NANO-6063

Intel® Atom® x6000E Series SoC based NANO-ITX Board with Triple Display, GbE LAN, USB 3.2 Gen 2, M.2, SATA III, Mini-PCIe, and mSATA
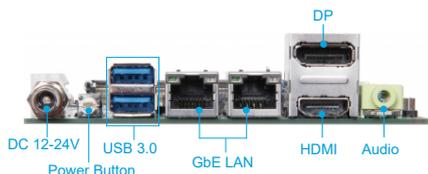

NANO-6063 is based on Intel® Atom® x6000E Series processors (formerly Elkhart Lake) integrated with Intel UHD Graphics. It supports industrial temperature range from -40°C to 85°C and can operate with TDP under 12W for fanless applications.

The support of four USB 3.2 Gen 2 ports ensures fast data transmission with low-power consumption. Dual Gigabit Ethernet LAN ports enable real-time computing and control capability. These integrated IoT features and flexible expandability make NANO-6063 suitable for industrial automation, robotic control, medical equipment, outdoor gateway and digital signage applications.

FEATURES

- Intel® Atom® x6000E SoC (Formerly Elkhart Lake)
- Delivers up to 32GB DDR4 3200 MT/s non-ECC SO-DIMM
- Triple Display by DP, HDMI and VGA
- Dual Gigabit Ethernet, high bandwidth I/O interface
- Supports Real-Time Performance: TSN, TCC
- Support a wide -40°C to 85°C industrial temperature range
- On board TPM 2.0

REAR/IO

DC 12-24V
Power Button
USB 3.0
GbE LAN
HDMI
DP
Audio

ORDERING GUIDE

AB1-3K29Z	(R).NANO-6063. Nano-ITX ESB. Intel® Elkhart Lake SoC.w/DDR4 SO-DIMM/VGA/HDMI/DP/ Dual GbE LAN/micro SD

GENERAL

Processor	- Intel® Atom® Dual/Quad-core x6000E Series SoC (up to 12W) - Supports time sensitive networking (TSN) capability, and Intel® Turbo Boost Hyper-Threading, Virtualization, Thermal Monitoring, Trusted Execution, Speed Step, Time Coordinated Computing (TCC) (depends on CPU SKUs)
BIOS	AMI UEFI BIOS
Memory	DDR4 3200 MT/s Non-ECC SO-DIMM up to 32GB
Storage Devices	- 1x SATA III port - 1x mSATA socket (choose either mSATA or mini-PCIe by BIOS) - 1x Micro-SD socket
Watchdog Timer	Programmable by embedded controller
Hardware Monitoring	System monitor (Voltage, Fan Speed and Temperature)

I/O INTERFACE

Expansion Interface	- 1x M.2 Type E socket - 1x full size mini-PCIe socket (choose either mSATA or mini-PCIe by BIOS
Audio	- High Definition Audio integrated in Intel® SoC - Realtek ALC897 HDA codec - Audio jack on rear I/O with Line-out and on board pin header with Line in, Line-out, and Mic-in
Ethernet	- Intel® I225 GbE controller and MaxLinear GPY215 GbE PHY - Dual RJ45 connectors on rear I/O with two LED indicators
Serial Port	1x RS-232/422/485 on board connector (selected by BIOS)
USB	- 2x USB 3.2 Gen 2 ports on rear I/O (10Gbps) - 2x USB 3.2 Gen 2 ports on board with header (10Gbps)
GPIO	8-bit configurable controlled by embedded controller
Others	TPM 2.0 on board

DISPLAY

Graphic Controller	Intel® UHD Graphics
Display Interface	- 1x HDMI port on rear I/O, up to 4K resolution - 1x DP port on rear I/O, up to 4K resolution - 1x VGA on board connector

Mechanical & Environment

Dimension	120mm(L) x 120mm(W); 4.72"(L) x 4.72"(W)
Power Supply	DC 12V input
Environment	- Operation Temperature: -40°C~85°C - Storage Temperature: -40°C~85°C - Relative Humidity: 5%~95%, non-condensing

Microsoft® Windows® Embedded Partner | RoHS | EC | SATA 3.0 | AMI BIOS | 1 COM | Fanless | TPM | 2 GbE | Wide Temperature | Mini-PCIe | DP

Last updated: September 9, 2022