



BCO-2000-RYZ FANLESS MINI COMPUTER

# BCO-2000-RYZ-V1605B

Fanless Mini Computer with AMD Ryzen™ Embedded R1000/V1000 Series,  
2x LAN, 4x USB



## Features

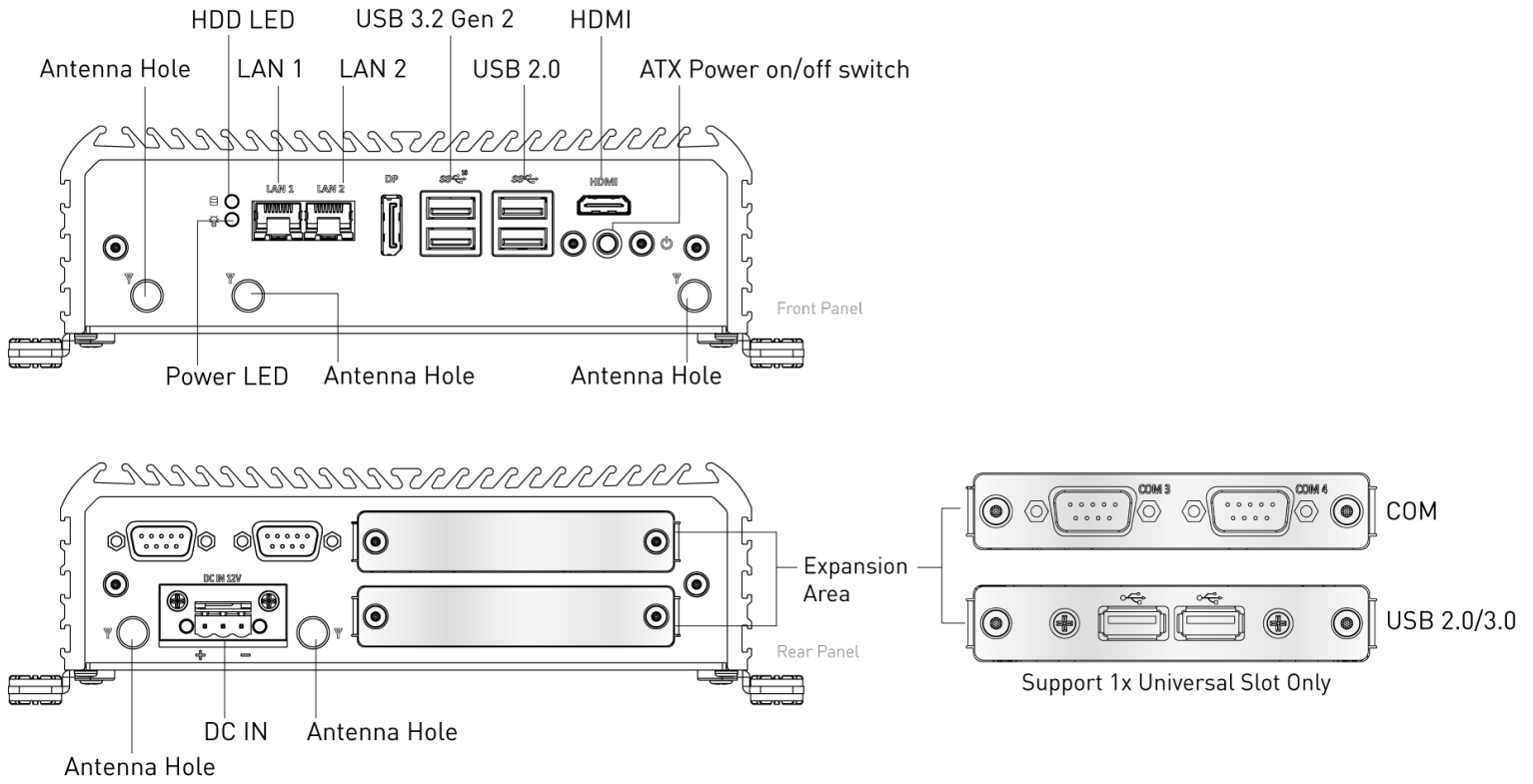
- Support AMD Ryzen™ Embedded R1000/V1000 Series
- 2x 260-pin DDR4 2400 MHz SODIMM. Max. up to 32GB (ECC/non-ECC)
- 2x Intel® GbE (Support Wake-on-LAN and PXE)
- Triple Independent Display by 1x DisplayPort, 1x LVDS, 1x HDMI (Optional)
- 1x M.2 B Key for 4G/5G Communications & Storage
- 1x Full-Size Mini PCIe for expansion modules
- 2x USB 3.2 Gen 2 (10Gbps), 2x USB 2.0, 2x RS-232/422/485
- 1x Internal 2.5" SATA HDD Bay, 1x internal SIM socket
- Watchdog timer 1-255s system reset
- TPM 2.0 Supported
- UL Listed

