



INDUSTRIAL EDGE COMPUTING



BPC

Embedded Box PC



LYNX Series, Ultra Compact IoT Gateway

- Ultra Small Form Factor (palm size)
- From **100x 40x 92** (mm) / 100 x 63 x 92 (mm)
- Intel Celeron N3350 (**Amston Lake coming soon Q2/Q3**)
- Basic I/O Selection, cost effective
- Extra I/O Options for Vertical Segments
- Easy Mounting and installation (Wall Mount/Din-Rail support)
- **Ready for Alleantia IoT 4.0 Edge SW and Microsoft Azure Cloud**



LYNX-612E

IoT Gateway in industrial automation environment

[View Product](#)



LYNX-612D

PoE Gateway with Microsoft IoT edge certification

[View Product](#)



LYNX-612G

IoT Gateway with enriched I/Os for expansion

[View Product](#)



LYNX-612B

Harsh environment edge controller

[View Product](#)



LYNX-612A

Connect security with Intelligent video analytics

[View Product](#)



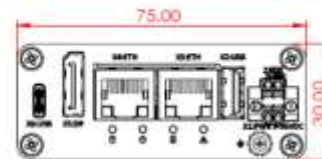
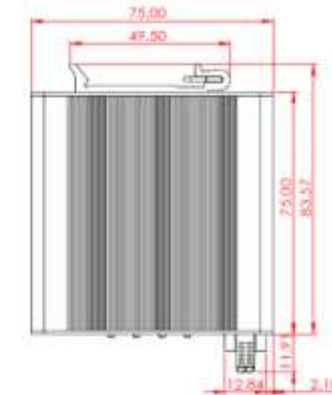
LYNX-6110

The base model suitable for edge computing

[View Product](#)

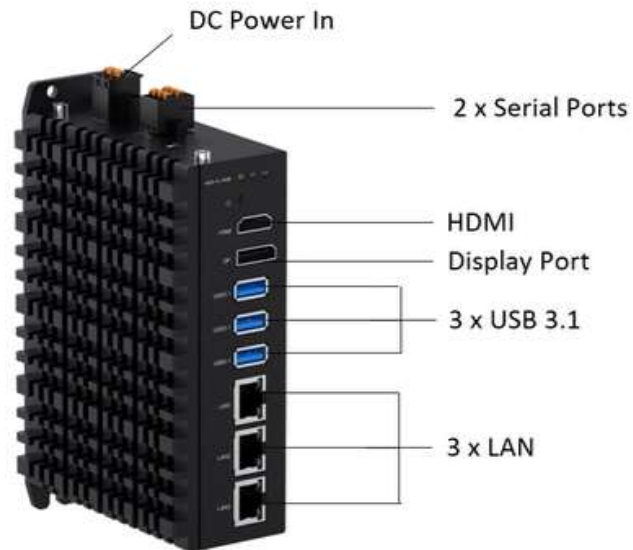
MIWA Ultra Compact AI Gateway

- Alder Lake-N series X & N SKU CPU , Fanless
- Tiny system IP30 size in 7.5cm x 7.5cm x 3cm
- Ready config LPDDR5 8GB/16GB (option) and eMMC 64G/128G(option)
- 2x 2.5 GbE LAN (Intel® i226-IT)
- Support Hailo-8™ AI Accelerator, up to 26 TOPS
- -20°C ~ 55°C with airflow, DIN Rail mount (by request)
- System design optimized for 6W CPU power consumption



WEBS-8910 DIN-rail Compact Gateway

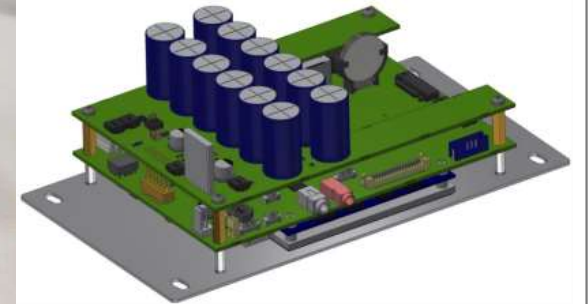
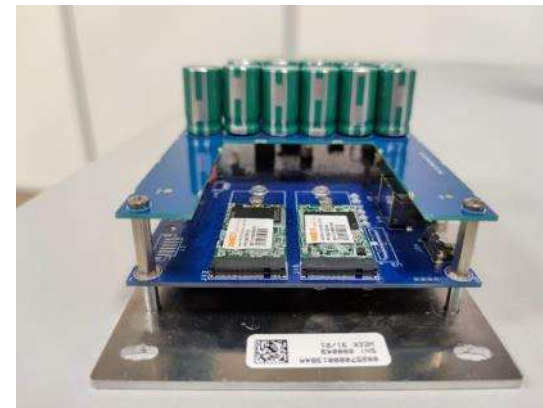
- Elkhart Lake Celeron J6412 (4Cores, 4Threads, 10W) , Fanless
- Compact size : 138 x 102 x 48 (mm)
- Support LPDDR4 up to 32GB and M.2 2242M SSD storage
- **3 x GbE LAN (Intel® i210)** , 3 x USB 3.1 , 2 x COM
- 1 x mPCIe socket with **SIM card holder**
- 1 x HMI and 1 x DP ports
- -20°C ~ 60°C with airflow, DIN Rail mount (by request)



Coming Soon Product

UPS Inside Gateway

- Smarcore APL E3940, 4GB RAM (Elkhart Lake also supported)
- Operating Temp: -25°C ~70°C
- UPS can power the box at least 45 seconds
- 2x M.2 slots with disk mirroring function (by OS)
- Max Board power consumption 15W
- Max UPS power required to the external power supply during charge 10W
- Max power deliverable from UPS to Board 80W
- Fanless design:



WEBS-21X series Gateway

- Powered by Intel® Atom® X7000E and Intel® Core™ i3 N-Series SoC or
- Memory: 16GB DDR4 3200MT SO-DIMM with IBECC
- Display: 1x DP and 1x HDMI
- Expansion slots: 1x M.2 E Key, 1x M.2 B Key (with Nano-SIM) socket and Micro-SD slot
- TPM 2.0 and audio output
- Powered by Intel® Atom® Elkhart Lake Dual/Quad-core™ x6000 Series SoC
- Support 1x 2.5" SSD, 1x mSATA, 1x Micro SD, up to 32GB RAM In-Band ECC
- Triple Display by VGA, DP, HDMI
- 1x M.2 and 1x Full-size Mini-PCIe socket (Choose either mSATA or mini-PCIe by BIOS)



WEBS-45H Series, High Performance Fanless System

- Fanless Control Box PC supporting **10th Gen Intel® Core CPU** in LGA1200 (35W TDP)
- Up to 64GB DDR4 2400/2666 Non-ECC SDRAM on two SO-DIMM sockets
- Up to 4x SATAIII ports (6Gb/s)
- Multiple Expansion I/O via M.2 and 1x SIM Card socket
- Multiple wireless connectivity (2x Antenna support for WiFi, 3G/GPS, 4G LTE or 5G)
- Multiple I/O density : 2 x GLAN, up to 5x COM and 8xUSB, 1xGPIO, 4 video outputs and Audio and **modular design for easy customization**
- 2 x PCIe expansion slot version available for add-on cards
- DC 12V ~ 36V with 3-pin Terminal Block Connector
- -20°+60° operating temperature
- PCIe expansion slot version also available for add-on cards



WEBS-45J Series, High Performance Fanless System

- Fanless Control Box PC supporting **12/13th Gen Intel® Core CPU** in LGA1700 (35W TDP)
- Up to 64GB DDR5 4800 on two SO-DIMM sockets
- Storage 2x SATAIII ports (6Gb/s)
- Support triple DP and one HDMI display
- Support One M.2 E Key, One M.2 M Key
- High I/O density: 2 x GLAN, up to 4x COM and 12xUSB, 8-bit DIO, 4 video outputs, two antenna holes for WiFi modules
- **Modular design for easy customization**
- 2 x PCIe expansion slot version available for add-on cards
- Power input: 12V ~ 36VDC with 3-pin Terminal Block Connector
- Operating Temperature: -20° to 60°C



WEBS-85H High Performance Fanless System

- Support **10th Generation Intel® Core™ i3/i5/i7/i9 processors**
- Support 64 GB DDR4 2400/2666 Non- ECC SDRAM
- Support triple displays including HDMI 1.4, HDMI 2.0, DP 1.2
- Support 4x COM ports (1x RS- 232/422/485, **CANbus (2.0 A/B)** selected by onboard jumper), 4x USB 3.2 (Gen1), 2x USB 3.2 (Gen2), 3x RJ45, 2x nano-SIM slots, **8x GPIO**
- **3x Gigabit Ethernet (Intel® I210-IT) supporting TSN**
- Support Mini-PCIe socket, M.2 2242/60/80 M key socket, and M.2 2230 E key socket
- 4 x Antenna hole for WiFi and 4G/GPS module to use
- Onboard TPM 2.0
- **Expansion version supporting up to three add-on card options via PCIe slots (1x PCIe x16 + 1x PCIe x4 or 2x PCIe x8 + 1x PCIe x4 (auto-detect)**
- Operating Temperature: -20° to 60°C



Compact version



Slot Expansion version



Industrial Systems and Boards Portfolio



RPC-530 , Rackmount

- 4U Rackmount Chassis
- One slim CD-ROM and two 2.5" HDD/ SDD Drive bays
- Two 12 cm ball-bearing cooling fans for better ventilation
- Two USB 3 ports on the front panel

- **All I/O ports, Buttons, LEDs, Drive bays, AC inlet located on the front side**



