



### Features

- LGA 1700 socket for 12/13th Gen. Intel® ADL & RPL Processor (65W/35W TDP)
- Intel® R680E chipset
- 2x DDR5 4800/5600MHz SODIMM. Max. up to 64GB
- Triple Independent Display by 1x DVI-I and 2x DisplayPort
- 2x Intel® 2.5GbE supporting Wake-on-LAN and PXE
- 2x Full-size Mini PCIe (1x shared by 1x mSATA), 2x SIM socket
- 2x 2.5" SATA HDD Bay (1x Internal) and with RAID 0, 1 support
- 1x M.2 (E Key, PCIe x1, USB 2.0, 2230, Support CNVi)
- 6x RS-232/422/485 (4x internal), 4x USB 3.2 Gen 2, 5x USB 3.2 Gen 1 (internal)
- 8x DI + 8x DO with isolation
- 9 to 48VDC Wide Range Power Input Supporting AT/ATX Mode
- Wide Operating Temperature -25°C to 70°C (35W CPU); -25°C to 60°C (65W CPU)
- TPM 2.0 Supported

### Specifications

System		I/O	
Processor	Support 12/13th Gen Intel® ADL & RPL Processor (LGA 1700, 65W/35W TDP)	COM	2x RS-232/422/485 ; 4x RS-232/422/485 (internal)
	- Intel® Core™ i9-13900TE/i9-12900TE, up to 24 Cores, 36MB Cache, up to 5 GHz, 35W	DIO	8 in / 8 out (Isolated)
	- Intel® Core™ i7-13700E/i7-12700E, up to 16 Core, 30MB Cache, up to 5.1 GHz, 65W	LAN	2x RJ45
	- Intel® Core™ i7-13700TE/i7-12700TE, up to 16 Cores, 30MB cache, up to 4.8 GHz, 35W	Universal I/O Bracket	2x Universal I/O Bracket (By mini PCIe interface)
	- Intel® Core™ i5-13500E/i5-12500E, up to 14 Cores, 24MB Cache, up to 4.6 GHz, 65 W	USB	4x USB 3.2 Gen 2 (10 Gbps)
	- Intel® Core™ i5-13500TE/i5-12500TE, up to 14 Core, 24MB Cache, up to 4.5 GHz, 35W		5x USB 3.2 Gen 1 (5 Gbps, Internal)
	- Intel® Core™ i3-13100E/i3-12100E, up to 8 Cores, 12MB cache, up to 4.4 GHz, 60W		1x USB 3.2 Gen 1 header (5 Gbps, internal)
	- Intel® Core™ i3-12100TE/i3-12100TE, up to 4 Cores, 12MB Cache, up to 4.1 GHz, 35W	Others	4x WiFi Antenna Holes
	- Intel® Pentium® G7400E, 2 Cores, 6MB Cache, 3.6 GHz, 46W		1x Power Switch, 1x AT/ATX Switch, 1x Remote Power On/Off
	- Intel® Pentium® G7400TE, 2 Cores, 6MB Cache, 3.0 GHz, 35W		1x PC/Car Mode Switch, 1x Delay Time Switch
	- Intel® Celeron® G6900E, 2 Cores, 4MB Cache, 3.0 GHz, 46W		1x Removable CMOS Battery (internal)
	- Intel® Celeron® G6900TE, 2 Cores, 4MB Cache, 2.4 GHz, 35W		1x 6CM FAN Module (Optional)
System Chipset	Intel® R680E Express Chipset	Operating System	
LAN Chipset	2.5 GbE1: Intel I226, 2.5 GbE2: Intel I226, Support Wake-on-LAN and PXE, Support TSN	Windows	Windows 10/11
Audio Codec	Realtek ALC888S	Linux	Linux kernel
System Memory	2x 262-Pin DDR5 4800/5600MHz SODIMM. Max. up to 64GB (ECC and Non-ECC)	Power	
Graphics	Intel® UHD Graphics 770/710	Power Adapter	Optional AC/DC 24V/9.2A, 220W Optional AC/DC 24V/11.67A, 280W (GPU/Card Expansion) Optional AC/DC 24V/15A, 360W (i7/i9 CPU/GPU/Card Expansion)
BIOS	AMI 256Mbit SPI BIOS	Power Mode	AT, ATX
Watchdog	Software Programmable Supports 1~255 sec. System Reset	Power Ignition Sensing	Power Ignition Management
TPM	TPM 2.0	Power Supply Voltage	9~48VDC • VCO-6000-RPL-4E-2PWR (optional) : 12~48VDC (Optional, For GPU/Card Expansion)
Display		Power Connector	5-pin Terminal Block 4-pin Terminal Block (optional)
Display Port	2x DisplayPort, Support resolution 5120 x 3200, Up to 7680 x 4320	Power Protection	OVP (Over Voltage Protection) OCP (Over Current Protection) Reverse Protection
DVI	1x DVI-I, support resolution 1920 x 1200	Environment	
Multiple Display	Triple Display	Operating Temperature	-25°C to 70°C (35W CPU) -25°C to 60°C (65W CPU)
VGA	Yes (by optional split cable)	Storage Temperature	-30°C to 85°C
Storage		Relative Humidity	10% to 95% (non-condensing)
M.2	1x M.2 B Key, 2242/3042/3052 (PCIe x2, Support AI Module/NVMe Storage) (PCIe x1 & USB 3.2 Gen1, Support 4G/5G)	Certification	CE, FCC Class A
mSATA	1x mSATA (Shared by 1x Mini PCI Express)	Vibration	With SSD: 3 Grms, 5 - 500 Hz, 0.5 hr/axis With HDD: 1 Grms, 5 - 500 Hz, 0.5 hr/axis
SIM Socket	2x Internal SIM socket (Mini PCIE/M.2 B Key attached)	Shock	With SSD: 20G, half sine, 11ms
SSD/HDD	1x Internal 2.5" SATA/SSD HDD Bay (support H=9mm) 1x Removable 2.5" SATA HDD Bay (support H=7mm, Hot-swappable) Support RAID 0, 1	Physical	
	optional: 4B7M: 4x Removable 2.5" SATA HDD Bay (support H=7mm, Hot-swappable, Optional) Support RAID 0, 1, 5, 10	Dimensions	177 (W) x 340 (D) x 240 (H) mm
	2B15M: 2x Removable 2.5" SATA HDD Bay (support H=15mm, Hot-swappable, Optional) Support RAID 0, 1, 5, 10	Weights	TBD
	2N15M: 2x Removable 2.5" U.2 NVMe Bay (support H=15mm, Hot-swappable, Optional) Support RAID 0, 1	Construction	Extruded Aluminum with Heavy Duty Metal
		Mounting Options	Wall Mounting
Expansion			
Mini PCIe	1x Full-size Mini PCIe (1x shared by 1x mSATA)		
PCIe	2x PCIe x16 Slot (x8 Lane, Gen 4) 1x PCIe x4 (x1 Lane, Gen 3)		
Card Dimension	310 (L) x 112 (H) mm		

