

ARES-1980

Fanless Rugged Controller with 11th Gen. Intel® Core™ i Processor (Tiger Lake UP3)



Features

- Onboard Intel® Core™ i Processor (Tiger Lake UP3)
- Support 2 x 260-pin DDR4 SO-DIMM sockets
- Support 5G (Sub-6G) module, M.2 NVMe SSD Gen3x4, USB 3.2 Gen2, and 2.5 GbE LAN
- Rich I/O: 4 x COM/ 3 x LAN/ 4 x USB3.2 Gen2/ Remote PWR
- Support Triple-display (DVI-D/HDMI/DP)
- Wide Power Input: 9~36 VDC
- Power on/off delay control / configurable ignition power control
- Support DirectX 12

Industrial Automation

| System | |
|------------------|--|
| CPU | Soldered onboard Intel® i7/ i5/ i3 Processor (Default: i5 CPU Tiger Lake-U) |
| Memory | 2 x 260-pin DDR4 SO-DIMM sockets, supporting 3200MHz SDRAM up to 64GB |
| Chipset | SoC |
| Graphics | Intel® Iris® Xe Graphics |
| LAN Chipset | 2 x Intel® i211AT PCIe controller 1 x Intel® 225LM PCIe controller (iAMT support w/ i5/i7 skus) |
| Watchdog Timer | 1~255 levels reset |
| I/O | |
| Serial Port | 2 x RS232 (DB-9 male connector) 2 x RS232 _(Default) /422/485 (RI/5V/12V) (DB-9 male connector/ Switch via BIOS) |
| USB Port | 4 x USB 3.2 Gen2 (2 w/ independent full speed) 1 x USB 2.0 onboard for encryption dongle (Type A) |
| LAN | 2 x RJ-45 ports for GbE LAN (PoE complies with IEEE802.3af) 1 x RJ-45 ports for 2.5 GbE LAN (iAMT support w/ i5/i7 skus) |
| Video Port | 1 x HDMI 2.0b connector, supporting 4K/2K resolution 1 x DisplayPort 1.4 connector, supporting 4K/2K resolution 1 x DVI-D connector, supporting Full HD resolution |
| Expansion Bus | 1 x full mPCIe slot (PCIe x1+ USB2.0, Full size) w/ 1 x SIM card slot 1 x M.2 B-Key 2242/3042/3052 (PCIe x2 + USB3.0) w/ 2 x SIM card slots |
| Digital I/O | 8 x DI & 8 x DO w/ 1.5KV isolation |
| Multi-Serial Bus | I ² C/SPI/UART/GPIO (w/ 3.3 or 5V) via DB-26 |
| Others | 10 x Antenna Holes are reserved |
| Storage | |
| Type | 1 x M.2 M-Key 2242/2280 (PCIe Gen III x4 + SATAIII) 1 x 2.5" HDD/SSD tray (SATA III + SATA PWR connector) |
| Environmental | |
| Operating Temp. | -20 ~ 60°C (-4 ~ 140°F), ambient w/ air flow |

| | |
|--------------------|--|
| Storage Temp. | -40 ~ 70°C (-40 ~ 158°F) |
| Operating Humidity | 10-95% @ 60°C (non-condensing) |
| Vibration | 5~500Hz 3 Grms X,Y,Z axis w/ SSD, according to IEC 60068-2-64 |
| Shock | 40G peak acceleration (11 m sec. duration), operation w/ SSD 80G peak acceleration (11 m sec. duration), nonoperation w/ SSD According to IEC 60068-2-27 |

Qualification

| | |
|---------------|-----------------|
| Certification | CE/ FCC Class A |
|---------------|-----------------|

Power Requirement

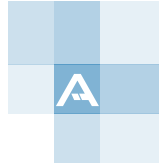
| | |
|------------------------|--|
| Power Input | DC 9~36V (3-pin terminal block: V+, V-, GND) |
| Max. Power Consumption | 120W |
| Remote Control | 1x3-pin terminal block for remote control and PWR LED output |
| Power Ignition | IGN +/- |

Mechanical

| | |
|------------------------|--|
| Construction | Sheet Metal + Aluminum Alloy |
| Mounting | Wall-mount (standard) DIN-rail or VESA mount (optional w/ CTOS bracket) |
| Weight | 3.7kg |
| Dimensions (W x D x H) | 210 x 180 x 70 mm |