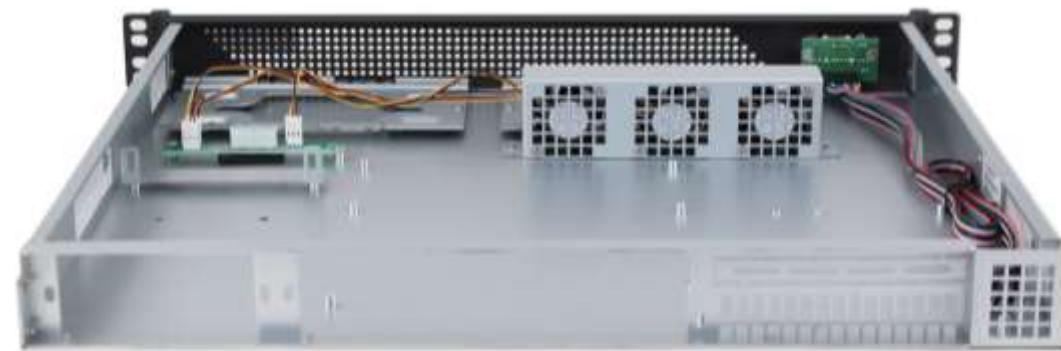
AREMO-2199 MX , Rackmount

- **2U Rackmount System**, designed for **ATX/MicroATX/ Mini-ITX M/B**
- **9x 3.5" HDD Drive bays** (Or 3x 2.5" HDD/SSD)
- build two USB interfaces on the front panel
- Four 8cm ball-bearing cooling fans for better ventilation
- All I/O ports, Buttons, LEDs, Drive bays, AC inlet located on the front side
- 7x half-size PCI/PCIe expansion slots, vertical insert



AREMO-1192 MX , Rackmount

- **1U Rackmount System**, designed for **ATX/MicroATX/ Mini-ITX M/B**
- **2x 3.5" HDD(or 2x 2.5" HDD/SSD)**
- build two USB interfaces on the front panel
- Two 4cm ball-bearing cooling fans
- All I/O ports, Buttons, LEDs, Drive bays, AC inlet located on the front side
- 420 x 427 x 45 mm



AREMO-4197 , Rackmount

- 4U Rackmount System
- Version for M/B and PICMG (14-slots)
- Two USB3 ports on the front panel
- 5.25" x3 + 3.5" x1 drive bays for RAID 0, 1, 5 & CD-ROM
- Traditional rack-mount handles
- PS/2 or Mini-redundant power supply installable



AREMO-2173P , Rackmount

- 2U Rackmount System, Version for M/B and PICMG
- One slim CD-ROM and two hot-swap 3.5" HDD (SATA) Drive bays
- Two USB ports on the front panel
- Two 7cm ball-bearing cooling fans for better ventilation
- PS/2 or Mini-redundant power supply installable
- One power On/Off switch with a protection cap and one touch-free reset for secure access



Thumb Lock
Convenient to operate or protect the system



Two Swappable SATA HDD Drives
Easy to access HDD drives



Front Replaceable Air Filters/Fans
Convenient to change air filters or fans when needed



Rear View

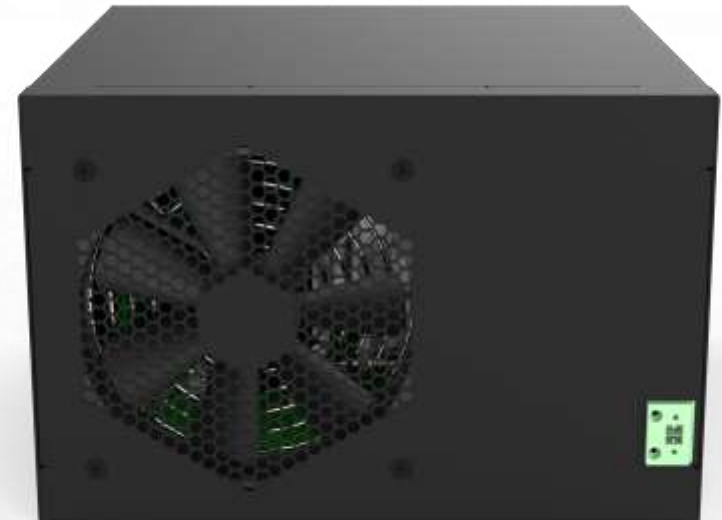
AREMO- 6/8 Series , Node PC (Shoe-box)

- Industrial Node Chassis (shoe-box) supporting 6 and 8 slots full-size
- One external 5.25" and one 3.5" internal HDD drive bay (or two each with mirror disk RAID1)
- One replaceable air filter for easy cleaning
- Can be vertically or horizontally mounted, easy to fit into space limited environment
- One 12cm ball-bearing cooling fan for better ventilation
- Possible Two USB ports on the front panel depending on the model



PAOI-8041, Configured Workstation

- Support **Intel® 8th Gen Coffee Lake-S processor in LGA1151**
- Memory: up to 32GB on 2x DDR4 2400 MT/s non-ECC SO-DIMM
- I/O: 2x GbE, 6x USB, 2x mini-DP
- Storage: 2x 2.5" cage (RAID supported), 1x mSATA
- Expansion: **2x PCIe x16 slots** (1x PCIe x16 or 2x PCIe x8 signal) and **2x PCI slots** (for legacy cards)
- Power input: **6-36VDC**
- Operating Temperature: 0° to 40°C



PEAI-9910, Configured Workstation

- Supports **Intel® 12th/13th Generation Core processors Family** in LGA 1700 package
- Memory: up to 64GB maximum DDR5 4800 ECC SO-DIMM on two sockets
- Display: 1x DP and 1x HDMI
- Storage: 2x 2.5" cage at the front (RAID supported), M.2 M Key
- I/O: 2x USB 3.2 Gen2 and 4x USB 3.2 Gen1, TPM 2.0, 2x 5GbE LAN (Marvell

AQC114CS), 1x RS-232/422/485, 8-bit DIO

- 1x PCIe x16 Gen5 slot (for **2.5 slot Accelerator cards**)
- 1x PCIe x4 Gen4 slot
- Power input: AC 100~240V, **650W PSU**
- Operating Temperature: 0° to 40°C



Industrial Board Computing

Industrial SBC in short



Formats:

- PICMG 1.3
- Mini ITX
- NANO ITX
- ATX
- Custom Flex ATX

Technologies

Latest CPUs:

- Alder lake (PICMG 1.3)
- Comet lake
- Coffee lake, Whiskey lake
- Elkhart lake , Apollo lake

[Portwell - Single Board Computer](#)

[Portwell - Embedded Board](#)



ROBO-8116VG2AR

- **12th Gen Intel® Core™ Desktop processors (Alder Lake-S)**
- Dual Channel DDR5 4800 ECC SO-DIMM up to 64GB
- 16x PCIe Gen 5 and 4x PCIe Gen 4 lanes ready for high-speed expansion cards
- Triple displays by DVI-D, DP and HDMI
- **2x 2.5GbE LAN**, 2x USB 3.2 Gen 2 and USB 3.2 Gen 2x2 on REAR I/O
- On-board TPM2.0



ROBO-8115VG2AR

- Supports Intel® 10th Gen. Xeon® W/Core™ i3/i5/i7/ i9 /Pentium®/Celeron® processors in LGA 1200 package (W480E or Q470E chipset)
- Delivers up to 128GB maximum DDR4 2666 ECC Long-DIMM on four sockets
- Supports mutiple display by DVI-I(DVI-D+VGA)and HDMI
- Dual Gigabit Ethernet, 4x PCI slots, 1x PCIe x16 slot,1x PCIe x4 slot
- Rich I/O connections such as four serial ports, 6x USB3.2(Gen2), 8x USB2.0, 5x SATA III, 1x M.2 (Key M) 2280 port.
- Support onboard TPM2.0



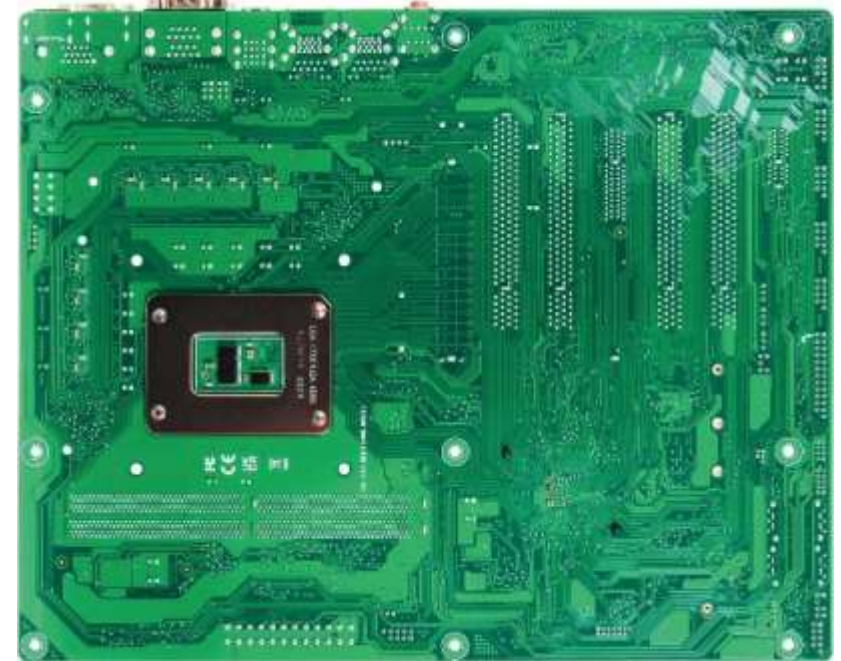
PCOM-C615 , COMe

- PICMG 1.3 form factor with **COM Express Type VI row connectors**, suitable for evaluation testing of Portwell's Type VI COM Express modules on PCIe, PEG, VGA/HDMI, DVI, USB and SATA interface.
- Supports four SATA III ports
- Supports multiple display by LVDS, HDMI, DP on board and DVI-I(DVI-D+VGA) on bracket(Choose either HDMI or VGA by BIOS)
- Rich I/O interfaces such as serial ports, USB, PCI



