



MACHINE VISION COMPUTER

VCO-6000-RPL-4E

Machine Vision Computer w/ LGA 1700 for Intel 12/13/14th Gen CPU & R680E PCH, 3 PCIe

Features

- LGA 1700 socket for 12/13/14th Gen. Intel® ADL & RPL Processor (65W/35W TDP)
- Intel® R680E chipset
- 2x DDR5 4800/5600MHz SODIMM. Max. up to 64GB
- Triple Independent Display: 2x DisplayPort, 1x DVI-I
- 2x Intel® 2.5GbE supporting Wake-on-LAN and PXE
- 1x 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)
- 1x M.2 (B Key, 2242/3042/3052, PCIe x2, Support AI Module/NVMe Storage, PCIe x1 & USB 3.2 Gen1, Support 4G/5G)
- 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 | |
|--------------------|---|
| Processor | Support 12/13/14th(Non-vPRO) Gen Intel® ADL & RPL Processor (LGA 1700, 65W/35W TDP) |
| | - Intel® Core™ i9-14900/i9-13900E/i9-12900E, 65W |
| | - Intel® Core™ i9-14900T/i9-13900TE/i9-12900TE, 35W |
| | - Intel® Core™ i7-14700/i7-13700E/i7-12700E, 65W |
| | - Intel® Core™ i7-14700T/i7-13700TE/i7-12700TE, 35W |
| | - Intel® Core™ i5-14500/i5-13500E/i5-12500E, 65 W |
| | - Intel® Core™ i5-14500T/i5-13500TE/i5-12500TE, 35W |
| | - Intel® Core™ i3-13100E/i3-12100E, 60W |
| | - Intel® Core™ i3-14100T/i3-13100TE/i3-12100TE, 35W |
| | - Intel® Core™ 300T, 35W |
| | - Intel® Pentium® G7400E, 46W / G7400TE, 35W |
| | - Intel® Celeron® G6900E, 46W / G6900TE, 35W |
| System Chipset | Intel® R680E Express Chipset |
| LAN Chipset | 2.5 GbE1: Intel I226; 2.5 GbE2: Intel I226, Support Wake-on-LAN and PXE, Support TSN |
| Audio Codec | Realtek ALC888S |
| System Memory | 2x 262-Pin DDR5 4800/5600MHz SODIMM. Max. up to 64GB (ECC and Non-ECC) |
| Graphics | Intel® UHD Graphics 770/710 |
| BIOS | AMI 256Mbit SPI BIOS |
| Watchdog | Software Programmable Supports 1~255 sec. System Reset |
| TPM | TPM 2.0 |
| Display | |
| Display Port | 2x DisplayPort, Support resolution 5120 x 3200, Up to 7680 x 4320 |
| DVI | 1x DVI-I, support resolution 1920 x 1200 |
| Multiple Display | Triple Display |
| VGA | Yes (by optional split cable) |
| Storage | |
| 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) |
| mSATA | 1x mSATA (Shared by 1x Mini PCI Express) |
| SIM Socket | 2x Internal SIM socket (Mini PCIe/M.2 B Key attached) |
| 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 optional: • 4B7M: 4x Removable 2.5" SATA HDD Bay (support H=7mm, Hot-swappable, Optional) Support RAID 0, 1, 5, 10 • 2B15M: 2x Removable 2.5" SATA HDD Bay (support H=15mm, Hot-swappable, Optional) Support RAID 0, 1, 5, 10 • 2N15M: 2x Removable 2.5" U.2 NVMe Bay (support H=15mm, Hot-swappable, Optional) Support RAID 0, 1 |
| 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 |
| GPU Card Dimension | Please ensure the card dimensions do not exceed the following specifications to avoid potential installation issues. 312 (L) x 111 (W) mm (Height: Single GPU 20 mm, Dual GPU less than 40 mm) |

| I/O | |
|-----------------------|---|
| COM | 2x RS-232/422/485 ; 4x RS-232/422/485 (internal) |
| DIO | 8 in / 8 out (Isolated) |
| LAN | 2x RJ45 |
| Universal I/O Bracket | 2x Universal I/O Bracket (By mini PCIe interface) |
| USB | 4x USB 3.2 Gen 2 (10 Gbps) 5x USB 3.2 Gen 1 (5 Gbps, Internal) 1x USB 3.2 Gen 1 header (5 Gbps, internal) |
| Others | 4x WiFi Antenna Holes 1x Power Switch, 1x AT/ATX Switch, 1x Remote Power On/Off 1x PC/Car Mode Switch, 1x Delay Time Switch 1x Removable CMOS Battery (internal) 1x 6CM FAN Module (Optional) |

| Operating System | |
|------------------|---------------|
| Windows | Windows 10/11 |
| Linux | Linux kernel |

