



AI EDGE INFERENCE COMPUTER

## BCO-6000-RPL

AI Edge Computer with Intel Raptor Lake-S/ Alder Lake-S® CPU, 3x DP, 2x COM



## Features

- Support Intel® IOTG Raptor Lake-S/ Alder Lake-S Processor Core i9/i7/i5/i3, Pentium, Celeron (35W only)
- DDR4 SODIMM. Max. up to 64GB (Default: 8GB)
- Triple Independent Display by 2x Display Port, 1x HDMI
- Intel® I225-V/ I225LM/ I225LV 2.5GbE LAN
- 1x M.2 (M Key (Default: 128GB SSD)), 1x M.2 (E key), 1x M.2 (B key)
- 4x COM, 6x USB 3.2 Gen2, 2 USB 3.2 Gen1, x2 USB 2.0
- 2x PCIe x8 Slot or 1x PCIe x16 Slot
- 9 to 36VDC Wide Range Power Input Supporting AT/ATX Mode
- Wide Operating Temperature 0°C to 50°C
- TPM 2.0 Supported
- CE, FCC Class A

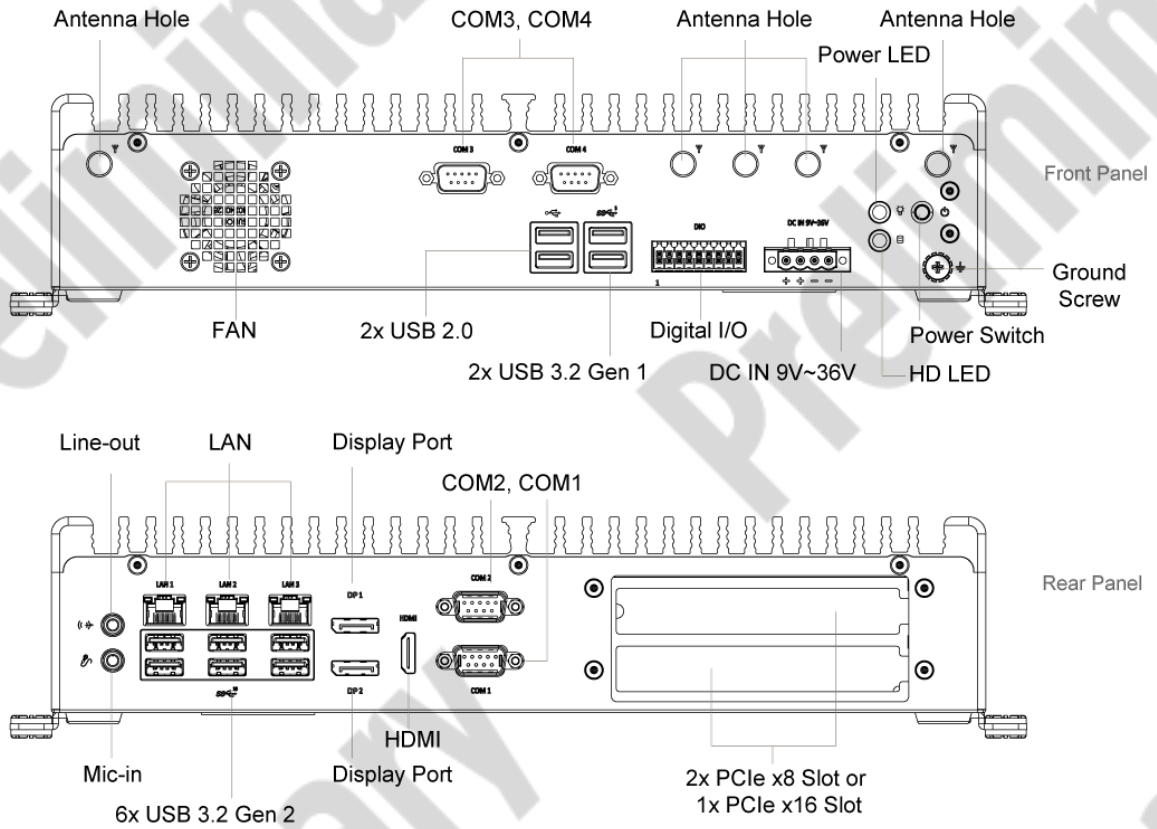


## Specifications

| System           |   |
|------------------|---|
| Processor        | Intel® IOTG Raptor Lake-S Processor Core i9/i7/i5/i3, Pentium, Celeron (35W only)<br>Intel® IOTG Alder Lake-S Processor Core i9/i7/i5/i3, Pentium, Celeron (35W only)   |
| System Chipset   | Intel® Q670E Express Chipset  |
| LAN Chipset      | Intel® I225LM PCIe 2.5GbE LAN<br>Intel® I225V PCIe 2.5GbE LAN<br>Intel® I225LV PCIe 2.5GbE LAN  |
| Audio Codec      | Realtek ALC897  |
| System Memory    | DDR4 3200MT/s SODIMM. Max. up to 64 GB (Default: 8GB & Non- ECC supported)  |
| BIOS             | AMI UEFI BIOS   |
| Watchdog         | Software Programmable Supports 1~255 sec. System Reset  |