RUBY-D813-H610E

- **Intel® 12th Gen Core™ Processors support**
- Two Long-DIMM support DDR4 Non-ECC DRAM up to 64GB
- Support dual Ethernet, 6x COM Ports, 4x USB 3.2 Ports , 4x SATA III Ports and Audio
- Two PCIe x16(1x PCIe x4 signal), one PCIe x1, four PCI slots, one M.2 (Type M) type 2242/2260/2280



RUBY-D812-Q470E

- **Intel® 10th Gen Core™ Processors support**
- Four Long-DIMM support DDR4 Non-ECC DRAM up to 128GB
- Support dual Ethernet, 6x COM Ports, 6x USB 3.2 Ports , 6x SATA III Ports, 8-bit GPIO, and Audio
- Two PCIe x16 (1x PCIe x8 signal), three PCIe x4 , two PCI slot, one M.2 (Type B) , one M.2 (Key E) for Wireless, one M.2 (Key M) for SSD



WADE-8213-Q670E

- **Support 12th Intel® Gen Core™ Processors (Alder Lake-S)**
- Two SO-DIMM support DDR5-4800 DRAM up to 64GB
- Support dual Ethernet, 5x COM ports, 4x SATA III ports and Audio
- Support one PCIe x16(Gen5), one M.2 Key E 2230 with PCIe x1 and CNVI for Wireless, and one M.2 Key M 2242/2260/2280 with PCIe x4 and SATA3 for SSD
- Support 3x USB3.2 (Gen2) on rear I/O(2x Type A + 1x Type C), 1x USB3.2 (Gen1) on rear I/O, 1x USB3.2 (Gen1) on board(Vertical Type-A), 2x USB3.2 (Gen1) on pin header, 4x USB2.0 on rear I/O, 2x USB2.0 on pin header



WADE-8212-Q470E

- **Intel® 10th Gen Core™ Processors support**
- Supports two SO-DIMMs support DDR4 Non-ECC SDRAM up to 64GB
- Supports dual Ethernet(one port support 1G/one port support 2.5G), five COM Ports, ten USB Ports, four SATA III Ports and Audio
- Support one PCIe x16(Gen3), one M.2 Key E 2230 with PCIe x1, CNVI and USB2.0 for Wireless, one M.2 Key M 2242/2260/2280 with PCIe x4 and SATA3 for SSD, one M.2 Key B 3042/3052 with USB 3.0 Signal and one SIM Card socket



WADE-8173-J6412

- **Intel® Celeron® Processor J6412(formerly Elkhart Lake), low profile**
- Two SO-DIMM support DDR4 DRAM up to 32GB
- Support dual Ethernet, 6x COM Ports
- Support 3x USB 3.2 Gen2, 5x USB 2.0, 1x SATAIII port
- Expansion interfaces: one PCIe x1(Gen3), one M.2 Key E 2230 with PCIe x1 and USB2.0 for Wireless, one M.2 Key M 2242/2260/2280 with PCIe x2 and SATA signal for SSD, and one full/half size Mini PCIe socket with PCIe x1(with SIM holder) and one Full-size SD card slot
- Power: 12VDC (internal 4pin or external DC jack)



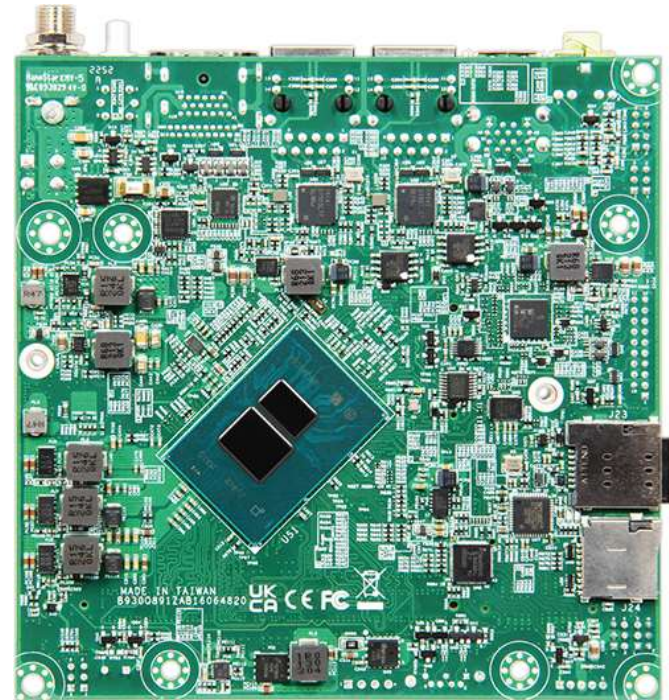
NANO-6063

- Supports Intel® Atom® Dual/Quad **Elkhart Lake** Family SoC (**x6000E**)
- Up to 32 GB DDR4 3200 SODIMM, In-Band ECC
- Supports multiple displays by VGA, DP, and HDMI
- Supports 4x USB 3.2, 1x COM, 2xRJ45, 1x M.2 (Key-E), 1x mPCIe
- Supports Real-Time Performance: TSN, TCC
- Support onboard TPM2.0
- NANO size 120x120mm



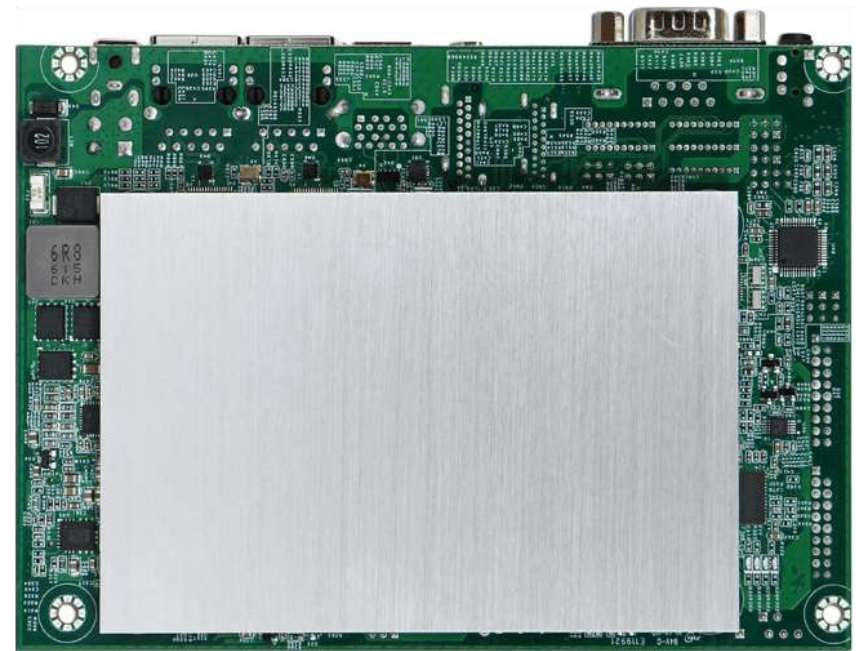
NANO-6064

- Support low-power Intel Atom® **x7000E Series (Alder lake)** SoC and high-performance Intel® i3 N-Series SoC
- Up to 16GB DDR4 3200MT/s non-ECC SO-DIMM, support **IBECC**
- Support multiple displays via HDMI, DP, LVDS
- High-speed I/O with dual 2.5GbE and four USB 3.2 Gen2
- Multiple expansions with M.2 E Key and B Key
- Support on-board TPM 2.0



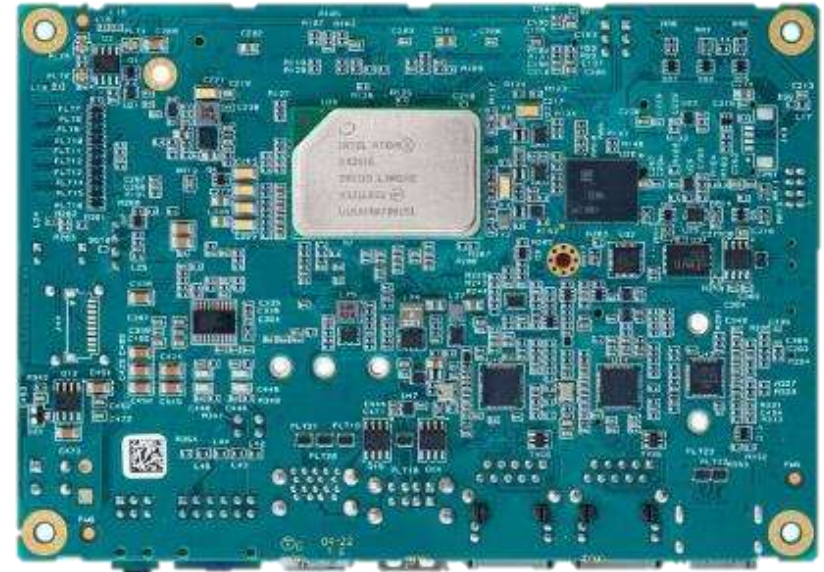
PEB-2773

- Supports Intel® Apollo Lake series processor (**Elkhart Lake also available**)
- Supports 6x COM ports(REAR IO support RS-232/422/485)
- Supports DD3L-1866/1600 MT/s non-ECC SDRAM on one SO-DIMM slot, up to 8GB
- Supports Triple displays including DP, HDMI, and Dual channel 24bit LVDS
- Supports mini-PCIe / mSATA (2x mini- PCIe slots)



