信与接口LSI

NFC标签芯片

这是用于支持近场通信（NFC）的非接触式 IC 标签的 LSI。
您只需将配备 NFC 的终端（例如智能手机）放在靠近 IC 标签的地方，就可以通过与 IC 标签进行通信来读取和写入数据。
通过将该 LSI 安装在各种设备上，可以实现这些设备与配备了 NFC 的终端之间的通信。
另外，由于该 LSI 配备有用于保存数据的存储器，因此它也可以用作独立的无线 IC 标签。
它可以使用从配备有 NFC 的终端以无线方式提供的电源进行操作，即使关闭了配备此 LSI 的电视机的电源，也可以进行通信。
使用独立的无线 IC 标签，您可以实现不需要电源的系统配置。

特点

- 不论智能手机 / 平板电脑的型号如何，通信都不会延迟
- 即使关闭设备电源也可以进行通讯。
- 保护重要数据免遭掠夺
- 通过 NFC 触摸与设备的微型计算机进行高速通讯

• KM63Y 系列

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Part No.	Host Interface	Operating Voltage (V)	Built-in FeRAM (Nonvolatile Memory)	RF interface (Auto selection)	NDEF Communication(NFC Forum Tag)	RF communication stop function when the power OFF	Encryption	User memory (FeRAM)	Power current	Package Type
KM63Y1212	N/A		Rewriting ：100 million times , Data retention period ：10 years	ISO/IEC14443 TypeB JISX6319-4 (FeliCa) *1	Type4B Tag(NFC-B) Type3 Tag(NFC-F)	N/A	AES128	432Bytes (FeRAM)	-	HSON008 -A-0202
KM63Y1213	I2C (to 100Kbps)	1.7 to 3.6	Rewriting ：100 million times , Data retention period ：10 years	ISO/IEC14443 TypeB JISX6319-4 (FeliCa) *1	Type4B Tag(NFC-B) Type3 Tag(NFC-F)	N/A	AES128	432Bytes (FeRAM)	to 500uA	HSON008 -A-0202
KM63Y1221	I2C (to 400Kbps)	1.7 to 3.6	Rewriting ：100 million times , Data retention period ：10 years	ISO/IEC14443 Type A ISO/IEC14443 Type B JISX6319-4 (FeliCa) *1	Type4A,/4B(NFC-A,B) Type3 Tag(NFC-F)	Available	N/A (Password)	960Byte (FeRAM)	to 500uA	HSON008 -A-0202

Foundry Service

晶圆代工简介

新唐科技晶圆代工 (源自于华邦电子二厂) 座落于台湾新竹科学园区，自 1992 年起，拥有超过 25 年晶圆代工服务之专业经验。
6 英寸晶圆厂，月产能 45,000 片，1.0um 至 0.35um 节点技术，提供成熟与特殊工艺。
至今已量产超过近千万片晶圆，并实现 MCU、Speech、Audio、Power (LDO、DC/DC、AC/DC、PMIC、BMIC、Driver IC)、LCD/LED Driver、LED BL/ Lighting Driver、Motor Driver、TVS、MOSFET、Sensor (Hall、Light、Pressure、Thermal、Gas、Humidity) 与 LED BL/ Lighting Driver ... 等产品。

FAB
6 inch (class-1)

Capacity
45k pcs/M

Technology
1.0um to 0.35um

Specialty Process

在生产与服务方面，我们提供稳定的产能、最佳的质量与准确的交期。
我们拥有丰富的软硬设备与技术服务资源，并取得多项国际认证档，以 More-Than-Foundry 的思考，提供卓越的代工服务，满足您于市场上的需求，新唐科技晶圆代工立志成为客户最佳的合作伙伴。

Best R&D team
TD, ESD, Model, PDK

Strong technical support team
CE, PIE, Product

Professional analysis machine
TLP, EMMI, OBRICH, FIB, SEM, TEM

International certifications LAB
IATF 16949, QC 080000, ISO 14001, ISO 45001

新唐科技晶圆代工傾聽客戶心聲，時時刻刻為客戶著想，提供客戶更多增值服務。
1. 4 合 1 光罩服務 (MLM)、全光罩 + 插花技术
2. 完整的设计文件支持 (PDK)
3. 全方位的支援團隊
4. 客制化服务平台
5. 第三方服务

工艺简介

新唐科技晶圆代工致力于自有技术开发，提供 0.35um 以上的多样化成熟与特殊工艺，包括电源管理 (Power Management)、高压 (High Voltage)、超高压 (Ultra High Voltage)、逻辑 (Logic)、信号混合 (Mixed Signal)、光罩唯独 (Mask ROM/Flat Cell)、嵌入式内存 (embedded Non-Volatile Memory) 与客制化制程 (TVS、MOSFET、Sensor、GaN power)。

Specialty Process

CMOS IC
Power (HV/ BCD/ UHV/ HVIC), Logic/ eNVM, Mixed signal, Mask ROM/ Flat cell