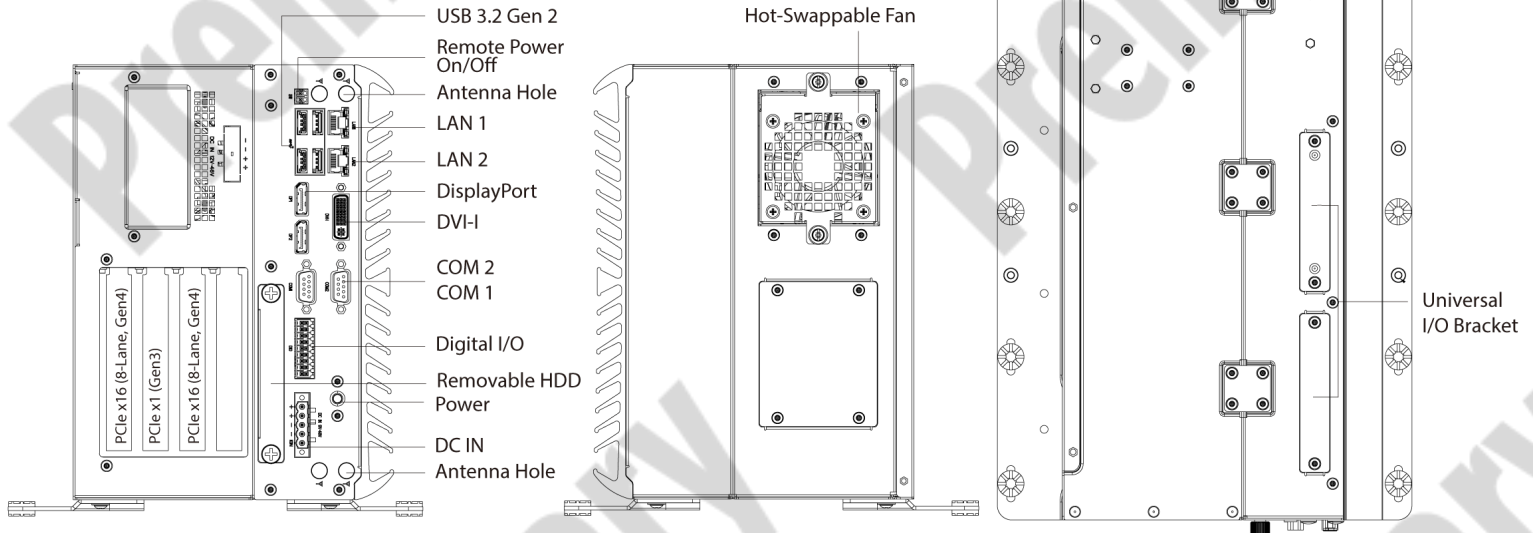
\* For 12/13th Gen Intel CPUs configured to run at 65W, operating temperatures will be limited to 60°C.  
\* 65W CPUs may experience thermal throttling depending on extreme application workloads; this is also due to an increase in the physical CPU cores from the Intel silicon (up to 24 cores). Please note, this does not indicate system malfunction or problems in the fanless design. Please consult our embedded engineers for the best configuration to match your application requirements.  
\* All specifications and photos are subject to change without notice.