T. Board EHL

- Intel® Elkhart Lake (x6000E series)
- SO-DIMM DDR4 up to 16GB
- Storage: starting from 4GB eMMC drive onboard, 2x SATA and M.2
- 2x OTG, 2x USB2, 2x USB3, eDP, HDMI, LVDS
- 1 x M.2 Key E (PCI-E Gen3x1, USB2.0, UART)
- 1 x M.2 Key B (PCI-E Gen3x2, USB2.0, I2S, SIM)
- 1 x M.2 Key B (PCI-E Gen3x2)
- Operating Temperature: -40° up to 85°
- Power input: **+12 to 24VDC**
- Dimensions: 146 x 102 mm (3.5" form factor)



COM

Computer on Module Portfolio

MicroGEA



SODIMM



SMARC



COM Express Mini



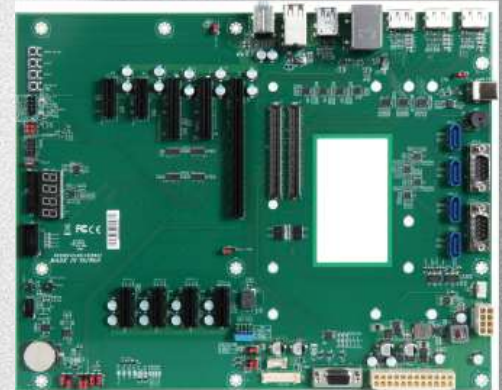
COM Express



COM Express HPC



Carrier Boards



Embedded Modules for custom projects

COM Express Focus - Module Overview



Formats:

Type 6 and 7

- COMe Basic
- COMe Compact

Type 10

- COMe Mini

Type E

- COMe HPC **New**

COMe Carrier

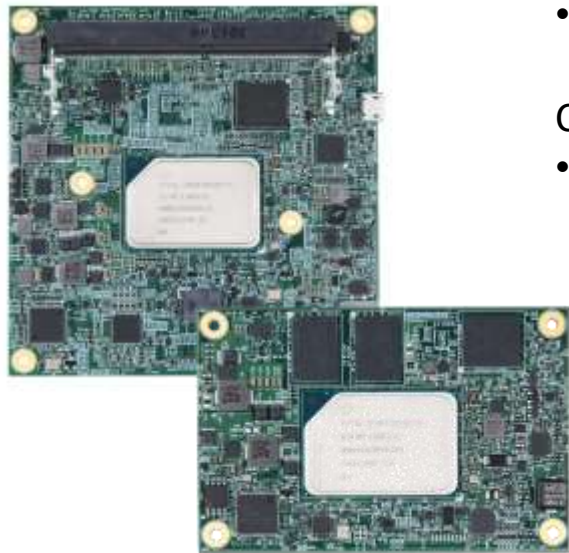
- PICMG 1.3, mini ITX, ATX, mATX, NANO

Technologies

- Latest CPUs:

Alder lake/Raptor lake, Tiger lake, Elkhart lake, Comet lake, Coffee lake, Whiskey lake,
Apollo lake, Denverton and ARM

- Traditional Soldered technology
- Desktop CPU technology



[Portwell - Well-known Computer on Module standard defined by the PICMG](#)

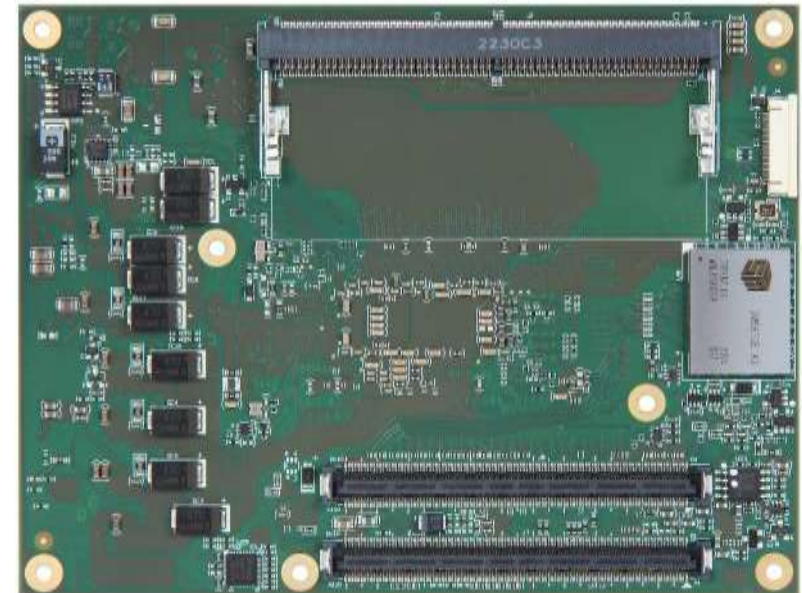


PCOM-B658VGL

- **12th / 13th Gen Intel® Core™ ,Celeron® Series processors** in Intel® 7 lithography
- Up to 6x performance core + 8x efficient core, and up to 96x graphic execution units
- 2x **DDR5-4800 non-ECC SO-DIMMs** up to 2x 32GB, 1x PCIe Gen4 x8(H series), 2x Gen4 x4, and 7x PCIe Gen3 x1
- 4x USB3.2 Gen2, 8x USB2.0, 2x SATAIII, 3x DDI, VGA, eDP/LVDS, and optional 2x

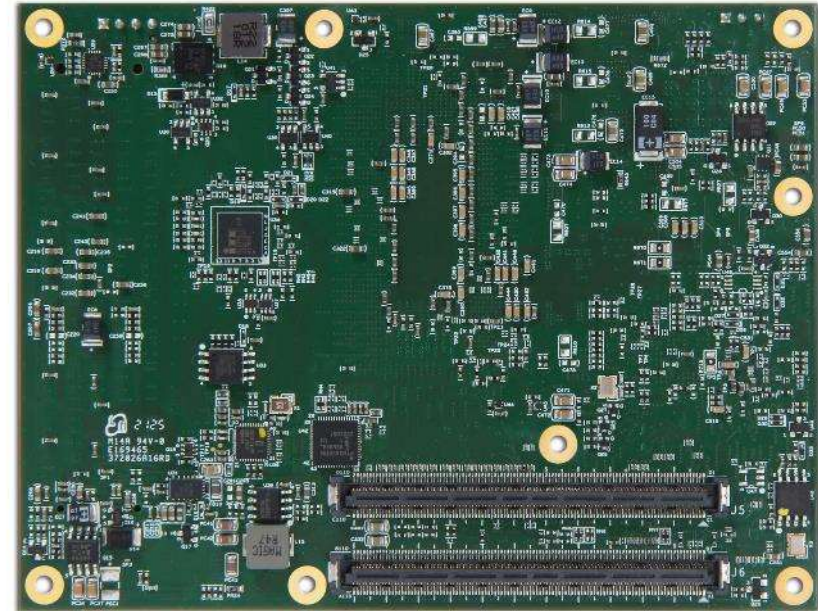
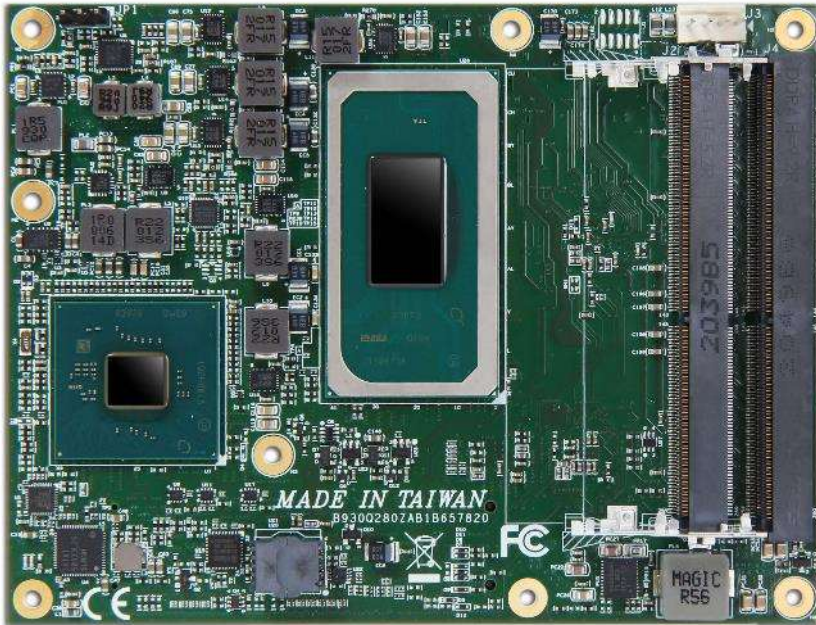
USB4

- **2, 2.5 GbE TSN Ethernet, I225/I226 Series ethernet,**
- Evaluation board: **PCOM-C60B/C605R**
- **Basic Size (125mm x 95mm)**



PCOM-B657VGL

- Intel® **Tiger Lake-H** processor **11th Gen** (Chipset: RM590E / QM580E)
- Up to **8 (16T) Core**, **eTemp** option
- **2x DDR4-3200** SO-DIMM ECC (up to 64GB)
- Support up to: 1 x PCIe 4.0 x16 (1 x16, 2 x8, or 1 x8 + 2 x4) and 8 x PCIe 3.0 x1 (8 x1, 4 x1 + 1 x4, or 2 x4)
- Support 3*DDI, LVDS/eDP, VGA
- AI/DL Instruction sets (Intel® VNNI, AVX-512, INT8, FP16)
- Evaluation board: **PCOM-C60B**
- **Basic Size** (125mm x 95mm)



