

ARES-1990 Series

1U Height Ultra Slim Fanless Box PC w/ 14th Gen Raptor Lake U Series Processors



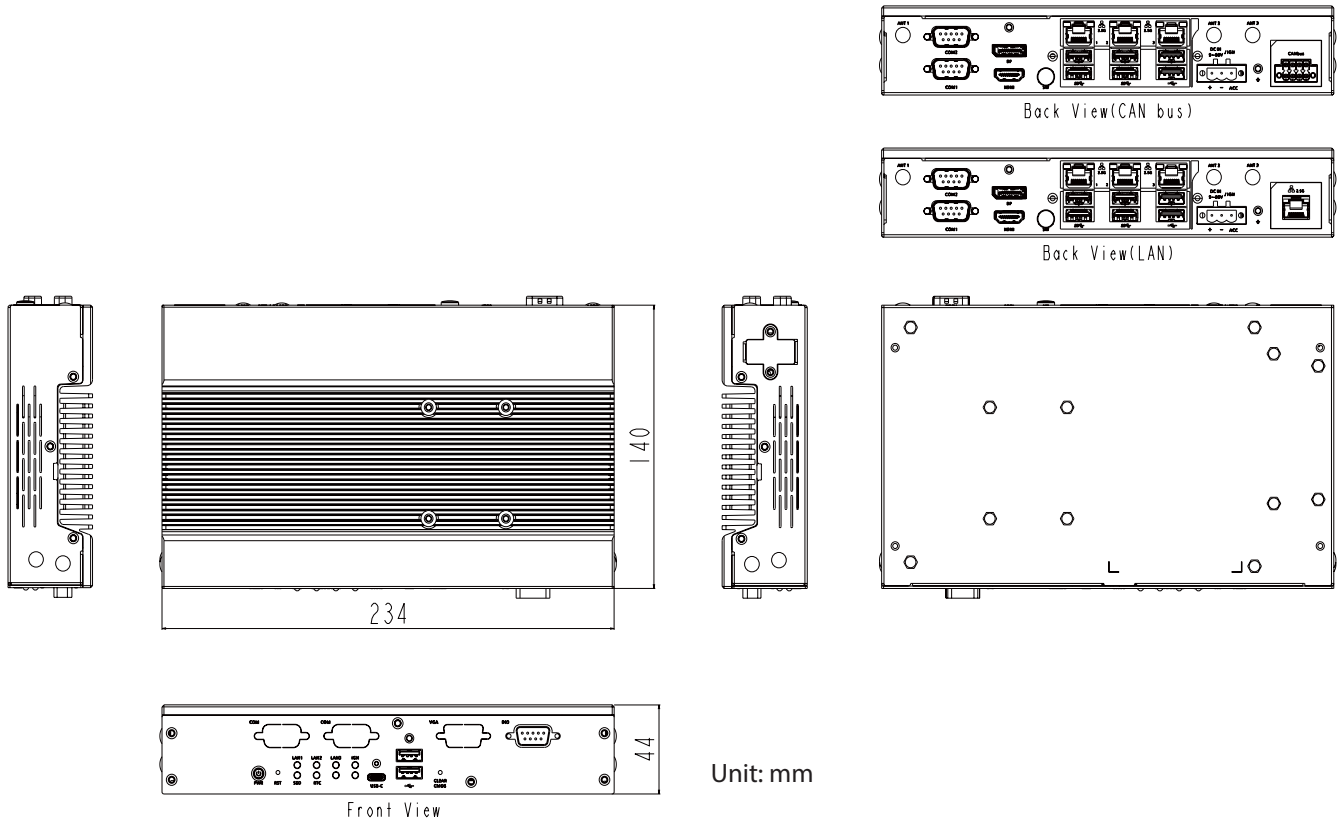
Features

- Intel® Core™ 5 Processor 120U
- Ultra Slim & Fanless Design
- Support Wide Input Voltage Range of 9 ~ 36VDC
- Support up to 9 x USB Ports
- Support up to 3 x 2.5GbE LAN Ports (up to 4 x 2.5GbE via expansion)
- Support up to 4 x Simultaneous Displays
- Dual M.2 Slots supporting SATA & NVMe Interfaces
- Support M.2 AI Module expansion