## Specifications

System	
Processor	Support AMD Ryzen™ Embedded V1000/R1000 Series
	<ul style="list-style-type: none"> <li>• AMD Ryzen™ Embedded V1605B with Radeon™ Vega 8 Graphics, 4M Cache, 4 Cores, 8 Threads, Up to 3.6 GHz</li> <li>• AMD Ryzen™ Embedded R1606G with Radeon™ Vega 3 Graphics, 4M Cache, 2 Cores, 4 Threads, Up to 3.5 GHz (Optional)</li> </ul>
System Chipset	SoC integrated
LAN Chipset	GbE1: Intel i210 (Support Wake-on-LAN and PXE) GbE2: Intel i210 (Support Wake-on-LAN and PXE)
Audio Codec	Realtek ALC888S
System Memory	2x 260-Pin DDR4 2400 MHz SODIMM. Max 32 GB
BIOS	AMI uEFI 64 Mbit SPI flash
Watchdog	Software Programmable Supports 1~255 Sec. System Reset
TPM	TPM 2.0
Display	
Display Port	1x DisplayPort 1.4, DP++, Support resolution 3840 x 2160 @60 Hz
HDMI	1x HDMI 2.0b, Support resolution 3840 x 2160 @60 Hz (Optional)
LVDS	1x 24-bit dual channel LVDS, Support resolution up to 1920x1200 @60Hz
Multiple Display	Triple Display
Storage	
M.2	1x M.2 B Key, 3042, Support SATA
SIM Socket	1x Internal SIM socket (M.2 B Key attached)
SSD/HDD	1x Internal 2.5" SATA HDD Bay (support H=9.5mm)
Expansion	
M.2	1x M.2 B Key ( PCIe x1 & USB 3.0, 3042/3052, SATA, USIM, Support 4G/5G)
Mini PCIe	1x Full-Size Mini PCIe for expansion modules
I/O	
COM	2x RS-232/422/485
DIO	4 in / 4 out (Isolated)
LAN	2x RJ45
Universal I/O Bracket	2x Universal I/O Bracket (By mini PCIe/M.2 interface)
USB	2x USB 3.2 Gen 2 (10 Gbps) 4x USB 2.0 (2x internal)
Others	5x WiFi Antenna Holes 1x 4-Pin FAN Connector 1x RTC battery by cable
Operating System	
Windows	Windows 10
Linux	Linux Kernel 5.x (Fedora 30 or above / Ubuntu 19.04 or above)