PCOM-B701GT-R

- Intel® **Atom C3000 (Denverton)**, and Denverton Refresh (**PCOM-B701-R**)
 - Up to **12(12T)** Core, **eTemp** option
 - **3x DDR4** SO-DIMM ECC (up to 96GB)
 - 1x PCIe Gen3 x8 & 2x PCIe Gen3 x2 & 3x PCIe Gen2 x1
 - **4x 10GbE** KR supported
- Evaluation board: **PCOM-C701**
 - **Basic Size** (125mm x 95mm)



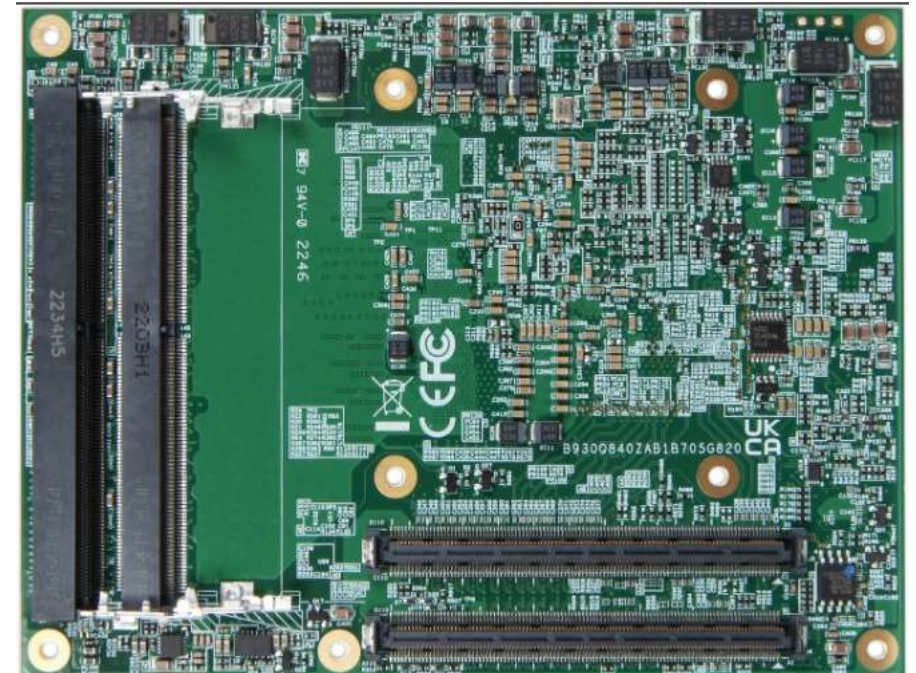
PCOM-B706GT

- **AMD®** Embedded Ryzen **V3000** CPU featuring "Zen 3" core (8C/16T)
- 2x **DDR5** 4800 MT/s SO-DIMM,
- 10W ~ 54W cTDP with -40 ~ 85 °C support on selected SKU
- Up to 16x PCIe Gen 4 lanes for high-speed interconnection
- Optional on-module PCIe x2 NVME storage
- **2x 10G KR**, 4x USB 2.0, 4x USB 3.2 Gen1
- Evaluation board: **PCOM-C701**
- **Basic** Size (125mm x 95mm)



PCOM-B705GT

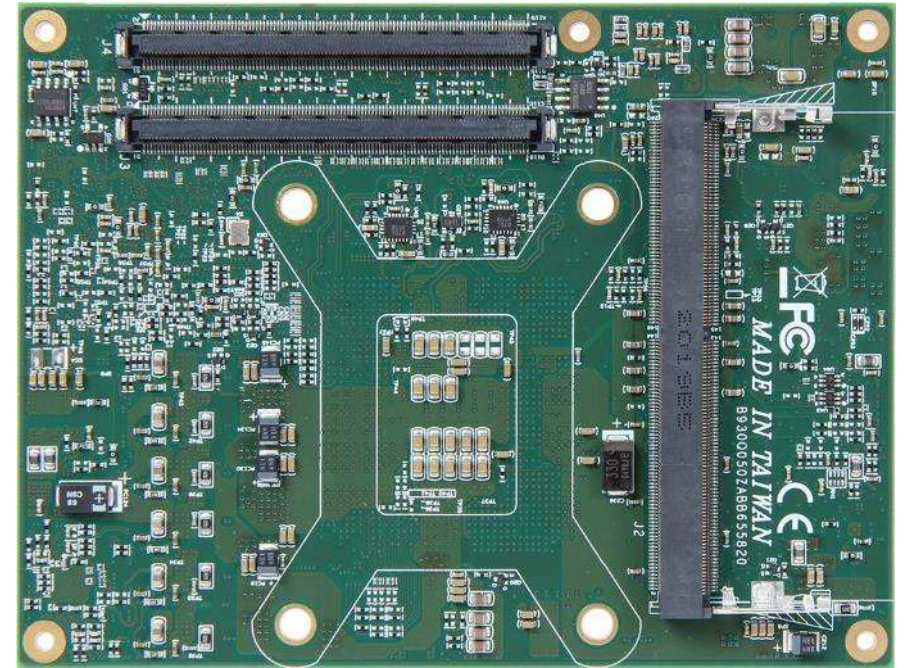
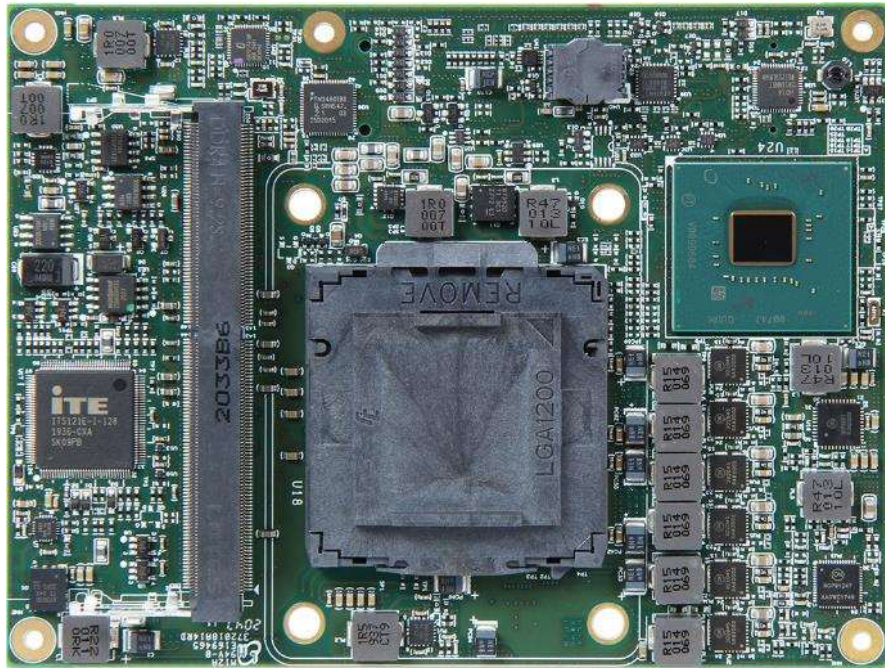
- Intel® Xeon® D Processors (Ice Lake D LCC – 10C/20T)
- Up to 10(20T) Core, **eTemp option** (-40 to 80C)
- 3x DDR4 SO-DIMM ECC (option for 4x SO-DIMMs) up to **128GB**
- 16x PCIe 4.0 + 16x PCIe 3.0, 4x USB2.0/3.2 Gen 2x1, 2x SATAIII, 2x UART
- **4x 10GbE KR** supported
- Evaluation board: **PCOM-C701**
- **Basic Size** (125mm x 95mm)



PCOM-B655VGL

- Intel® **Comet Lake-S** processor ,
- Up to **10(20T)** Core,
- **2x DDR4-2933** SO-DIMM ECC (up to 64GB)
- Support 1x PCIe 3.0 x16, 8x PCIe 3.0 x1
- Support LVDS/eDP, VGA, and 3x Display port/HDMI
- Support USB2.0/3.2 Gen2, 4x SATAIII

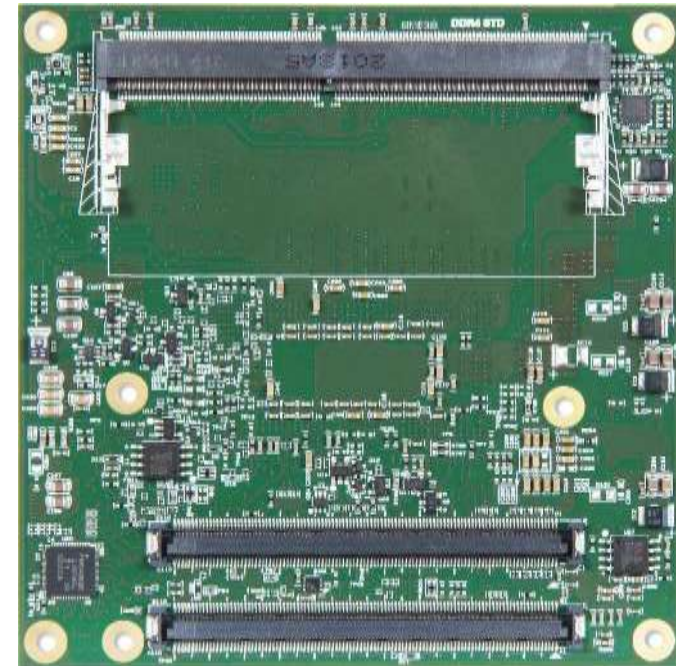
- Evaluation board: **PCOM-C60B**
- **Basic Size** (125mm x 95mm)
- **Desktop, Cost effective solution**