OS Support

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|----------------|--|
| Windows 10 IoT | |
| Ubuntu 20.04 | |

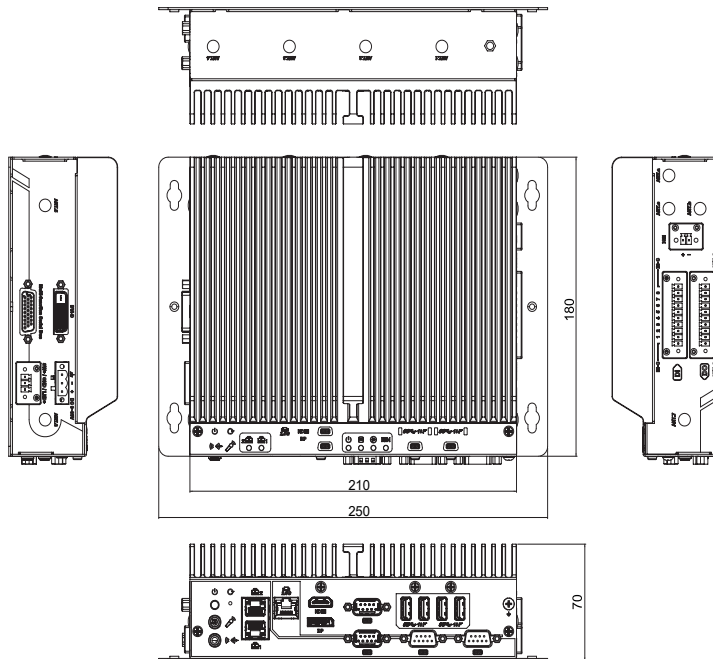


Ordering Information

| | |
|-------------------------|---|
| ARES-1980-1115G4E (BTO) | ARES-1980 w/ i3-1115G4E, 2*DDR4, 4*COM, 4*USB3.2 Gen2, 1*onboard USB2.0, 2*PoE, 1*2.5GbE LAN, 1*HDMI, 1*DVI-D, 1*DP, 1*mPCIe slot, 1*M.2 B-Key, 1*M.2 M-Key, 1*2.5" SSD/HDD tray, 1*M.2 E-Key, 2*SIM, 1*Multi Serial BUS, 8*DI/DO, 1*MIC-in, and 1*Line-out |
| ARES-1980-1145G7E | ARES-1980 w/ i5-1145G7E, 2*DDR4, 4*COM, 4*USB3.2 Gen2, 1*onboard USB2.0, 2*PoE, 1*2.5GbE LAN, 1*HDMI, 1*DVI-D, 1*DP, 1*mPCIe slot, 1*M.2 B-Key, 1*M.2 M-Key, 1*2.5" SSD/HDD tray, 1*M.2 E-Key, 2*SIM, 1*Multi Serial BUS, 8*DI/DO, 1*MIC-in, and 1*Line-out |
| ARES-1980-1185G7E | ARES-1980 w/ i7-1185G7E, 2*DDR4, 4*COM, 4*USB3.2 Gen2, 1*onboard USB2.0, 2*PoE, 1*2.5GbE LAN, 1*HDMI, 1*DVI-D, 1*DP, 1*mPCIe slot, 1*M.2 B-Key, 1*M.2 M-Key, 1*2.5" SSD/HDD tray, 1*M.2 E-Key, 2*SIM, 1*Multi Serial BUS, 8*DI/DO, 1*MIC-in, and 1*Line-out |

BTO means Build-to-Order.

Dimensions



Optional Configuration (*CTOS Kit)

| | | |
|-------------------------|--|--|
| PAC-120W6B-FSP-ES | 19V/6.3A, 120W AC/DC adapter kit | |
| WIFI-AT4550 | Atheros QCNFA324 Wi-Fi module w/ 2*30cm internal wiring | |
| ANT-D11 | 1 x Wi-Fi Dual-band 2.4G/5G antenna | |
| ANT-H11 | 2dBi HSUPA ANTENNA KIT | |
| LTE-1450 | LTE Quectel EC25-E Cat 4 Mini-PCIe Wireless Kit(excluded North of America/ Euro) | |
| MM-4C-4G/8G DIMM Memory | 2G/4G/8G DDR4 Memory | |

*CTOS means Configure-to-Order Service.

Assured Systems

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