| Power | |
|------------------------|---|
| Power Adapter | Optional AC/DC 24V/9.2A, 220W Optional AC/DC 24V/11.67A, 280W (for more advanced CPU or as second power supply for GPU/Card Expansion) Optional AC/DC 24V/15A, 360W (for more advanced i7/i9 CPU) |
| Power Mode | AT, ATX |
| Power Ignition Sensing | Power Ignition Management |
| Power Supply Voltage | 9~48VDC • VCO-6000-RPL-4E-2PWR (optional) : 12~48VDC (Optional, For GPU/Card Expansion) |
| Power Connector | 5-pin Terminal Block 4-pin Terminal Block (optional second power supply) |
| Power Protection | OVP (Over Voltage Protection) OCP (Over Current Protection) Reverse Protection |

| Environment | |
|-----------------------|---|
| Operating Temperature | -25°C to 70°C (35W CPU) -25°C to 60°C (65W CPU) |
| Storage Temperature | -30°C to 85°C |
| Relative Humidity | 10% to 95% (non-condensing) |
| Certification | UL 62368 Ed. 3, CE, FCC Class A |
| Vibration | IEC60068-2-64:2008 With HDD: 1 Grms (5 - 500 Hz, 0.5 hr/axis) With SSD: 3 Grms (5 - 500 Hz, 0.5 hr/axis) Designed to comply with MIL-STD-810G Method 514.7 Procedure I |
| Shock | IEC60068-2-27:2008 With SSD: 20G half-sin 11ms Designed to comply with MIL-STD-810G Method 516.7 Procedure I |

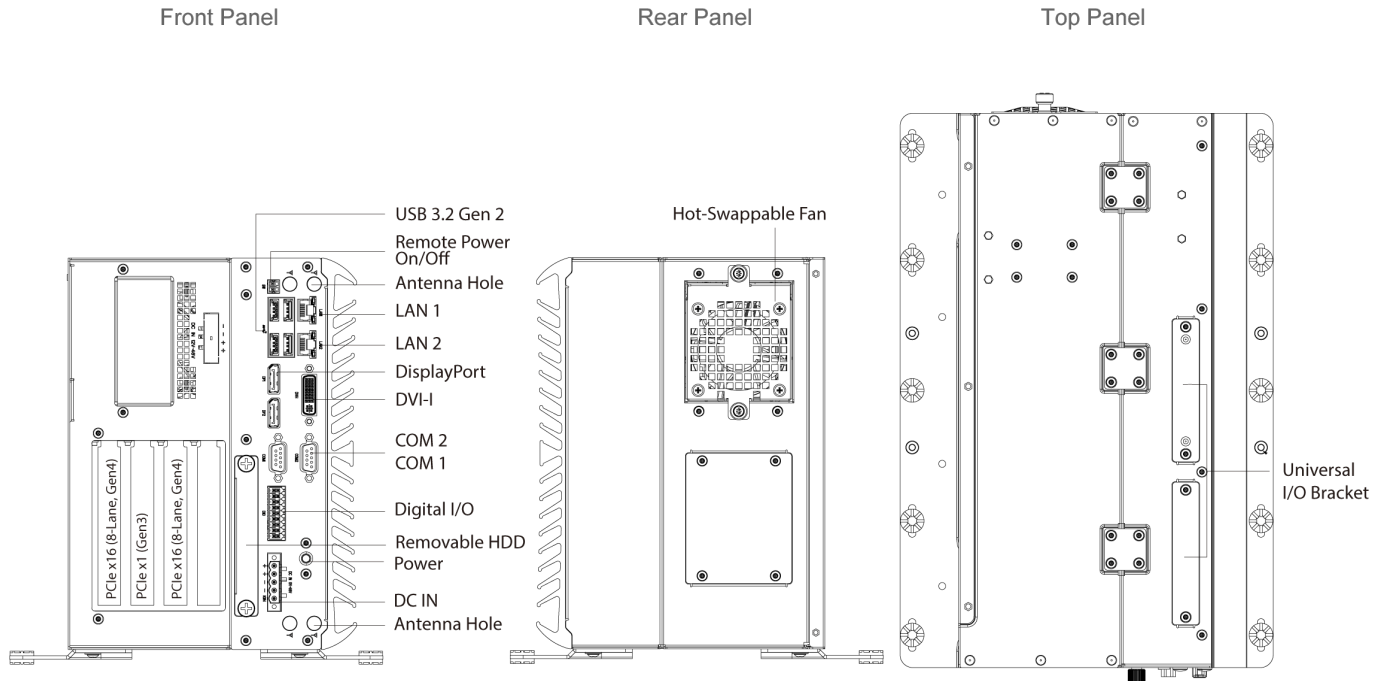
| Physical | |
|------------------|---|
| Dimensions | 177 (W) x 340 (D) x 240 (H) mm |
| Weights | 9.7 KG |
| Construction | Extruded Aluminum with Heavy Duty Metal |
| Mounting Options | Wall Mounting |

* For 12/13/14th 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.



