

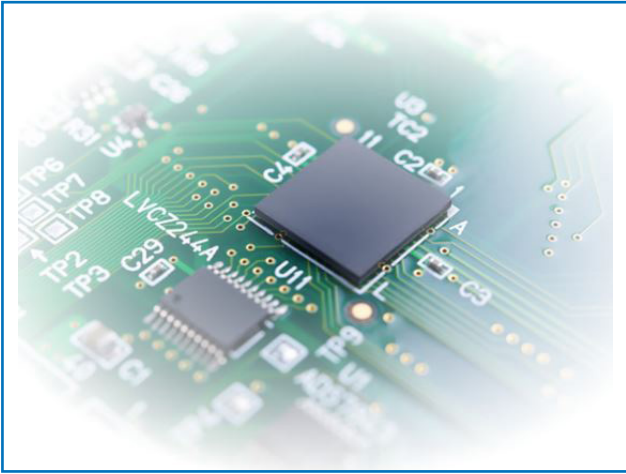


Bring innovative solutions to the semiconductor industry

nuvoTon

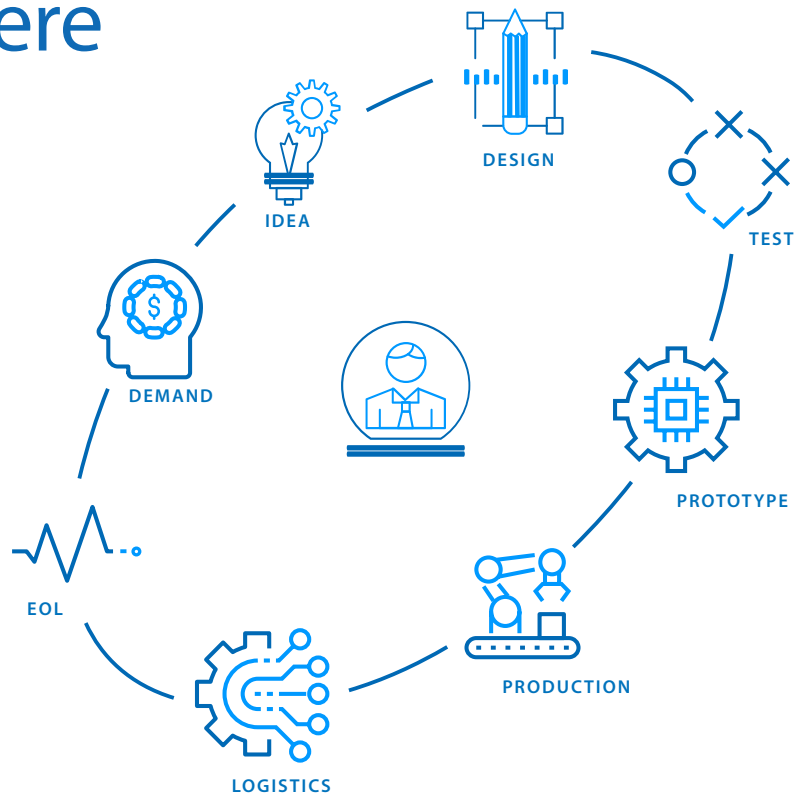


Nuvoton & Alcom



Nuvoton focuses on the developments of microcontroller, microprocessor, smart home, cloud security, battery monitoring, component, visual sensing and IoT with security ICs and has strong market share in Industrial, Automotive, Communication, Consumer and Computer markets. Nuvoton owns wafer fabs equipped with diversified processing technologies to provide professional wafer foundry services. Nuvoton provides products with a high performance/cost ratio for its customers by leveraging flexible technology, advanced design capability, and integration of digital and analog technologies. Combine the Nuvoton products with our highly educated and experienced team of Alcom's engineers and let us guide you through your next project.

Co-creation starts here



Alcom considers everybody an indispensable added value in the collaborative chain with all of its partners.



