

# ARES-1980

Fanless Rugged Controller with 11<sup>th</sup> 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 3.1 Gen2, and 2.5 GbE LAN
- Rich I/O: 4 x COM/ 3 x LAN/ 4 x USB3.1/ Remote PWR
- Support Triple-display (DVI-D/HDMI/DP)
- Wide Power Input: 9~36VDC
- Power on/off delay control / configurable ignition power control
- Support DirectX 12

## 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
Watchdog Timer	1~255 levels reset

## I/O

Serial Port	2 x RS232 (DB-9 male connector) 2 x RS232 <sub>(Default)</sub> /422/485 (RI/5V/12V) (DB-9 male connector/ Switch via BIOS)
USB Port	2 x USB 3.1 Gen1 (5Gbps) 2 x USB 3.1 Gen2 (10Gbps) 1 x USB 2.0 onboard for encryption dongle (Type A)
LAN	2 x RJ-45 ports for GbE LAN (PoE) 1 x RJ-45 ports for 2.5 GbE LAN
Video Port	1 x HDMI 2.0b connector, supporting 4K2K resolution 1 x DisplayPort 1.4 connector, supporting 4K2K 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 <sup>2</sup> C/SPI/UART/GPIO (w/ 3.3 or 5V) via DB-15
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)
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## Environmental

Operating Temp.	-10 ~ 50°C (14 ~ 122°F), ambient w/ air flow
Storage Temp.	-20 ~ 60°C (-4 ~ 140°F)

Operating Humidity	10-95% @ 50°C (non-condensing)
Vibration	5~500Hz 3 Grms X,Y,Z axis w/ SSD, according to IEC 60068-2-64 40G peak acceleration (11 m sec. duration), operation w/ SSD
Shock	80G peak acceleration (11 m sec. duration), nonoperation w/ SSD According to IEC 60068-2-27

## Qualification

Certification	CE/ FCC Class A
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## Power Requirement

Power Input	DC 9~36V (3-pin terminal block: V+, V-, GND)
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	TBD
Dimensions (W x D x H)	210 x 180 x 60 mm

## OS Support

Windows 10 IoT	
Ubuntu 18.04	

## Ordering Information

ARES-1980-1115G4E	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-1970-1185G7E	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

\*CTOS means Configure-to-Order Service. BTO means Build-to-Order.



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