## External I/O Mechanical Layout

Front Panel

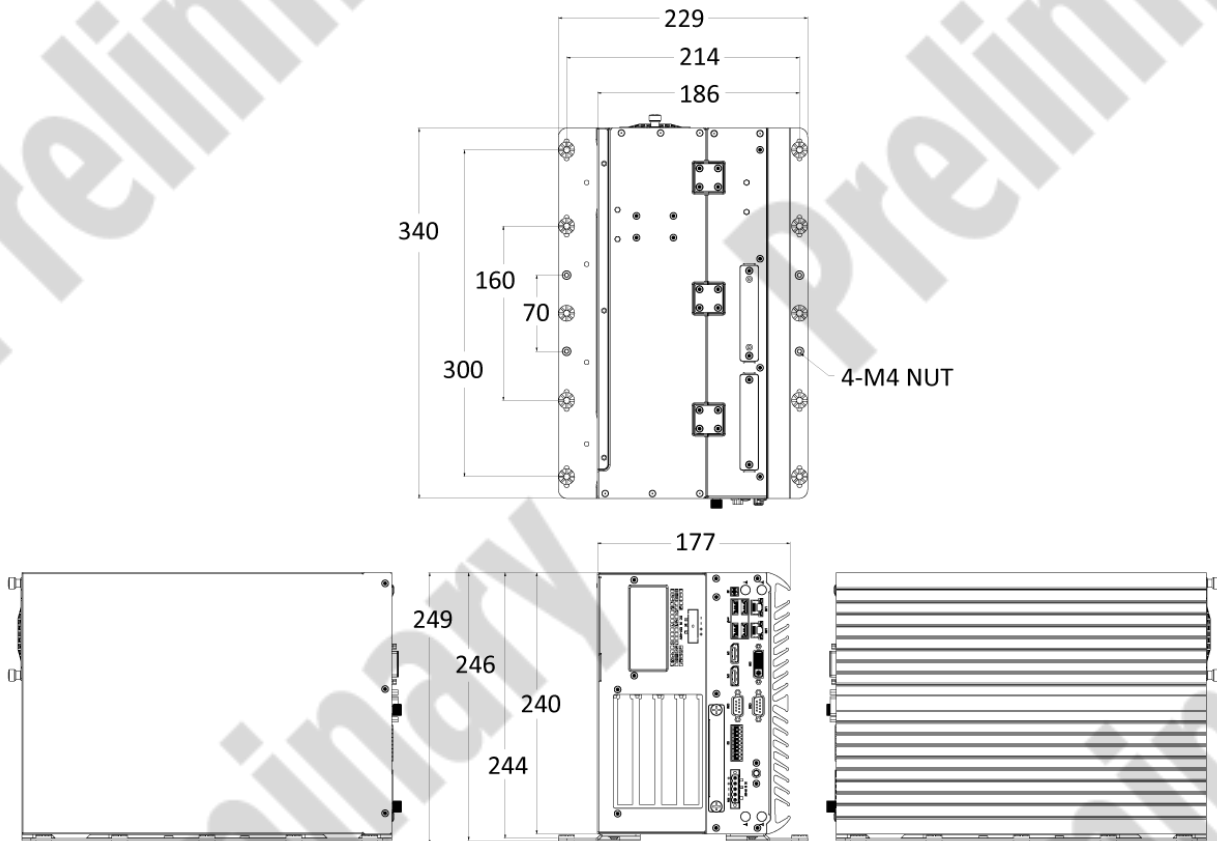
Rear Panel

Top Panel

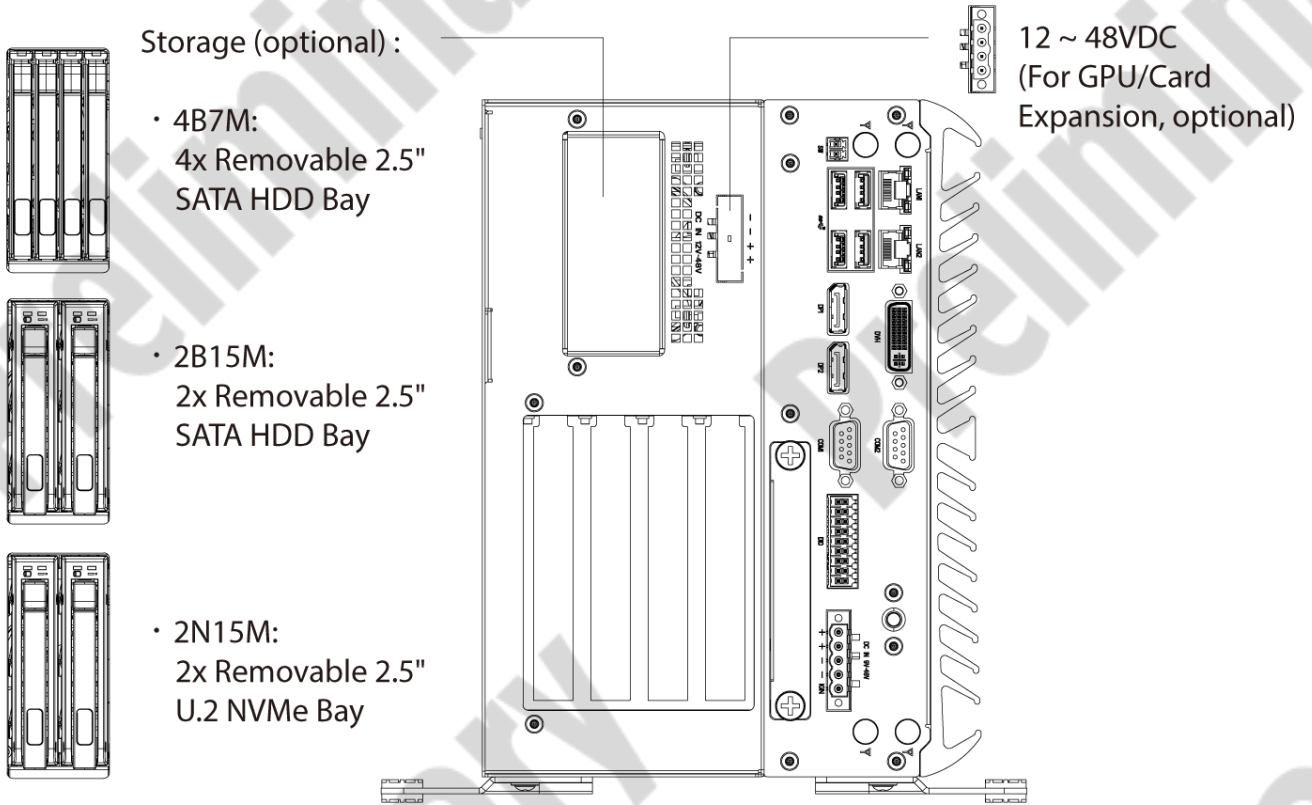


## Dimension

Unit: mm

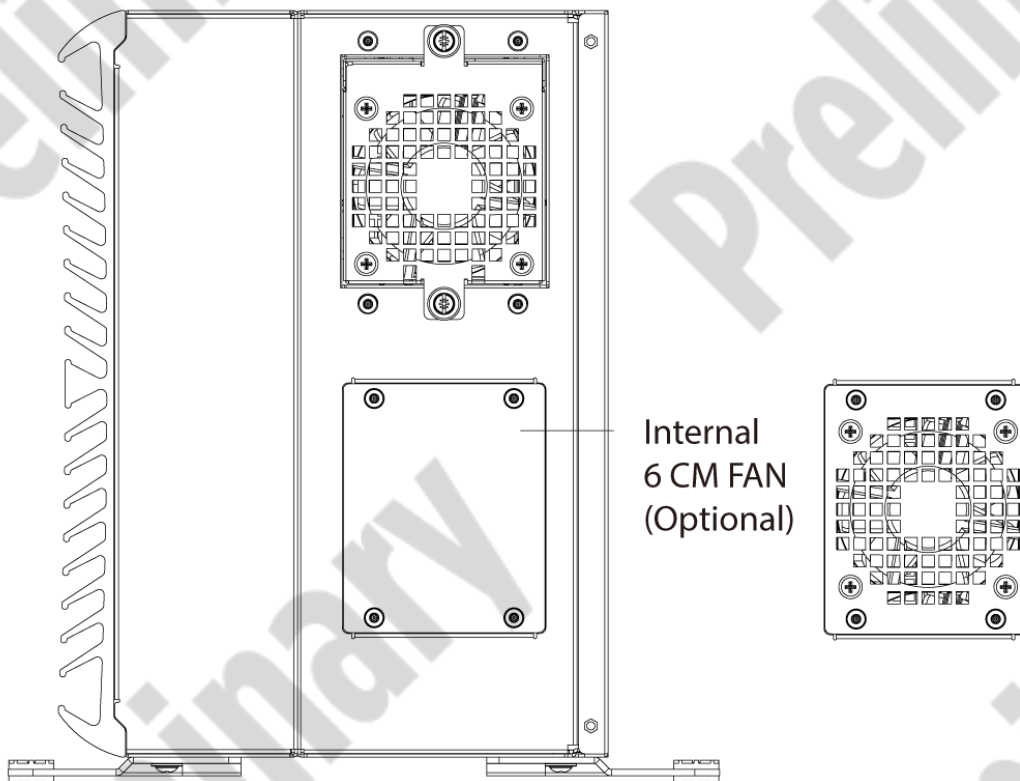


## External I/O Mechanical Layout



## Dimension

Unit: mm



## Available Models

Model No.	Description
VCO-6000-RPL-4E	Machine Vision Computer w/ LGA 1700 for Intel 12/13th Gen CPU & R680E PCH, 3x PCIe
VCO-6000-RPL-4E-4B7M	Machine Vision Computer w/ LGA 1700 for Intel 12/13th Gen CPU & R680E PCH, 3x PCIe, 6x HDD