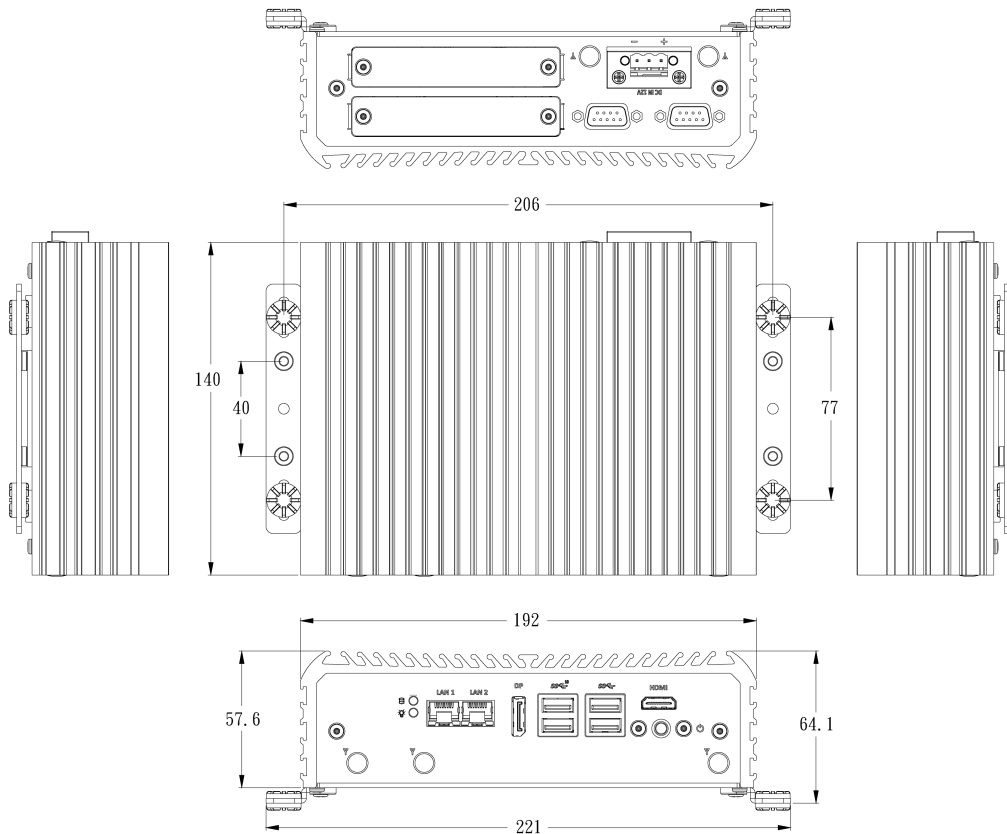
Power	
Power Adapter	Optional AC/DC 12V/5A, 60W
Power Mode	AT, ATX 12VDC
Power Protection	Reserve Protection
Environment	
Operating Temperature	-20°C to 55°C (25W CPU)
Storage Temperature	-30 °C to 85 °C
Relative Humidity	10% to 95% (non-condensing)
Certification	UL, CE, FCC Class A
Vibration	With SSD: 3 Grms, 5 - 500 Hz, 0.5 hr/axis With HDD: 1 Grms, 5 - 500 Hz, 0.5 hr/axis
Shock	With SSD: 20G, half sine, 11ms
Physical	
Dimensions	140 (D) x 192 (W) x 57.6 (H) mm
Weights	1.5 Kg
Construction	Extruded Aluminum with Heavy Duty Metal
Mounting Options	Wall Mounting, DIN-Rail Mounting (Optional)

## External I/O Mechanical Layout



## Dimension

Unit: mm



## Available Models

Model No.	Description
BCO-2000-RYZ-V1605B	Basic Fanless Embedded System with AMD Ryzen™ Embedded V1605B, 2xLAN, 4x USB, 2x LAN
BCO-2000-RYZ-R1606G	Basic Fanless Embedded System with AMD Ryzen™ Embedded R1606G, 2xLAN, 4x USB, 2x LAN

## Optional Accessories

Model No.	Description
1-E09A06007	Adapter AC/DC 12V 5A 60W with 3pin Terminal Block Plug 5.0mm Pitch
SFICBL022	Power Cord, 3-pin US Type, 180cm
1-TPCD00002	Power Cord, European Type, 180cm
1-TPCD00001	Power Cord, 3-pin UK Type, 180cm
3-DINR-0004	DIN-Rail Mount Kit
3-BC2000CMKIT-S0	Module Kit with 4x COM for BCO-2000 Series
3-BC2000U2KIT-S0	Module Kit with 2x USB 2.0 for BCO-2000 Series
3-BC2000U31IT-S1	Module Kit with 2x USB 3.0 for BCO-2000 Serie

## Packing List

1x BCO-2000-RYZ-V1605B Fanless Mini Computer  
1x Wall Mount Kit  
1x Accessory Kit