

EMS-ARH

Intel® Core™ Ultra 7/5 Processor (Arrow Lake-H Platform) Fanless Rugged Embedded System

Key Features

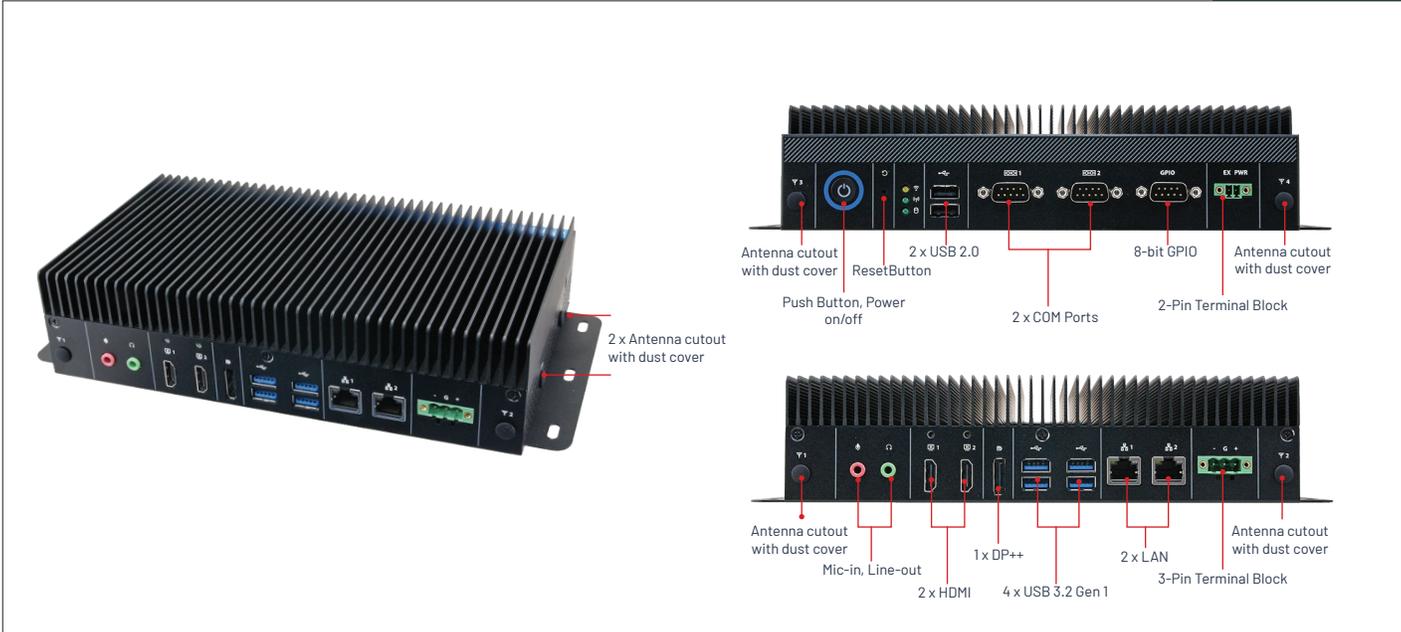
- Qualified Intel® AI Edge Systems
- Intel® Core™ Ultra 7 Processor 255H (28W), Intel® Core™ Ultra 5 Processor 225H (28W), Arrow Lake-H Platform
- Integrated Intel® Arc™ GPU
- Intel® AI Boost (NPU)
- 2 x SO-DIMM sockets support up to 64GB DDR5 6400MT/s
- 2 x DP++ 1.4, 1 x HDMI 2.0b, supports 3 independent displays
- Dual Intel® Ethernet Controller I226-IT 2.5GbE LAN ports
- 2 x external COM ports, 1 x external GPIO
- Support 5G (Sub-6G) module, M.2 NVMe SSD Gen4 x4
- Fanless operation Temperature from -40°C ~ 50°C
- Wide range DC power input from +9~36V
- TPM 2.0, iAMP (selected CPU), IP50
- Flexible IO interfaces via IET interface (1 x DDI, 4 x PCIe Gen4x1, 3 x USB2.0, 1 x SMBus, eSPI)