VCO-6000-RPL-4E-2B15M	Machine Vision Computer w/ LGA 1700 for Intel 12/13th Gen CPU & R680E PCH, 3x PCIe, 4x HDD
VCO-6000-RPL-4E-2N15M	Machine Vision Computer w/ LGA 1700 for Intel 12/13th Gen CPU & R680E PCH, 3x PCIe, 2x 15mm NVMe
VCO-6000-RPL-4E-2PWR	Machine Vision Computer w/ LGA 1700 for Intel 12/13th Gen CPU & R680E PCH, 3x PCIe, 2x Power input
VCO-6000-RPL-4E-4B7M-2PWR	Machine Vision Computer w/ LGA 1700 for Intel 12/13th Gen CPU & R680E PCH, 3x PCIe, 6x HDD, 2x Power input
VCO-6000-RPL-4E-2B15M-2PWR	Machine Vision Computer w/ LGA 1700 for Intel 12/13th Gen CPU & R680E PCH, 3x PCIe, 4x HDD, 2x Power input
VCO-6000-RPL-4E-2N15M-2PWR	Machine Vision Computer w/ LGA 1700 for Intel 12/13th Gen CPU & R680E PCH, 3x PCIe, 2x 15mm NVMe, 2x Power input

## Optional Accessories

Model No.	Description
1-E09A22102	Adapter AC/DC 24V 9.2A 220W with 3pin Terminal Block Plug 5.0mm Pitch
1-E09A22801	Adapter AC/DC 24V/11.67A 280W with 3pin Terminal Block Plug 5.0mm Pitch
1-E09A36001	Adapter AC/DC 24V/15A 360W 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-RC6300EXFAN	External Double FAN KIT

## Packing List

- 1x VCO-6000-RPL-4E Series Embedded System
- 1x Wall Mount Kit
- 1x Accessory Kit
- 1x DVI to VGA Adapter