PCOM-B656VGL

- Intel® **Tiger Lake-UP3** processor
- Up to **4(8T) Core, eTemp** option
- **2x DDR4-3200** SO-DIMM ECC (up to 64GB)
- Support up to: 1x PCIe Gen3 x4/2x PCIe Gen3 x2/4x PCIe Gen3 x1/1x PCIe Gen3 x2 + 2x PCIe Gen3 x1

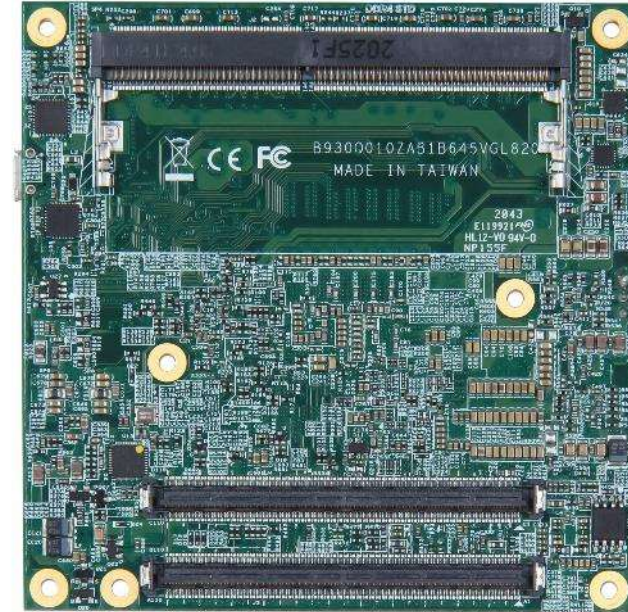
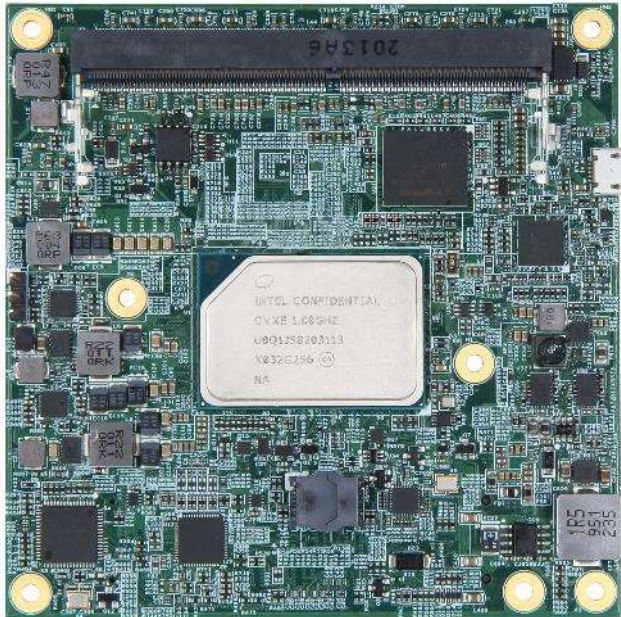
- Support Display Port, HDMI, VGA, and LVDS/eDP
- Evaluation board: **PCOM-C60B**
- **Compact** Size (95mm x 95mm)



PCOM-B645VGL

- Intel® Atom **Elkhart Lake** processor,
- Up to **4(4T) Core**, **eTemp** option
- **2x DDR4-3200** SO-DIMM (up to 32GB), **In-Band ECC** option
- Support up to: 6x PCIe 3.0 x 1, 2x USB 3.2(Option 4x USB 3.2), 8x USB 2.0(Option 1x OTG), Intel® **TCC/TSN** with 2.5GbE, **eMMC**

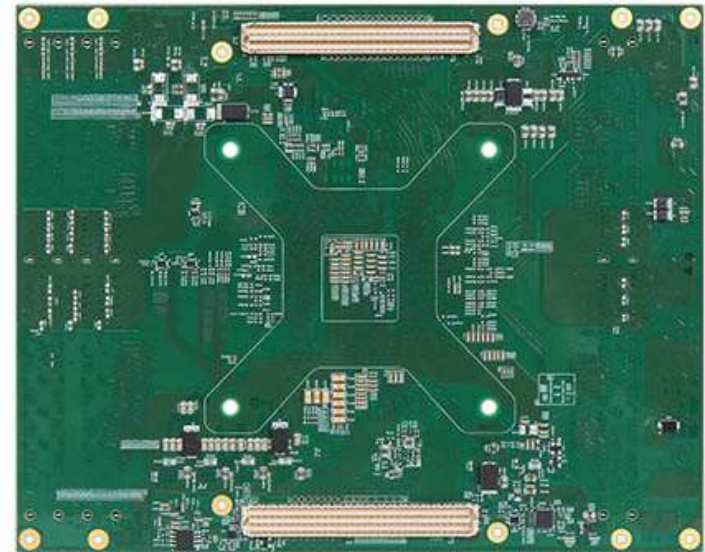
- Support: VGA, LVDS/eDP, DP, HDMI
- Evaluation board: **PCOM-C60B**
- **Compact** Size (95mm x 95mm)



PCOM-B800GT (HPC)

- Intel® Xeon® D Processors (Ice Lake D HCC)
- Up to **20(40T)** Core
- **8x DDR4** ECC Long-DIMM (4 channels)
- **8x 10GbE KR**
- **48x PCIe Lanes (G4:32/G3:16)**

- Evaluation board: **PCOM-C800**
- **COM-HPC Server, Size E (200mm x 160mm)**



PCOM-B883VG2 (HPC)

- **12th** Gen Intel® Core Processors (Alder Lake-P)
- Up to **6P + 8E/20T** Core
- **2x DDR5 4800** SO-DIMM
- Up to 8x PCIe 4.0 (selected SKU) and 8x PCIe 3.0 (2 lanes shared with SATA)
- **3x DDI**, eDP, 2x **USB 4**, 2x USB 3.2 Gen2, 8x USB 2.0

- Evaluation board: **PCOM-C880**
- **COM-HPC Client, Size B** (120mm x 120mm)



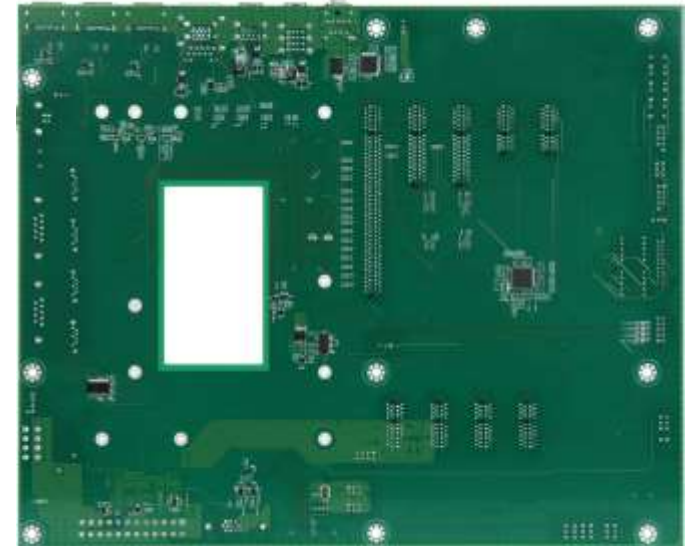
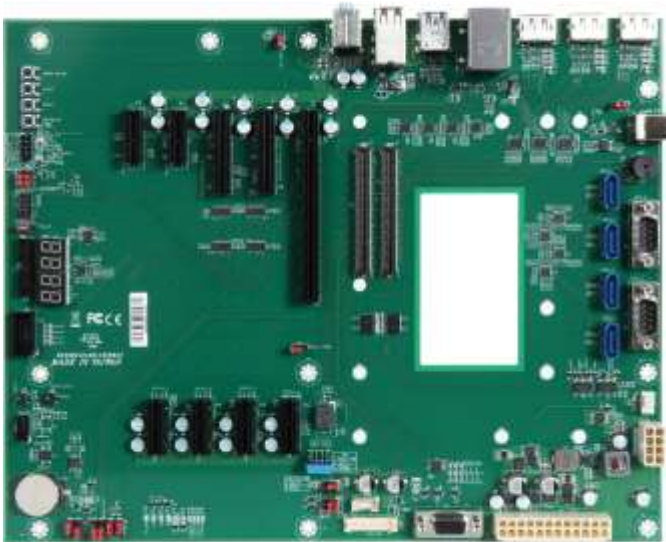
PCOM-BA02GL

- Intel® Atom® **Processor x6000 Series (Elkhart Lake)**
 - On Board LPDDR4 SDRAM up to 8GB
 - Low Power Consumption (4.5 to 12W), 4K Resolution
 - Support wide temperature -40°C ~ 85°C
 - Support Intel® TCC/TSN with 2.5GbE
- Evaluation board: **PCOM-CA00**
 - eMMC up to 64GB
 - **Mini Size (Type 10):** 84mm x 55mm