Product Specifications

System		External I/O (Front)	
CPU	Intel® Core™ Ultra Processor (Series 2) Intel® Core™ Ultra 7 Processor 255H (28W) Intel® Core™ Ultra 5 Processor 225H (28W) Arrow Lake-H Platform	Power Switch	1 x Push Button for Power on/off
System Memory	2 x 262-pin SO-DIMM sockets support up to 64GB DDR5 6400MT/s	LED Indicators	1 x Power LED (Blue) 1 x Storage LED (Yellow) 1 x LTE LED (Green) 1 x Wi-Fi LED (Green)
BIOS	AMI uEFI BIOS 256 Mbit SPI Flash ROM	Reset Button	1 x Push Button for Reset
Audio Codec	Realtek HD Audio	USB	2 x USB 2.0
Ethernet	2 x Intel® Ethernet Controller I226-IT , 10/100/1000/2500 Base-Tx GbE Compatible	COM Port	2 x RS232/422/485
Expansion	1 x M.2 B-Key (2242/3042/3052), supports SATA3 / PCIe Gen4x1 / USB 3.2 Gen2 + SIM Card slot 1 x M.2 E-Key (2230) for Wi-Fi and BT Module (PCIe Gen4x1 / USB 2.0) 1 x IET interface (1 x DDI, 4 x PCIe Gen4x1, 3 x USB2.0, 1 x SMBus, eSPI)	GPIO	1 x 8-bit GPIO (DB9)
Storage through	1 x M.2 M-Key 2280 (1 x PCIe Gen4x4), supports NVMe 1 x M.2 B-Key 2242, supports SATA (share with expansion slot)	SIM Card Slot	1 x Internal SIM card slot
Watchdog Timer	H/W Reset, 1sec. ~ 65535sec.	Wire-Control Power On/Off	1 x 2-Pin Terminal Block for wire-control power on/off
H/W Status Monitor	CPU & system temperature monitoring and voltages monitoring	Antenna	2 x Antenna cutout with dust covers
TPM	dTPM 2.0	External I/O (Rear)	
iAMT	Supported by selected CPU	Display	1 x DP++ 1.4 2 x HDMI 2.0b
Supported OS	Win 11, Linux	USB	4 x USB 3.2 Gen.1 (5Gbp/s)(w/ USB 2.0)
Display		LAN	2 x RJ45
Chipset	Integrated Intel® Arc™ GPU	Audio	1 x Line-out, 1 x Mic-in
Resolution	DP++ 1.4: 4096x2304 @ 60Hz HDMI 2.0b: 4096x2304 @ 60Hz	DC Input	1 x 3-Pin Terminal Block (V+, V-, GND) Phoenix connector
Multiple Display	Supports 3 Independent Displays	Antenna	2 x Antenna cutout with dust covers
		External I/O (Left Side)	
		Antenna	2 x Antenna cutout with dust covers
		External I/O (Right Side)	
		Antenna	2 x Antenna cutout with dust covers

Product Photo



Product Specifications Continue

Power Requirement		Mechanical and Environment	
Voltage Input	DC in typical 12/24V (+9V ~ +36V), wide voltage single power input TVS component for surge protection Reverse current/voltage protection (Max. Currency: 13A)	Operating Temperature	-40°C ~ 50°C (w/SSD) ambient with air flow
Voltage Input Connector	3-Pin Terminal Block Phoenix connector	Storage Temperature	-30°C ~ 70°C (-22°F ~ 158°F)
ACPI	Single power ATX Support S0,S3, S4, S5 ACPI 5.0 Compliant	Operating Humidity	40°C @ 95% Relative Humidity, Non-condensing
Power Mode	AT/ATX (Default: ATX)	IP Rating	IP 50
		Regulatory/Compliance	CE, FCC Class B
		Mounting Kit	Standard: Wall Mount Kit Optional: Din Rail Mount Kit
		Dimensions	Standard: 9.45" x 5.91" x 2.32" (240 x 150 x 59mm) Optional: 9.45" x 5.91" x 3.35" (240 x 150 x 85mm) (with IET Module)
		Weight	5.07 lbs / 2.3 kg (System) 6.84 lbs / 3.1 kg (w_Package)