| TPM              | TPM 2.0   |
| Display          |   |
| Display Port     | 2x Dual Mode DisplayPort 1.4a<br>Max Resolution 4096 x 2304 @60Hz   |
| HDMI             | 1x HDMI 1.4b<br>Max Resolution 4096 x 2304 @24Hz  |
| Multiple Display | 3x Independent Displays   |
| Storage          |   |
| M.2 B-Key        | 1x M.2 M key Type: 2242/2280<br>• Support PCIe x4 Gen3 NVMe SSD)<br>• PCIe x4 Gen3 signal from PCH)<br>• Support B+M Key Module for AI/Storage)<br>• Default: 128GB SSD   |
| Expansion        |   |
| M.2              | 1x M.2 E key Type: 2230<br>(Support PCIe x1 + USB 2.0; Support CNVi)<br>Devices Supported:<br>Intel® AX210 Wi-Fi 6E & BT-5.1 (vPro Supported)<br><br>1x M.2 B key Type: 3042 with Nano SIM Holder<br>(Support PCIe x1 + USB 3.2 Gen 2 x1 + USB 2.0, 5G/4G/LTE Module) |
| PCIe             | 2x PCIe x8 Slot or 1x PCIe x16 Slot<br>1x Default Industrial Fan<br>Support A2000 GPU (optional)  |
| I/O              |   |
| Audio            | Line-out/Mic-in   |
| COM              | 4x DB9<br>COM1: RS232/422/485<br>COM2: RS232/422/485<br>COM3: RS485<br>COM4: RS485  |
| DIO              | 8 in / 8 out (Isolated)   |
| LAN              | 3x RJ45 (2.5GbE)  |
| USB              | 8x USB 3.2 Gen 2 x1 Type-A<br>2x USB 2.0 Type-A   |
| Others           | 5x Antenna Holes<br>1x Power button<br>1x HD LED<br>1x Power LED  |
| Operating System |   |
| Windows          | Windows 10/11   |

