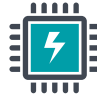


# EC90A-GH

AMD Ryzen™ Embedded R1000 Series  
Ultra Small Size Embedded System

## KEY FEATURES



### High Performance CPU

Smallest AMD Ryzen™ R1000 system



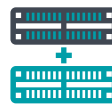
### Ultra Small Size

Dimension: 112.29 x 80 x 56.20mm (W x H x D)



### Fanless Design

DFI optimized thermal design



### Expansion Options

Opt. Mini-PCIE module with RS232/LTE/WIFI function

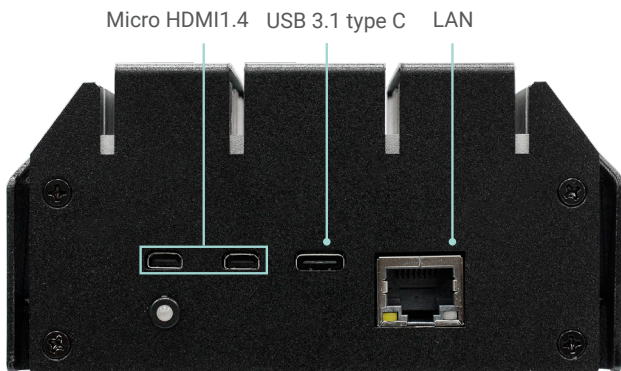


### Easy Integration

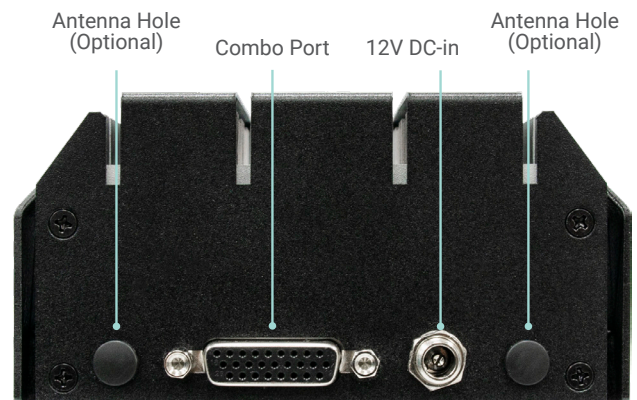
User friendly design for SIM card installation