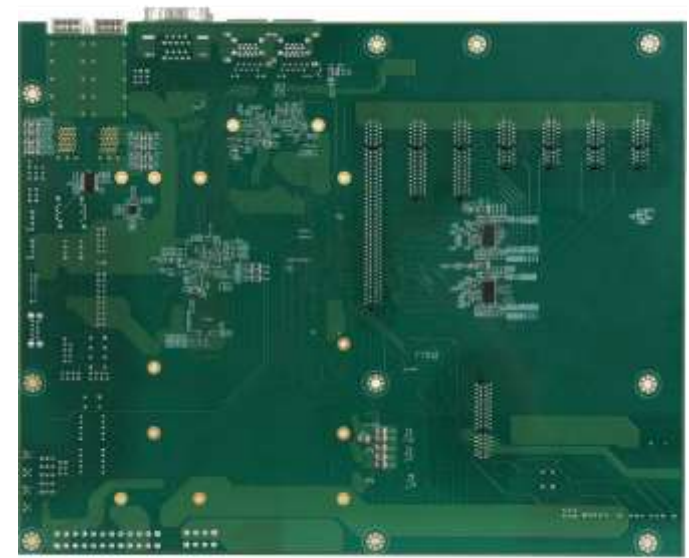
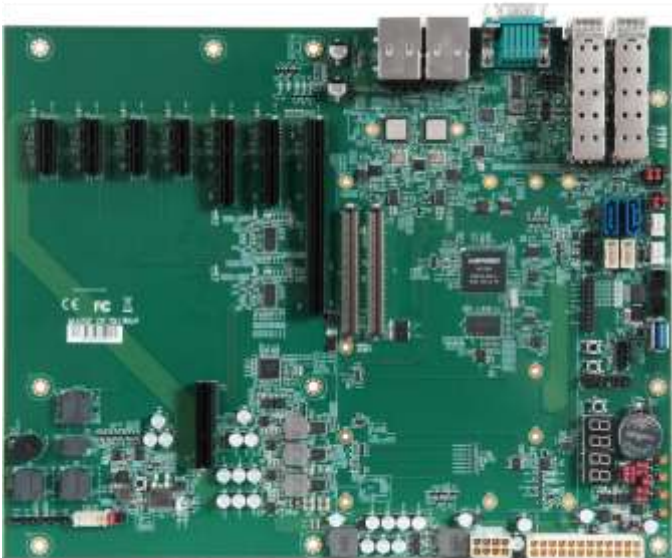
PCOM-C60B (Carrier)

- COM Express® carrier board is compatible with the **Type 6** modules
- Support 4x USB 3.2, 8x USB 2.0, 4x SATA III Ports
- Support multiple displays(eDP, DP, VGA, LVDS)
- Support **1x PEG**(Gen4), 2x **PCIe x4**, 6x **PCIe x1**, 2.5G Ethernet
- **ATX** Form Factor Evaluation Carrier Board for Type 6 Com-Express® **Rev 3.0** Module



PCOM-C701 (Carrier)

- COM Express® carrier board is compatible with the **Type 7** modules
- Support both AT and ATX mode
- 10G PHY: Inphi CS4227
- 1x GbE, 4x **10GbE SFP+**
- 32x PCIe Lanes(1x PCIe Gen3 x16, 3x PCIe Gen3 x4, 4x PCIe Gen3 x1)
- 2x SATA III, 4x USB 3.0, 4x USB 2.0
- **ATX** Form Factor Evaluation Carrier Board for Type 7 Com-Express® **Rev 3.0** Module



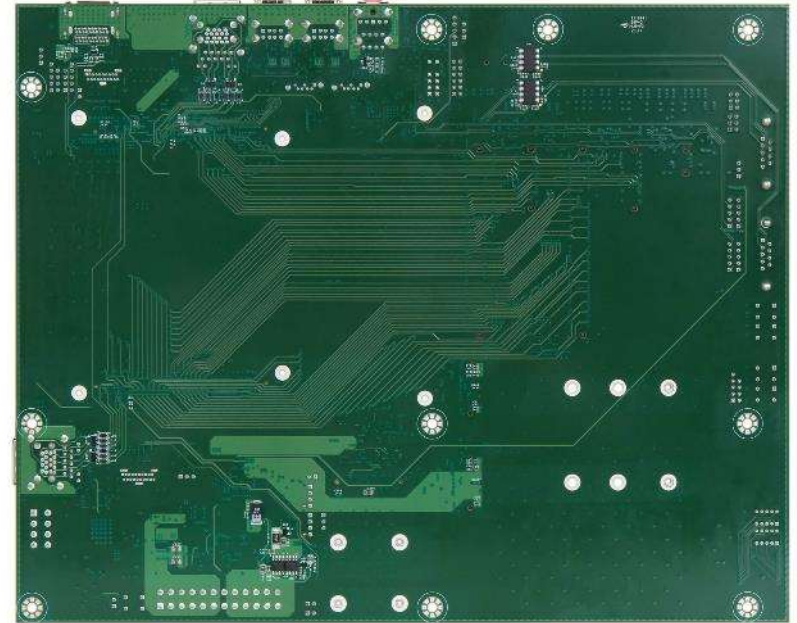
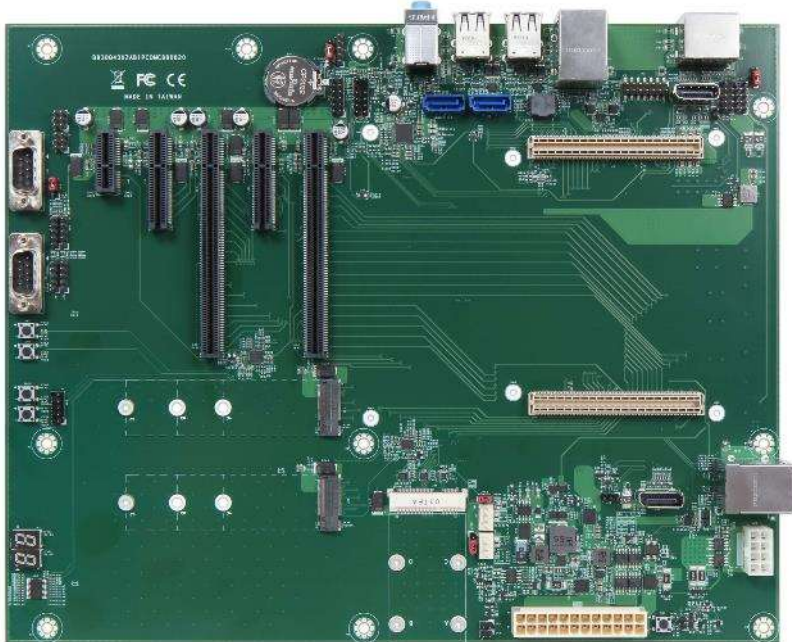
PCOM-C605R (Carrier)

- COM Express carrier board support **Type 6 Compact/Basic** size modules
- **Mini-ITX size** form factor provides an extra expansions slot and reversed side module mounting space for optimized passive cooling solution design
- Supports USB 3.2 Gen2 (Type-A), SATA, PCIe Gen4, 2.5G RJ45, DisplayPort, VGA, LVDS/eDP, Optional USB4 (Type-C)
- PCI Express options: 1x PCIe **x16** slot (x8 signal), 2x M.2 **M-key**, 1x M.2 **B-key**, 1x M.2 **E-key**
- Support wide temperature -40°C ~ 85°C (Selected SKU)
- ATX 8pin 12v input / **12v DC Jack**



PCOM-C880 (Carrier)

- **COM-HPC carrier board** support COM-HPC client size A/B/C modules
- **ATX size form factor** provides extra expansions slot, and follows the standard space mounting
- Supports USB 3.2 Gen2, SATA, PCIe Gen4, 2.5G RJ45, Displayport
- Support wide temperature -40°C to 85°C
- Standard ATX PSU input
- ATX size form factor



Embedded Modules for custom projects

Other Format Focus - Module Overview



Formats:

SMARC
SODIMM
MicroSOM
Q7



Technologies:

ARM based CPU

- **NXP:** i.MX8M Plus, i.MX8M Mini, i.MX8X, i.MX8QM, i.MX8M, i.MX6Q/D, i.MX6DL/S, i.MX6ULL, i.MX6UL
- **ST:** STM32MP157A/D
- **RENESAS:** i.CORE RZ/G2E
- **ROCKCHIP:** PX30, RK1808



Intel based CPU (SMARC only)

- X86 Apollo Lake, Elkhart Lake



SODIMM i.Core MX8M Plus

- NXP® i.MX 8M Plus (ARM Cortex A-53 with NPU)
- RAM up to 4GB LPDDR4
- Video interface: LVDS, 18/24bit up to Full HD MIPI-DSI – 4 lanes option HDMI up to Full HD 2x MIPI-CSI – 4 lanes

- Operating system: Linux – Yocto, Android
- Mass Storage : Up to 32GB eMMC
- Operating Temperature : Industrial (-40°C to 105°C Tj)
- Both 1x LAN 1000 and 2x LAN 1000 versions available









CPU	NXP® i.MX 8M Plus	MASS STORAGE	Up to 32GB eMMC
CORES	Powerful quad Arm® Cortex®-A53 @ up to 1.6GHz processor with a Neural Processing Unit (NPU) operating at up to 2.3 TOPS + Cortex®-M7 CPU @ 800 MHz.	NETWORKING	1 x Gb Ethernet interface
MEMORY		up to 4GB LPDDR4	USB
GRAPHICS	GC7000UL (2 shaders), OpenGL ES 2.0/3.0/3.1, Vulkan, OpenCL 1.2; GC520 (2D)	AUDIO	I2S Interface
VIDEO INTERFACES	LVDS, 18/24bit up to Full HD MIPI-DSI - 4 lanes option HDMI up to Full HD 2x MIPI-CSI - 4 lanes	PERIPHERAL INTERFACES	UART, I2C, PCIe 3.0, SPI, JTAG, CAN, SDIO, SPI, GPIO
VIDEO PROCESSING UNIT CAPABILITIES		1080p60 HEVC (h.265, h.264, VP9, VP8) dec; 1080p60 HEVC (h.265, h.264) enc	POWERSUPPLY
		OPERATING SYSTEM	Linux - Yocto, Android
		OPERATING TEMPERATURE*	Industrial (-40°C to 105°C Tj)
		DIMENSIONS	32.1 x 67.6 mm