Applications



AUDIO / VIDEO



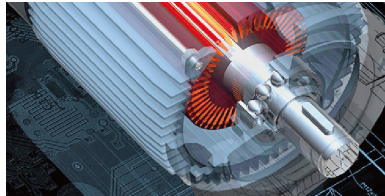
AUTOMOTIVE



COMPUTING



CONSUMER



INDUSTRIAL



IOT SECURITY



MEDICAL









PORTABLE DEVICES



SMART HOME APPLIANCES



NuMicro[®] MCU Cores

- 
Cortex[®] A35
 Industrial Control & HMI
 Machine Learning
 Edge Gateway
 New Energy
- 
Cortex[®] M23
 IoT Security
 Low Power
- 
Cortex[®] M4
 High Performance
 Security
 IoT
- 
Cortex[®] M0
 Comprehensive Platform
 Industrial Control
 Automotive
- 
Arm 9[™]
 Industrial Control
 HMI
 AIoT
- 
8051
 Low Power
 Industrial Control

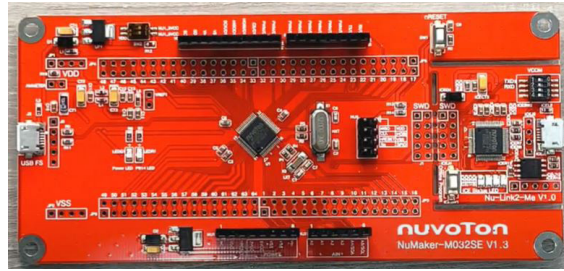


Product Overview

Microcontrollers

MCU and MPU platform

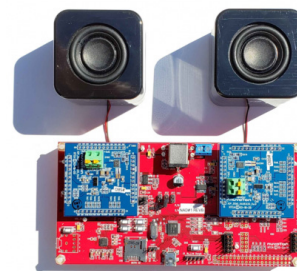
- NuMicro® MCU
- NuMicro® MCU
- NuMicro® IoT Platform



Smart Home Audio

Audio MCU and Management

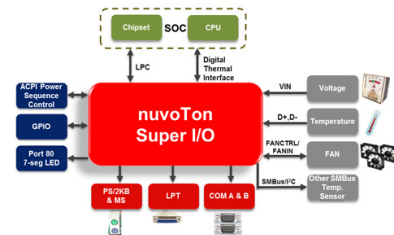
- Audio MCU/DSP with audio enhancement
- Audio component (Smart AMP, CODEC)
- NuSpeech / NuVoice / ChipCorder



Cloud Security

Computing Security

- Secure Embedded Controller and Super I/O
- Trust platform module (TPM)
- Server Baseboard management controller (BMC)



Smart Home Audio

Product Lines

Audio SoC

- ARM® Cortex®-M4
- ARM® Cortex®-M0
- Audio DSP

ISD ChipCorder

- Digital ChipCorder
- MLS ChipCorder

Audio Converter

- Audio CODEC
- Audio ADC/DAC
- Precision ADC
- Voiceband CODEC

Audio Amplifier

- Smart Amp
- Class-D
- Class-AB
- 2V_{rms} Line Driver

Audio Enhancement

- Audio Enhancement - MaxxAudio
- Audio Enhancement - Bongiovi

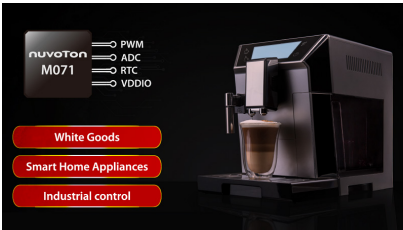


New product releases

IoT SECURITY MCU APPLIED ON THE MEDIA STREAMING DRM

IoT security has been one of the main issues in the IoT trend. And Nuvoton debuts the brand new NuMicro M2354 IoT security microcontroller series to inherit the security features of the NuMicro M2351 series that have been Arm PSA Certified™ Level 1, Level 2, and PSA Functional API certified. The M2354 series endows the microcontrollers used network-connected devices with the physical level (chip-level) security protection function.