Sensor
Thermal, Pressure, Light, Gas, Humidity

Discrete
TVS, MOSFET

GaN-on-Si Power
Depletion HEMT/MIS-HEMT

CMOS IC 工艺，我们专注于电源管理及超高压技术之研发，提供客户更具竞争力的新世代电源技术平台与服务价值。
第二代 0.5 微米 UHV 工艺进入稳定及高质量的生产阶段，提供多元化器件，扩大 AC/DC 电源应用领域。
第二代 0.5 微米 HVIC 工艺完成开发并进入试产阶段，提供制程精简、高可靠度器件，将超高压技术拓展至马达驱动应用领域。
第二代 0.35 微米 BCD 完成开发并进入试产阶段，提供超低导通阻、制程精简及多元化器件，满足客户于 DC/DC 电源管理应用领域。

Process	Technology	Process Feature
Power (HV/ BCD/ UHV/ HVIC)	0.35um	5/12~40V BCD G2 (NEW)
		5/12~40V BCD (with OTP)
		5/60~80V BCD
		5/16/60~120V BCD (Developing)
	0.5um	7/9/30/40/150~700V UHV G2 (NEW)
		5/20/120~600V HVIC G2 (NEW)
		5/7/9/25V HVCMOS
	0.6um	5/12/16/20V BCD
		5/25/40V BCD
		5/25/40/120/500V UHV
	0.8um	5/40V HVCMOS (N-sub)
	1.0um	5/40V HVCMOS (P-epi)
Logic / Mixed Mode	0.35um	1.5/3.3/5V Logic 3.3/5V Logic 5V Logic
	0.45um	3.3V Logic 5V Logic
	0.5um	1.5V Logic 3.3V Logic 5V Logic
Logic / Mixed Mode + eNVM	0.35um	3.3/5V Logic (YMC_eNVM)
Mask ROM / Flat Cell	0.32um	1.5/3.3/5V embedded 0.32 flat cell
	0.37um	5V embedded 0.37 flat cell

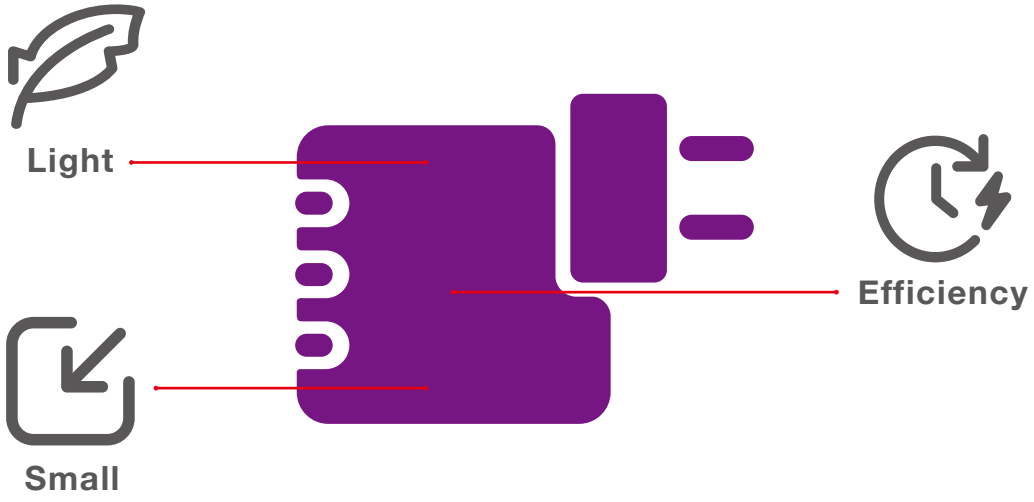
Contact us: Foundry@nuvoton.com

特殊工艺简介

在功率转换领域中，超过 70 年市场的硅 (Si) 技术发展已经到达尽头，而氮化镓 (GaN) 技术因材料特性优异造就了高效能、高开关速度、轻量化、小尺寸及低成本等卓越优势。随着氮化镓技术不断发展和成本降低，它将会改变整个产业带来光明前景。
新唐科技晶圆代工历经多年的研发，6 inch GaN-on-Si Power device - Depletion HEMT 已成功开发与导入量产，并持续开发下世代技术，提供更小面积与器件性能，满足客户产品之竞争力。

GaN-on-Si Power Platform

650V G1 Depletion MIS-HEMT
650V G1 Depletion HEMT



万物联网新世代将以〝人〞为本，对于外部世界探索，人类透过身体各个器官功能回传至大脑，而电子产品将透过传感器转换讯息至处理器，新唐科技晶圆代工专注传感器技术开发，支持客制化代工服务。

Sensor Process

Light Sensor
环境光感测、距离感测

Pressure Sensor
气压高度计、胎压量测表压

Thermal Sensor
生物检测、耳温量测、红外线热影像

Gas Sensor
酒精检测、CO2 检测、有毒气体 (VOC)

Humidity Sensor
湿度检测、智能家庭应用

nuvoTon
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