SmarCore MX8MPlus

- CPU : NXP® i.MX 8M Plus
- Cores : Quad Arm® Cortex®-A53 @ up to 1.8GHz processor with a (NPU) up to 2.3 TOPS and Cortex®-M7 CPU @ 800 MHz
- Memory : up to 4GB LPDDR4
- Video Interfaces : LVDS 18/24bit up to Full HD, MIPI-DSI – 4 lanes option, HDMI
- up to Full HD, 2x MIPI-CSI – 4 lanes
- Video Processing Unit Capabilities : 1080p60 HEVC (h.265, VP9, VP8) dec; 1080p60 HEVC (h.265) enc
- Mass Storage Mass Storage : Up to 32GB eMMC
- Networking : 2 x Gb Ethernet interface



 CPU	NXP® i.MX 8M Plus	 MASS STORAGE	Up to 32GB eMMC
 CORES	Powerful quad Arm® Cortex®-A53 @ up to 1.6GHz processor with a Neural Processing Unit (NPU) operating at up to 2.3 TOPS + Cortex®-M7 CPU @ 800 MHz	 NETWORKING	2 x Gb Ethernet interface
 MEMORY	RAM up to 4GB LPDDR4	 PCIe	1 x PCIe 3.0
 GRAPHICS	GC7000UL (2 shaders), OpenGL ES 2.0/3.0/3.1, Vulkan, OpenCL 1.2; GC520 (2D) Asynchronous Sample Rate Converter	 USB	1 x USB OTG 3.0 1 x USB HOST 3.0
 VIDEO INTERFACES	LVDS, 18/24bit up to Full HD MIPI-DSI – 4 lanes option HDMI up to Full HD 2x MIPI-CSI – 4 lanes	 AUDIO	I2S Interface
 VIDEO PROCESSING UNIT CAPABILITIES	1080p60 HEVC (h.265, h.264, VP9, VP8) dec; 1080p60 HEVC (h.265, h.264) enc	 PHERIPHERAL INTERFACES	UART, I2C, PCIe 3.0, SPI, JTAG, CAN, SDIO, SPI, GPIO
		 POWERSUPPLY	+ 5V DC
		 OPERATING SYSTEM	Linux · Android
		 OPERATING TEMPERATURE*	Industrial (-40°C to 105°C Tj)
		 DIMENSIONS	Standard SMARCTM 2.0 short size module

SmarCore EHLAKE

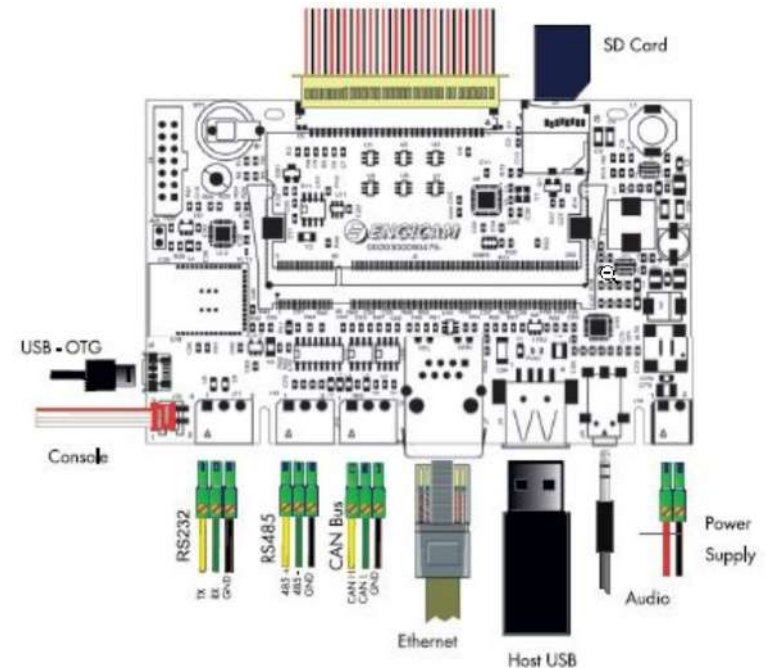
- Intel® Atom ELKHART LAKE series ATOM® x6000E, eTemp (-40 to 110C)
- Memory: Starting from 2GB LPDDR4
- Video Interfaces: eDP to LVDS Dual channel up to 1920x1080 @ 60Hz via eDP bridge; 1 x HDMI up to 4096x2160@60Hz 1x DP up to 4096x2160@60Hz eDP up to 4096x2160@60Hz
- Video Processing Unit Capabilities: HW accelerated encode HEVC/H.265, H.264, VP9, VP8, WMV9/VC1, MPEG-2, VC-1. JPEG/MJPEG dec HW accelerated encode HEVC/H.265, H.264, VP9, JPEG/MJPEG enc
- Mass Storage: Starting from 16GB eMMC drive soldered on-board
- Networking : 2 x Gb Ethernet interface



CPU Intel® Elkhart Lake Manufacturer: Intel ✓ VPU ✓ GPU	Cores x86 Up to 4 up to 1.9GHz L2 cache 1.5MB 2, 4 cores	Memory LPDDR4 3733 2MB up to 16GB
Graphics Intel® 11th generation (Gen 11) LP graphics controller, DirectX 12.1 compliant, OpenGL ES 3.1/3.0/2.0/1.1, OpenGL 4.5 Supported, OpenCL™ 1.2, Vulkan 1.0 APIs. Dedicated FIVK for Graphics, Intel® Virtualization Technology for Directed I/O (VT-d)	Video Interfaces DP, eDP, HDMI, LVDS	Video Processing Unit Capabilities HW accelerated encode HEVC/H.265, H.264, VP9, VP8, WMV9/VC1, MPEG-2, VC-1, JPEG/MJPEG dec HW accelerated encode HEVC/H.265, H.264, VP9, JPEG/MJPEG enc
Mass Storage Starting from 4GB eMMC drive soldered on-board eMMC, SATA	Networking 2x LAN 10Gb	USB 1x OTG 4x USB2 2x USB3
PCIe 4 up to 4x PCIe Gen3	Audio I2S Interface	Peripheral Interfaces UART, I2C, PCIe 3.0, SPI, JTAG, CAN, SDIO, QSPI

X.TOUCH 2.0 Carrier Board (ARM models)

- SMARC Form Factor Evaluation Board
- SmarCore MX8M Plus, MX8X, and EHL-x86 family compliant
- 1 x HDMI interface up to 4K
- 1 x LVDS interface up to FULL HD
- 2 x Gb Ethernet
- 1 x USB3.0, 2 x USB2.0
- Industrial temperature range



PPC

Monitor/Panel PC Portfolio



MD Series - Resistive Touch Industrial Monitor

- 5 wire Resistive Touch
- USB/RS232 Connector
- VGA + DVI
- Hardness >3H

4:3	12.1"	15"	17"
16:9	15.6"	18.5"	21.5"



P/N	Model name
AL8-3042	MD-121R (V1)
AL8-3044	MD-150R (V012)
AL8-3050	MD-170R (V2)
AL8-3048	MD-156R (V2)
AL8-3053	MD-185R (V4)
AL8-3055	MD-215R (V4)

MD Series – PCAP Touch Industrial Monitor

- Projected Capacitive Touch (10-point multi touch)
- USB Interface
- True Flat
- Hardness >7H

4:3	12.1"	15"	17"
16:9	15.6"	18.5"	21.5"



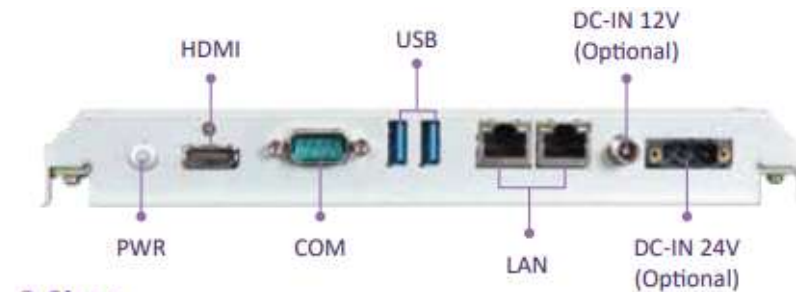
P/N	Model name
AL8-3043	MD-121P (V300)
AL8-3045	MD-150P (V303)
AL8-3051	MD-170P (V4)
AL8-3049	MD-156P (V2)
AL8-3054	MD-185P (V2)
AL8-3056	MD-215P (V2)

LEAD Series, Industrial Light Monitors and Panel Thin Client

- **Semi-Industrial Touch** (PCAP) Monitor and Panel PC
- 21.5" or 23.6" screen size and 1920x1080 (FHD) Resolution
- Stylish design with desk Stand, **fanless system**
- 2x HDMI, 1x VGA
- IP65 front with PCAP touch (10 point)
- Thin Client PPC based on Atom E3900 Cpu with 8G RAM/128G TLC mSATA



LEAD Panel Thin Client PC



FUDA3 series

- A Rugged Fan-less and Cable-less Touch **Panel PC**
- Quad-core Processor with Gen9 Graphic (Apollo Lake)
- Industrial panel display from 10.4" to 15" (4:3)
- Available for both Resistive single touch screen and P-CAP multi-touch

screen, 7H anti-scratch surface

- Wide Operating Temperature Support with Fan-less Design (-25~60°C)
- Wide **DC 12~24V** Input
- 1x Full-size mini PCIe socket for WIFI/LTE, **Different I/O extension** options



Thank you