



MU03 – Long-Life Embedded Intel Elkhart Lake® NUC Board

With planned lifecycle through 2036, this small form factor NUC motherboard packs a lot into it's 110mmx110mm footprint. Featuring Intel Celeron® J6412 SoC, this board has 2 x 2.5GbE, 2 x HDMI and multiple M.2 expansion options. This board comes with Intel fTPM 2.0 or the option for Onboard NUVOTON TPM v.2.0. With the option to have onboard storage via eMMC, this versatile board is perfect for Digital Security/Surveillance, Retail (POS/Kiosk/ATM/Digital Signage) and Factory Automation.

SPECIFICATIONS

CPU	Intel® Celeron J6412, 2.00GHz – 2.60GHz Burst, 4-Core 4-Thread, 10W TDP
Memory Type	DDR4-3200 SO-DIMM
Memory Slots	1
Maximum Memory Supported	32GB
Watchdog Timer	Generates a system reset with internal timer for 1 min/s ~ 255 min/s
GPIO Interface	Onboard programmable 8-bit Digital I/O interface
Integrated Graphics	Intel® UHD Graphics for 10th Gen Intel® Processors
TPM	Intel fTPM 2.0 (PTT), Option Onboard NUVOTON TPM v2.0
Video	2 x HDMI, 1 x DP
LAN Ports	2 x Intel I225-V PCIe 2.5GbE
Serial ATA (SATA)	1 x SATA3 (6Gbps)
Extended Interface	M.2 M-Key (2260/2280, SATA & PCIe 3.0 x2 NVMe), 1 M.2 E-key (2230 USB and PCIe for WiFi)
Rear I/O	1 x RJ45 LAN (10/100/1000/2500), 2 x HDMI, 1 x USB 3.2 Gen 2, 1 x DP 1.4, 1 x +12V 2.5mm Diameter DC Power Jack
Front I/O	1 x Power Switch, 1 x USB 3.2 Gen 2, 1 x USB 2.0, 1 x 3.5mm Line-out & MIC-in Audio Jack, 2 x USB 3.2 Gen2 Type-C
Internal I/O	1 x SATA3, 1 x Serial (RS232/422/485), 1 x USB for 2 additional USB 2.0, 1 x 8-bit GPIO , 1 x 4-pin SMBUS , 1 x 4-pin Fan Header, 1 x AT/ATX Mode Jumper, 1 x 4-pin SATA Power Output (Male)
Audio	Realtek ALC888S HD Audio
Power Requirement	+12V DC input
Dimensions	101mm x 101mm
Operating Temperature	0 ~ 60C (32 ~ 140F)
Storage Temperature	-20 ~ 85 °C (-4 ~ 185 °F)

Relative Humidity

10% to 90% (non condensing)

OS Software Supported

Windows 10 64-bit, Windows 10 IoT Enterprise 64-bit, Windows 11 64-bit, Windows

11 IoT Enterprise 64-bit. Drivers available for many LINUX versions.

Global P/N / SKU

2809168

Ordering Options

2809168A - MU03-00 2809168B - MU03-03 with onboard 32GB eMMC 2809178C - MU03-07 with Nuvoton 2.0 TPM and onboard 32GB eMMC

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