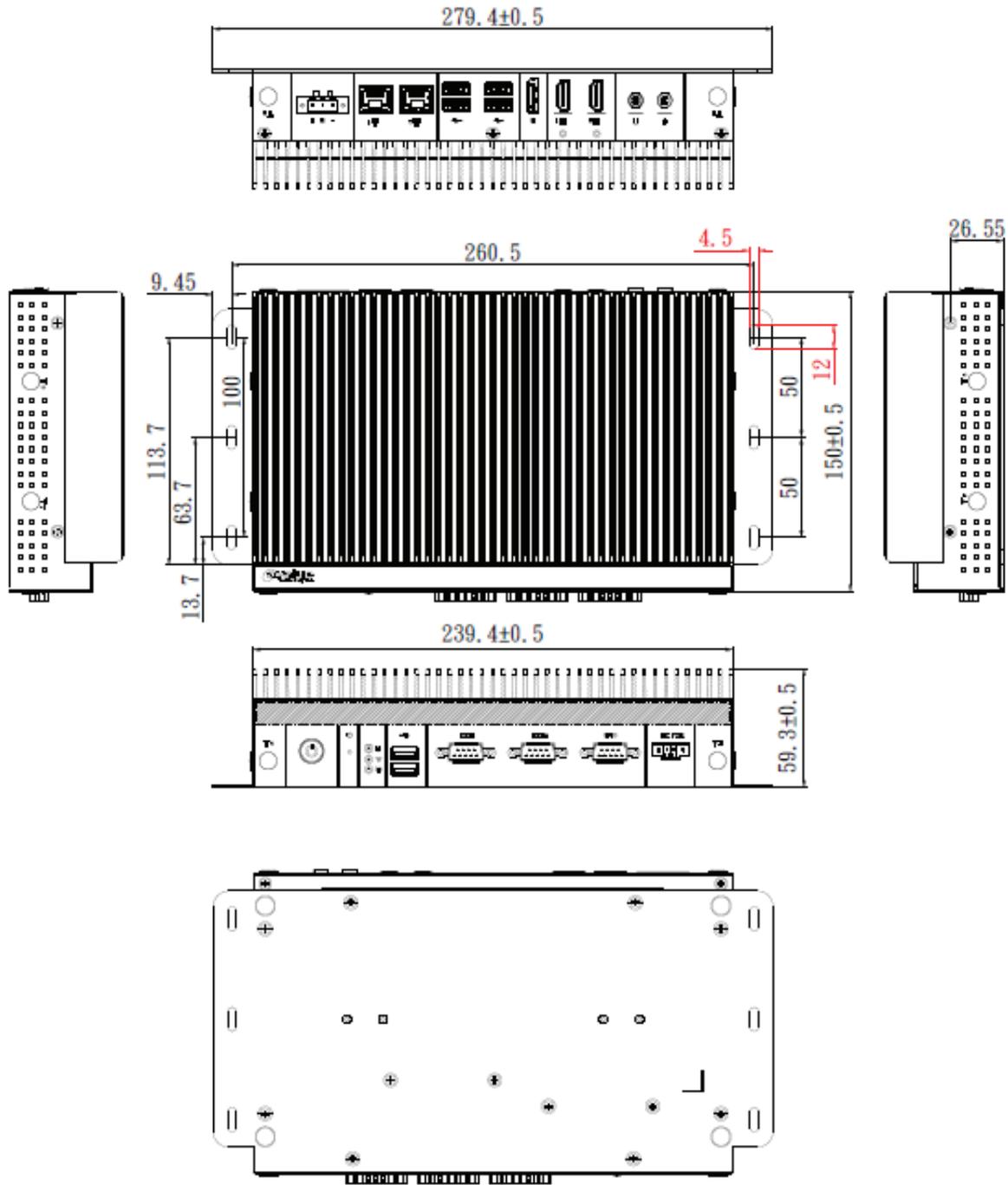
Part No.	Description
EMS-ARH	Please contact BCMSales@bcmcom.com



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Block Diagram / Dimension (Unit: mm)



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