System	
CPU	Intel® Core™ 5 Processor 120U
Memory	1 x 262-pin DDR5 SO-DIMM sockets, up to 48GB
Chipset	SoC
Graphics	Integrated Intel® Graphics
LAN Chipset	Intel® i226LM
Watchdog Timer	1~255 levels reset
TPM	TPM2.0 (fTPM/dTPM)
I/O	
Serial Port	2 x RS-232(Default)/422/485
	2 x RS-232 (optional)
USB Port	4 x USB-A 3.2 Gen2
	4 x USB-A 2.0 ports
	1 x USB-C 3.2 supports DP Alt. (4096 x 2304 @ 60 Hz) & 10W power output (5V/2A)
LAN	ARES-1990-CAN: 3 x 2.5GbE ports
	ARES-1990-LAN: 4 x 2.5GbE ports
	ARES-1990-AI: 3 x 2.5GbE ports + 1 x GbE port
Video Port	1 x DisplayPort (DP++), up to 4096 x 2304 @ 60 Hz
	1 x HDMI, up to 4096 x 2304 @ 60 Hz
	1 x VGA, up to 1920 x 1200 @ 60 Hz (optional)
Expansion Bus	1 x USB-C 3.2 support DP Alt. Video port support up to 4 x simultaneous displays
	1 x M.2 B-key 2242/3042 slot (PCIe 3.0 x2 + SATA + USB 2.0/3.0) w/ 1 x nano SIM card slot
	1 x M.2 E-key 2230 slot (PCIe 3.0 x1 + USB2.0 +CNVi)
Digital I/O	8 x DI/DO via 1 x DB9 port
CANBus (ARES-1990-CAN only)	2 x 2kV isolated CAN FD via terminal block
Storage	
Type	1 x M.2 M-key 2242 slot (PCIe 4.0 x4 + SATA)
Power Requirement	

Power Input	DC 9 ~ 36V via 3-pin terminal block (V+, GND, IGN)
Ignition Switch	1 x 3-pin terminal block (shared w/ power input)
Power Consumption	Max. 90W
Environmental	
Operating Temp.	-20 ~ 60°C (-4 ~ 140°F), ambient w/ air flow *For ARES-1990-AI, the operating temperature is -20 ~ 55°C (-4 ~ 131°F) due to AI module thermal constraints.
Storage Temp.	-40 ~ 80°C (-40 ~ 176°F)
Operating Humidity	10 ~ 95% @ 60°C (non-condensing)
Vibration	Comply with MIL-STD-810H, Method 514.8, Category 4, operating
Shock	Comply with MIL-STD-810H, Method 516.8, Procedure I, functional shock=20g, operating
Qualification	
Certification	CE, FCC Class A
Mechanical	
Construction	Metal + Aluminum
Mounting	Wall-mount (standard) DIN-rail (optional w/ CTOS bracket) VESA (optional w/ CTOS bracket)
Weight	2 kg (4.41 lb)
Dimension (W x H x D)	234 x 44 x 140 mm (9.21" x 1.73" x 5.51")
OS Support	
Windows 10 / Windows 11 / Ubuntu	
Ordering Information	
ARES-1990-LAN	ARES-1990 w/ Core 5 120U, w/ 4 x LAN, 9 x USB, 1 x DP, 1 x HDMI, 8 x DIO, 2 x COM, 1 x M.2 M-Key, 1 x M.2 B-Key, 1 x M.2 E-Key
ARES-1990-CAN	ARES-1990 w/ Core 5 120U, w/ 2 x CANBus, 3 x LAN, 9 x USB, 1 x DP, 1 x HDMI, 8 x DIO, 2 x COM, 1 x M.2 M-Key, 1 x M.2 B-Key, 1 x M.2 E-Key
ARES-1990-AI	ARES-1990 w/ Core 5 120U, 4 x LAN, 9 x USB, 1 x DP, 1 x HDMI, 8 x DIO, 2 x COM, 1 x M.2 M-Key, 1 x M.2 B-Key, 1 x M.2 E-Key Pre-installed MemryX M.2 AI Module

Dimension



Standard Accessories

CLB-1990 Cable-Lock Bracket for ARES-1990 Series



WMK-1973 Wall Mounting Bracket Kit for ARES Series



Optional Accessories

PAC-120W6B-FSP-ES 19V/6.3A, 120W AC/DC Adapter Kit

WiFi-AT3550 Atheros QCNFA324 M.2 Wi-Fi+BT Module Kit (w/ 2 x 30cm RF Cable)

ANT-D11 1 x Wi-Fi Dual-band 2.4G/5G Antenna Kit

ARES-1990 VESA DIN RAIL BKT KIT VESA DIN RAIL BKT KIT for ARES-1990 Series