nuvoTon



Home Appliance Solution

Microcontroller • Microprocessor • Audio

More than just chips—
A complete system solution for smarter home appliances.

Your One-Stop Partner

Control, Display, Touch, and Sound

All seamlessly integrated within a complete ecosystem, from start to finish.

Nuvoton provides a comprehensive home appliance platform featuring scalable MCU and MPU families with support for LCDs, HMIs, and capacitive touch interfaces. Combined with our dedicated Audio portfolio, we enable smarter, more intuitive consumer products.

Rich Portfolio
Scalable from 8051 to Cortex®-M55

HMI Support
Segment LCDs to TFT-LCDs

Touch Key Ready
Water-proof-tested, with high noise immunity

Audio Fit
Audio pairs directly with MCU / MPU families

Design Faster • Connect Easier • Launch Smarter

Engineered to work as a single system throughout your design cycle.



Every Appliance Solution from One Partner

MCU, MPU and Audio, all you need for smarter home appliances.

Product Selection Guide

Microcontroller

8051 | Cortex® M0 | Cortex® M23 | Cortex® M33 | Cortex® M4 | Cortex® M55

ROM Size \ PIN	32	44	48	64	80	100	128
1M				White Goods: M5531 @ 200 MHz 3.3 H; M3333 / M3334 @ 180 MHz 3.3 H; M3351 @ 144 MHz 5			
512K			Healthcare / Aircare / Floorcare Appliances / Fan: M2003 up to 40 MHz 5				
256K			M3333 / M3334 @ 180 MHz 3.3 H; M3351 @ 144 MHz 5; M25x @ 48 MHz 5 T L LP				
128K	Small Home Appliances: M2003 up to 40 MHz 5		M2003 up to 40 MHz 5				
64K	MG51 @ 24 MHz 5; ML51 @ 24 MHz 5 3.3 LP						
32K	ML54 / ML56 @ 24 MHz 3.3 T L LP						

- T Touch Key
- L LCD
- LP Low Power
- H HMI
- 5 5V
- 3.3 3.3V

Microprocessor

Arm9™

Mainstream — N9H Series

- Arm926EJ-S™ @ 300 MHz
- 8 - 128 MB DDR
- LCD Resolution: 1024 x 768
- Linux & FreeRTOS

Cortex® A35

High-Ends — MA35 Series

- Dual Cortex®-A35 @ 800 MHz + Cortex®-M4 @ 180 MHz + TSI
- Built-in 128 - 512 MB DDR
- LCD Resolution: 1920 x 1080
- Linux & FreeRTOS

Audio Solution

ISD ChipCorder | Speech Controllers | Audio Amplifiers | Audio Converters | Audio SoCs | Audio DSP

Voice Input — I94124CDI

- Offline Voice Recognition

Listens for commands, then talks back.

Voice Output — I3810

- Built-in Amplifier
- High Quality

Plays hours of clear voice guidance.

Sound Alerts — Smart Buzzer (NSP2340BA24E)

- Clear Spoken Alerts

Turns a beep into a clear spoken alert.

Precision Sensing — NSC128L42

- Measure, Display & Speak

Measures precisely, then shows and tells the result.



From First Prototype to Full Production

The NuDeveloper Ecosystem

The Golden Three Steps, accelerated.

Development › Mass Production › Upgrade

Beyond a rich portfolio, our complete ecosystem simplifies and accelerates your entire development journey.

Start Fast

Boards, debuggers, and IDEs

Hardware

- NuMaker® Evaluation Board
- Debugger and Programmer

Software

IDE

- Keil-Supports all Cortex®-M FREE
- NuEclipse-8051 FREE
- VS Code-Cross Platform FREE
- IAR-Support

NuTools

- NuTool-PinView
- NuTool-PinConfigure
- NuTool-ClockConfigure
- LCDView

NuDeveloper Ecosystem

Skip the Setup Work

BSP, example code, and 3rd party support

Code

BSP

- Fit development platform
- Rich Drivers
- API compatible

Example Code

Third-Party

HMI: SEGGER, LVGL, SQUARELINE STUDIO

OS: RT-Thread, RTOS, Linux, Zephyr



Never Build Alone

Reference designs, expert support — whenever you need them.

About Nuvoton Ecosystem

Watch on YouTube

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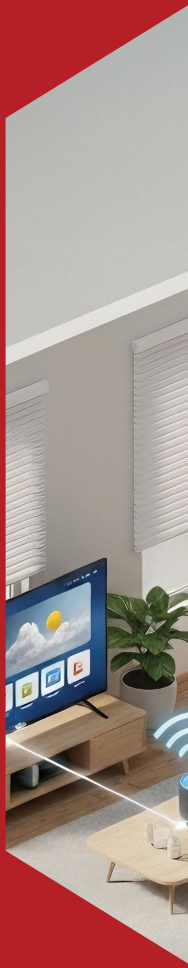
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