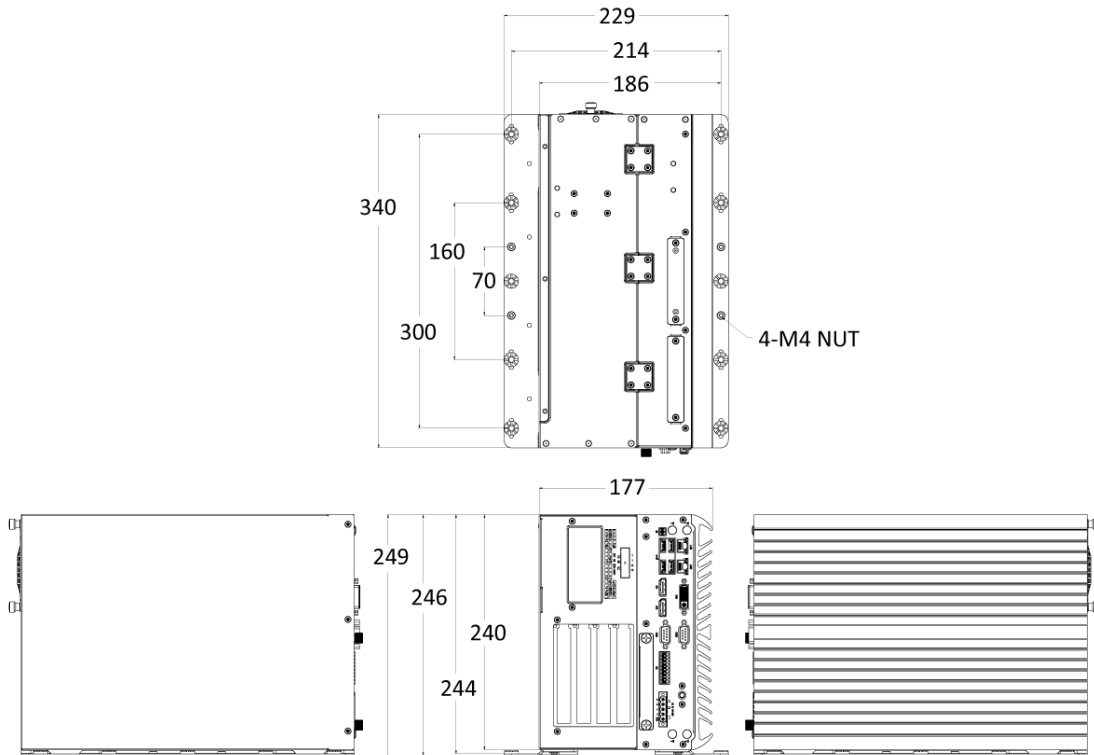
VCO-6000-RPL-4E

External I/O Mechanical Layout



Dimension

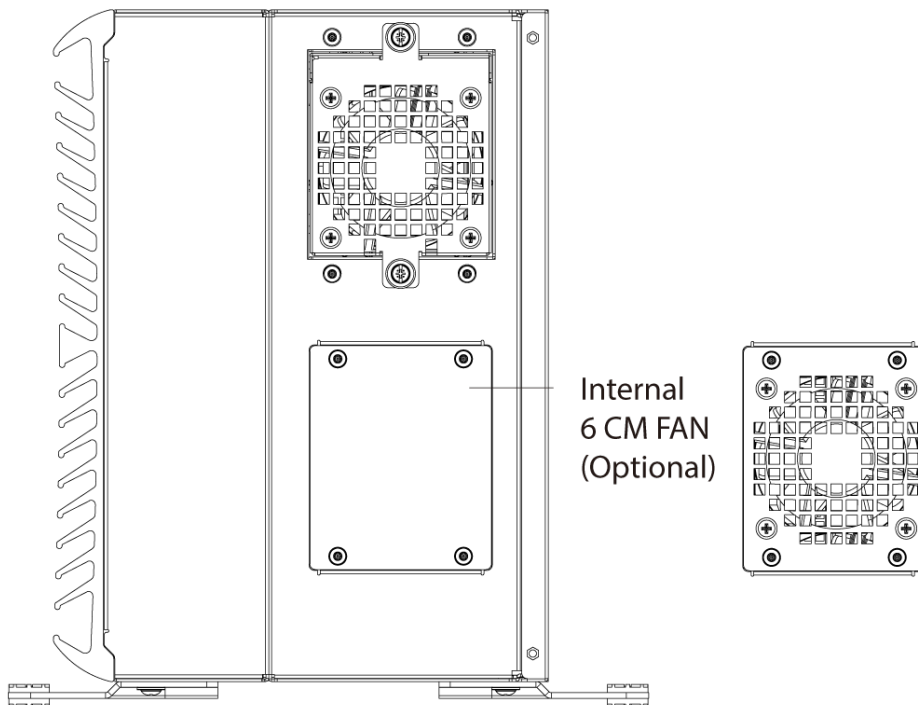
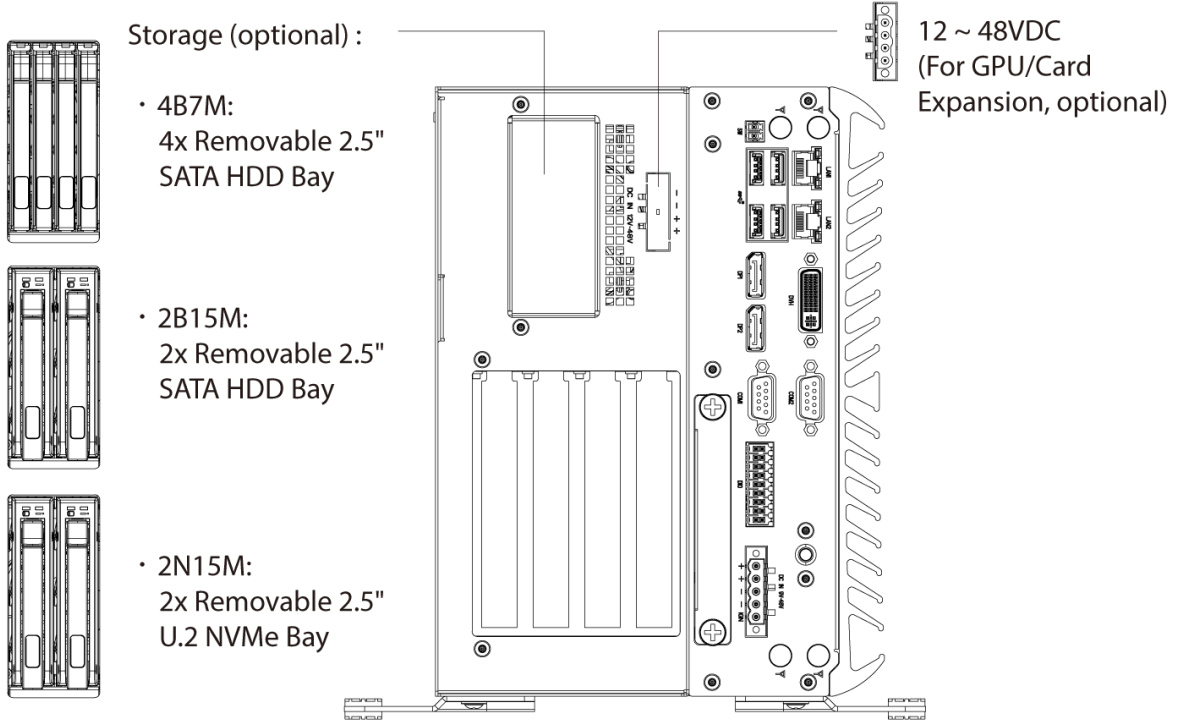
Unit: mm





VCO-6000-RPL-4E

Expansion





VCO-6000-RPL-4E

Available Models

| Model No. | Description |
|----------------------------|---|
| VCO-6000-RPL-4E | Machine Vision Computer w/ LGA 1700 for Intel 12/13/14th Gen CPU & R680E PCH, 3x PCIe |
| VCO-6000-RPL-4E-4B7M | Machine Vision Computer w/ LGA 1700 for Intel 12/13/14th Gen CPU & R680E PCH, 3x PCIe, 6x HDD |
| VCO-6000-RPL-4E-2B15M | Machine Vision Computer w/ LGA 1700 for Intel 12/13/14th Gen CPU & R680E PCH, 3x PCIe, 4x HDD |
| VCO-6000-RPL-4E-2N15M | Machine Vision Computer w/ LGA 1700 for Intel 12/13/14th Gen CPU & R680E PCH, 3x PCIe, 2x 15mm NVMe |
| VCO-6000-RPL-4E-2PWR | Machine Vision Computer w/ LGA 1700 for Intel 12/13/14th Gen CPU & R680E PCH, 3x PCIe, 2x Power input |
| VCO-6000-RPL-4E-4B7M-2PWR | Machine Vision Computer w/ LGA 1700 for Intel 12/13/14th 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 12/13/14th 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 12/13/14th 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 |
| 1-TPCD00005 | 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



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Assured Systems

Assured Systems is a leading technology company with over 1,500 regular clients in 80 countries, deploying over 85,000 systems to a diverse customer base in 12 years of business. We offer high-quality and innovative rugged computing, display, networking and data collection solutions to the embedded, industrial, and digital-out-of-home market sectors.

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