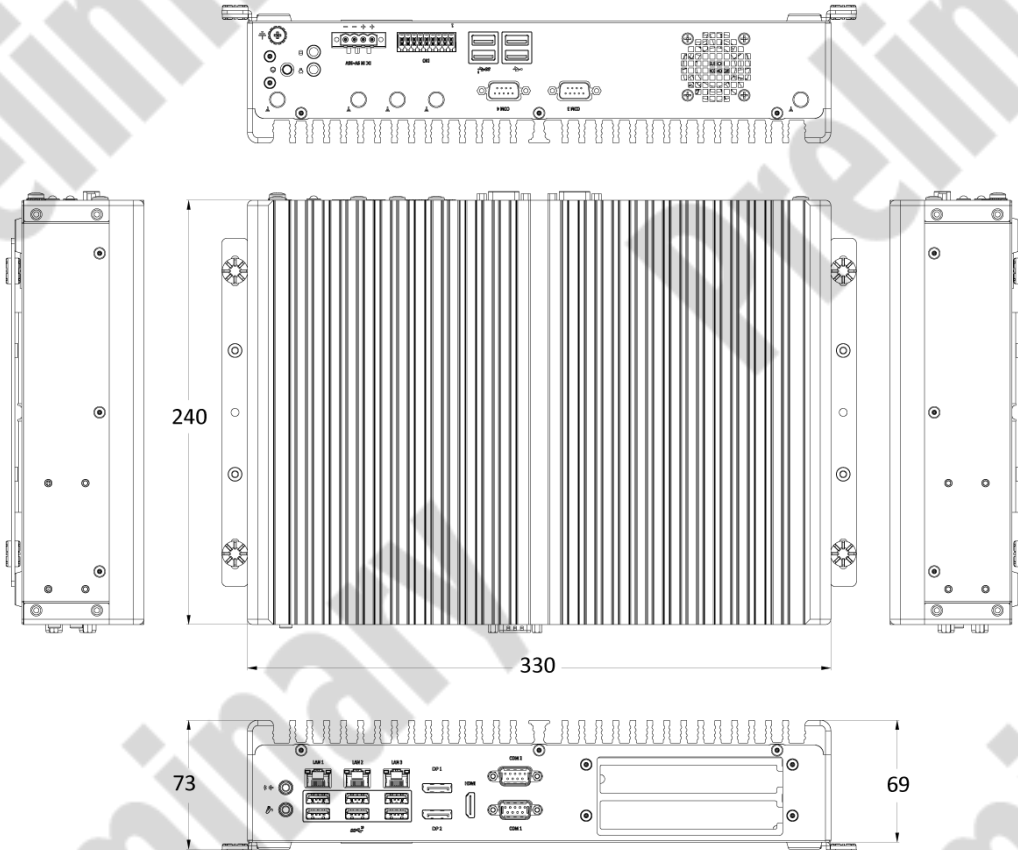
| Linux                 | Linux Kernel  |
|-----------------------|---|
| Power                 |   |
| Power Adapter         | Optional AC/DC 24V/9.2A, 220W for CPU and GPU Expansion   |
| Power Mode            | AT, ATX<br>(Default ATX)  |
| Power Supply Voltage  | 9~36VDC Default<br>24~36VDC for add GPU Card  |
| Power Connector       | 4-pin Terminal Block  |
| Environment           |   |
| Operating Temperature | 0°C to 50°C (35W CPU)<br>Tested according to:<br>IEC60068-2-1:2007 (Cold test procedure)<br>IEC60068-2-2:2007 (Dry heat test procedure)<br>IEC60068-2-3:2007 (Damp heat, steady state, test procedure)<br>IEC60068-2-14:2009 (Wide temperature range thermal shock) |
| Storage Temperature   | -30°C to 85°C   |
| Relative Humidity     | 10% to 95% (non-condensing)   |
| Certification         | EMC:<br>• CE<br>• FCC Class A (47 CFR part 15.109 and part 15.107)<br>• ICES-003<br>• UKCA<br>Green Product:<br>• RoHS 3.0 (Directive 2015/863/EU)<br>• REACH   |
| Vibration             | IEC60068-2-64:2008<br>With SSD: 5 Grms (5 - 500 Hz, 0.5 hr/axis)<br>Designed to comply with MIL-STD-810G Method 514.7 Procedure I   |
| Shock                 | IEC60068-2-27:2008<br>With SSD: 50G half-sin 11ms<br>Designed to comply with MIL-STD-810G Method 514.7 Procedure I<br>Package Drop Test: ISTA 2A  |
| Physical              |   |
| Dimensions (WxDxH)    | 330 x 240 x 69mm  |
| Construction          | Extruded Aluminum with Heavy Duty Metal   |
| Mounting Options      | Wall Mounting   |

## External I/O Mechanical Layout



## Dimension

Unit: mm



## Available Models

| Model No.         | Description  |
|-------------------|--|
| BCO-6000-RPL-1E16 | AI Edge Computer with Intel Raptor Lake-S/ Alder Lake-S® CPU, 3x DP, 2x COM, 1x PCIe (16-lane) |
| BCO-6000-RPL-2E8  | AI Edge Computer with Intel Raptor Lake-S/ Alder Lake-S® CPU, 3x DP, 2x COM, 2x PCIe (8-lane)  |

## Optional Accessories

| Model No.   | Description   |
|-------------|---|
| 1-E09A22102 | Adapter AC/DC 24V 9.2A 220W 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                                      |

## Packing List

1x BCO-6000-RPL  
1x Wall Mount Kit  
1x Accessory Kit