Flash Memory/ SRAM (Kbytes)	Automotive AEC-Q100 Grade 1	
	Industrial CAN	Industrial LIN
32 / 4	M0A230C1ACU	M0A23EC1ACU
	M0A230C1AC	M0A23EC1AC
	M0A210C1AC	M0A21EC1AC
Package	SSOP20 (5.3 x 7.2 mm)	TSSOP28 (4.4 x 9.7 mm)

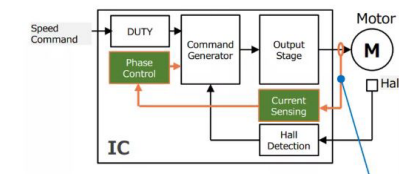


SMART HOME APPLIANCE MAIN CONTROL SOLUTION

The NuMicro® M071 series is a 32-bit microcontroller based on Arm® Cortex®-M0 core, with the hardware divider, targeted for smart home appliance applications. For the growing requirements of safety functions on the home appliance, the M071 series provides certified Software Test Library (STL) and an application note for IEC60730-1 Class B Annex H. This certified STL can significantly reduce the development time and efforts to pass IEC60730-1 Class B certification for home appliances.

LOW-POWER BLE 5.0 AND 2.4G DUAL-MODE MICROCONTROLLER

NuMicro® M031BT/M032BT series based on Arm® Cortex®-M0 core operating up to 72 MHz, with up to 512 KB Flash and 96 KB SRAM. In addition to the BLE 5.0 and 2.4GHz RF wireless connectivity, the NuMicro M031BT/M032BT series feature built-in rich peripherals and analog functions for applications that need advanced and precise control functions in industrial control applications that it also requires wireless connectivity for sensor hubs in rigid working environments.

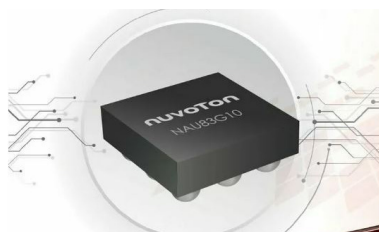


THREE AND SINGLE PHASE MOTOR DRIVER ICs

Nuvoton's motor driver IC incorporate APC (Auto Phase Control) technology to correct the phase delay by detecting motor current automatically. With APC, there is no need for adjustment of phase. It helps to eliminate phase delay due to motor variation or deterioration and therefore realize a high efficiency, reliability and safety motor system.

MUG51 8-BIT MCU LOW POWER MICROCONTROLLERS FOR BATTERY-FREE DEVICES

Nuvoton Technology, one of the world's leading suppliers of microcontrollers, has proudly launched its MUG51 8-bit MCU series of low power microcontrollers designed for battery-free devices. Nuvoton is committed to sustainable 8-bit MCU production and product longevity to ensure a reliable supply, giving customers the confidence to commit to long-term products, platforms, and projects.



NUVOTON AUDIO CONVERTERS & AMPLIFIERS

Nuvoton high performance audio converter product family consist of product series that covers end to end of the Audio Signal path in an audio system. The product family fulfill the design needs to translate between analog and digital domains. These series are designed as cost-effective solutions targeting consumer, telecommunication and automotive markets.

Alcom product portfolio

ELECTRONIC COMPONENT SOLUTIONS	WIRELESS EMBEDDED CONNECTIVITY & SENSORS	WIRELESS & INDUSTRIAL CONTROLS NETWORKING	DISPLAY & TOUCH
LED & SOLID STATE LIGHTING	POWER & EMC	RUGGED MOBILE COMPUTING	EMBEDDED SYSTEMS, AI & EDGE COMPUTING

<ul style="list-style-type: none"> • Semiconductors • Frequency & timing • Power management • Circuit protection & discretes • Magnetics • Passives & electromechanical • Connectors & cable assemblies • Photonics 	<ul style="list-style-type: none"> • Wireless modules • Antenna's • Sensors
<ul style="list-style-type: none"> • Routers & gateways • Wireless embedded computers • Industrial ethernet and IP variations • Wired & wireless machine networking • Antenna's • Device to cloud solutions • Connectivity & remote management services • Networking & connectivity 	<ul style="list-style-type: none"> • Displays • Touch screens • Optical bonding • Total display solutions
<ul style="list-style-type: none"> • LED light sources • Optics • Thermal management • Power & intelligent controls • LED modules 	<ul style="list-style-type: none"> • AC/DC power supplies • DC/DC converters • Power management modules • Wireless charging • E-mobility solutions • Transformers & power inductors • UPS • EMC filters
<ul style="list-style-type: none"> • Tablets • PDA's • Vehicle mount computers • Accessories 	<ul style="list-style-type: none"> • Computer-on-modules • Embedded boards • Industrial PC & automation • System integration

Bridging the gap between technology, people and business with a human interface.