## PANEL

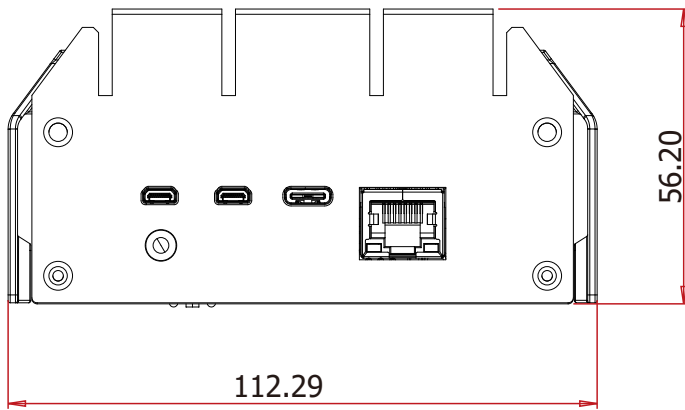


Front View

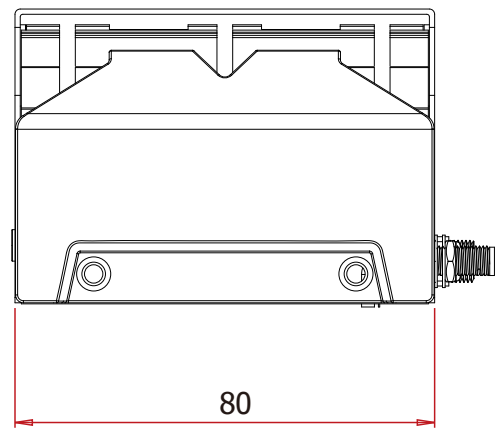


Rear View

## DIMENSIONS

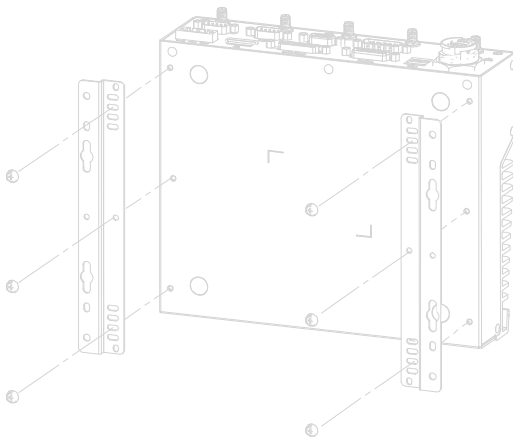


Front View

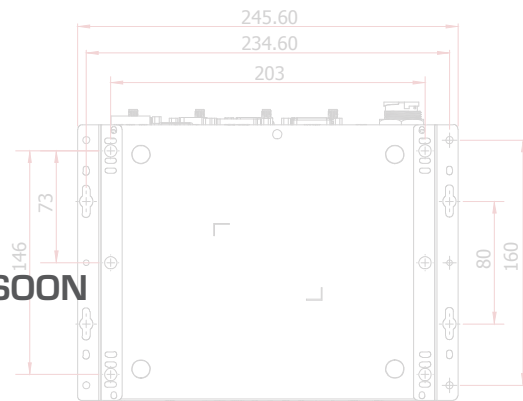


Right View

## WALL MOUNTING



COMING SOON



## SPECIFICATION

SYSTEM	Processor	AMD Ryzen™ Embedded R1606G, Dual Core, 1MB Cache, 3 CU, 2.6GHz (3.5GHz), 12W AMD Ryzen™ Embedded R1505G, Dual Core, 1MB Cache, 3 CU, 2.4GHz (3.3GHz), 12W AMD Ryzen™ Embedded R1305G, Dual Core, 3 CU, 1.5GHz (2.8GHz), 8-10W AMD Ryzen™ Embedded R1102G, Dual Core, 3 CU, 1.2GHz (2.6GHz), 6W
	Memory	DDR4 Memory Down up to 4GB/8GB Single Channel DDR4 2400MHz
	BIOS	AMI SPI 64bit
GRAPHICS	Controller	AMD Vega GPU with up to 3 computing units.
	Feature	H.265 decode/encode support, VP9 decode.
	Display	2 x Micro HDMI1.4 HDMI 1.4: resolution up to 4096 x 2160 @ 24Hz
STORAGE	Internal	eMMC up to 16/32/64/128GB
EXPANSION	Interface	1 x Full-size Mini PCIe (PCIe Gen2/USB 2.0, opt: USB 3.1 Gen2/USB 2.0)
ETHERNET	Controller	1 x I211AT PCIe or 1 x Intel I210IT (optional)
LED	Indicators	Power status
FRONT I/O	Ethernet	1 x GbE
	USB	1 x USB 3.1 Gen2 type C
	Display	2 x Micro HDMI1.4
REAR I/O	Combo Port	(option 1) 1 x 8-bit DIO + 1 x SMBus (option 2) 2 x RS-232
	Antenna	2 x Antenna (LTE or WiFi, via module) (optional) not available if selecting 2 x RS-232
WATCHDOG TIMER	Output & Interval	System reset, programmable via software from 1 to 255 seconds
SECURITY	TPM	fTPM 2.0
POWER	Type	12V DC-in
	Connector	DC Jack with lock
OS SUPPORT	Microsoft	Windows 10 IoT Enterprise 64-bit
	Linux	Ubuntu-certified IoT hardware
ENVIRONMENT	Operating Temperature	-20~45°C
	Storage Temperature	-40~85°C
	Relative Humidity	5 to 90% RH (non-condensing)
MECHANICAL	Construction	Metal + Aluminium
	Mounting	Wall mount /VESA mount
	Dimensions (W x H x D)	112.29 x 80 x 56.20mm
	Weight	700g
STANDARDS AND CERTIFICATIONS	Shock	Non-Operational Half-sine waveform: 5G
	Vibration	Non-Operational Vibration 1.5 G
	Certifications	CE, FCC, UKCA

## ORDERING INFORMATION

Model Name	Part Number	Description
EC90A-GH	750-EC90A1-000G	EC90A-GH: GHF51-BN-46R16, R1606G, DDR4 4GB, eMMC 32GB, 1 LAN, 2 Micro HDMI, 1 USB 3.1 Gen 1 type C, 8bit DIO& SMBUS, 12VDC, F/G SYSTEM RoHS
EC90A-GH	750-EC90A1-100G	EC90A-GH: GHF51-EN-46R16, R1606G, DDR4 4GB, eMMC 64GB, 1 LAN, 2 Micro HDMI, 1 USB 3.1 Gen 1 type C, 8bit DIO& SMBUS, 12VDC, F/G SYSTEM RoHS
EC90A-GH	750-EC90A1-200G	EC90A-GH: GHF51-BN-46R16, R1606G, DDR4 4GB, eMMC 32GB, 1 LAN, 2 Micro HDMI, 1 USB 3.1 Gen 1 type C, 2 COM /RS232, 12VDC, F/G SYSTEM RoHS
EC90A-GH	750-EC90A1-300G	EC90A-GH: GHF51-EN-46R16, R1606G, DDR4 4GB, eMMC 64GB, LTE module, 1 LAN, 2 Micro HDMI, 1 USB 3.1 Gen 1 type C, 8bit DIO& SMBUS, 2 SMA, 12VDC, F/G SYSTEM RoHS
EC90A-GH	750-EC90A1-400G	EC90A-GH:GHF51-BN-46R15,R1505G,DDR4 4GB, eMMC 64GB, 1 LAN, 2 Micro HDMI, 1 USB 3.1 Gen 1 type C, 2 COM /RS232, 12VDC, F/G SYSTEM RoHS
EC90A-GH	750-EC90A1-500G	EC90A-GH:GHF51-BN-46R11,R1102G,DDR4 4GB, eMMC 64GB, 1 LAN, 2 Micro HDMI, 1 USB 3.1 Gen 1 type C, 2 COM /RS232, 12VDC, F/G SYSTEM RoHS
EC90A-GH	750-EC90A1-600G	EC90A-GH:GHF51-BN-46R13,R1305G,DDR4 4GB, eMMC 64GB, 1 LAN, 2 Micro HDMI, 1 USB 3.1 Gen 1 type C, 2 COM /RS232, 12VDC, F/G SYSTEM RoHS

## OPTIONAL ITEMS

Optional Items	Part Number	Description
Power Adapter	671-106012-000G	Power adapter 12V, 60W
WiFi+BT kit	761-AP1235-000G	WiFi+BT Module, W/Antenna, SMA Cable/200mm, 802.11 abgn/ac