

GP-3000

Dual Full-length GPU Expandable Computer



Overview

 **CONTACT**

GP-3000. A flagship GPU edge computing computer of Cincoze. Its crowning feature is an exclusive GPU Expansion Box that provides expansion for up to two high-end GPU cards and creating a high-performance industrial-grade GPU computing computer.

Extreme Computing Performance

The GP-3000's extreme computing power starts with an 8th or 9th generation Intel® Xeon® or Core™ i3/i5/i7 (Coffee Lake and Coffee Lake-R) CPU, Intel® C246 chipset, and supports two sets of DDR4-2666 ECC/non-ECC SO-DIMM up to 64 GB and can support up to two 300 W high-end GPU cards (@48VDC), making it easy to meet and exceed high-efficiency application requirements. A precision heat dissipation and cooling design quickly wick away heat, keeping the focus squarely on the breathtaking performance of the GP-3000.

Rich Application Functions

The GP-3000 redefines the standard for high-end GPU computers, with high-speed I/O and multiple functions. In addition to the standard five LAN ports and six USB 3.2 ports, the GP-3000 uses Cincoze's exclusive CMI and CFM modular design, which offers expansion modules with eight Gigabit PoE, two USB 3.2, or dual 10 Gb/s LAN ports. Storage options include high-speed M.2 NVMe storage slots and four hot-swappable 2.5" HDD/SSD trays accessible through the front maintenance panel. Together, they meet large-capacity machine vision storage requirements and improve hard disk accessibility for convenient removal and replacement. The IGN module (power ignition sensing) can monitor the on-board battery voltage and set a delayed shutdown time to avoid damage to the system due to unstable current when starting or turning off the engine. This combination of diverse functions provides the flexibility to meet the requirements of different market applications.

Strong and Reliable

In the pursuit of ever-higher standards, the GP-3000 has passed the MIL-STD-810G certification designed and promulgated by the US Department of Defense to qualify military equipment. The GP-3000 features 9~48 VDC power input, is built for -40 to 70°C temperature operation. The GP-3000 has E-mark and EN50155 (EN50121-3-2 only) certifications, so it is capable of withstanding the rigors of rail and vehicle applications as well as other harsh environments.

Key Features

- Supports 9th/8th Gen Intel® Xeon®/Core™ Processor (35W / 65W / 80W)
- 2 x DDR4 SO-DIMM Sockets, Supports ECC/non ECC type up to 2666 MHz, 64GB
- 4 x 2.5" Hot Swappable SATA III HDD/SSD Bays (Max Height 15 mm)
- 1 x M.2 M Key Socket (NVMe), 1 x M.2 E Key Socket (CNVi)
- 2 x Front Accessible SIM Card Slots for Signal Redundancy
- CMI Technology for Various I/O Module Expansions
- CFM Technology for Power Ignition Sensing & PoE Function
- Versatile Mounting Methods (Tower Stand / Desktop / 19" Rack / Flat / Wall Mount)
- Military Standard Shock & Vibration Proof

Certifications



Cutting-Edge Performance

The GP-3000 is powered by the excellent performance of 8th / 9th generation Intel® Xeon® / Core™ processors. Supports two DDR4 SO-DIMM ECC/Non-ECC memory, up to 64GB. Through the exclusive GPU Expansion Box (GEB) design can flexibly expand up to dual high-end GPU cards. And GP-3000 offers 720W system power budget for high-end GPU Computing applications.



Futureproof Scalability

Upgrades are now easy. In addition to GPU expansion through the GEBs, the GP-3000 also retains flexibility for future upgrades. Whether adding or upgrading GPU cards, the core system remains, and only the GBE is changed. Upgrades become easier, and the expansion possibilities become almost endless.

Mount Anywhere

The GP-3000 supports multiple mounting options for various environment. Mounting options include a wall mount, desktop mount, Face-up mount, and 19" rack mount. Simple.



Specifications

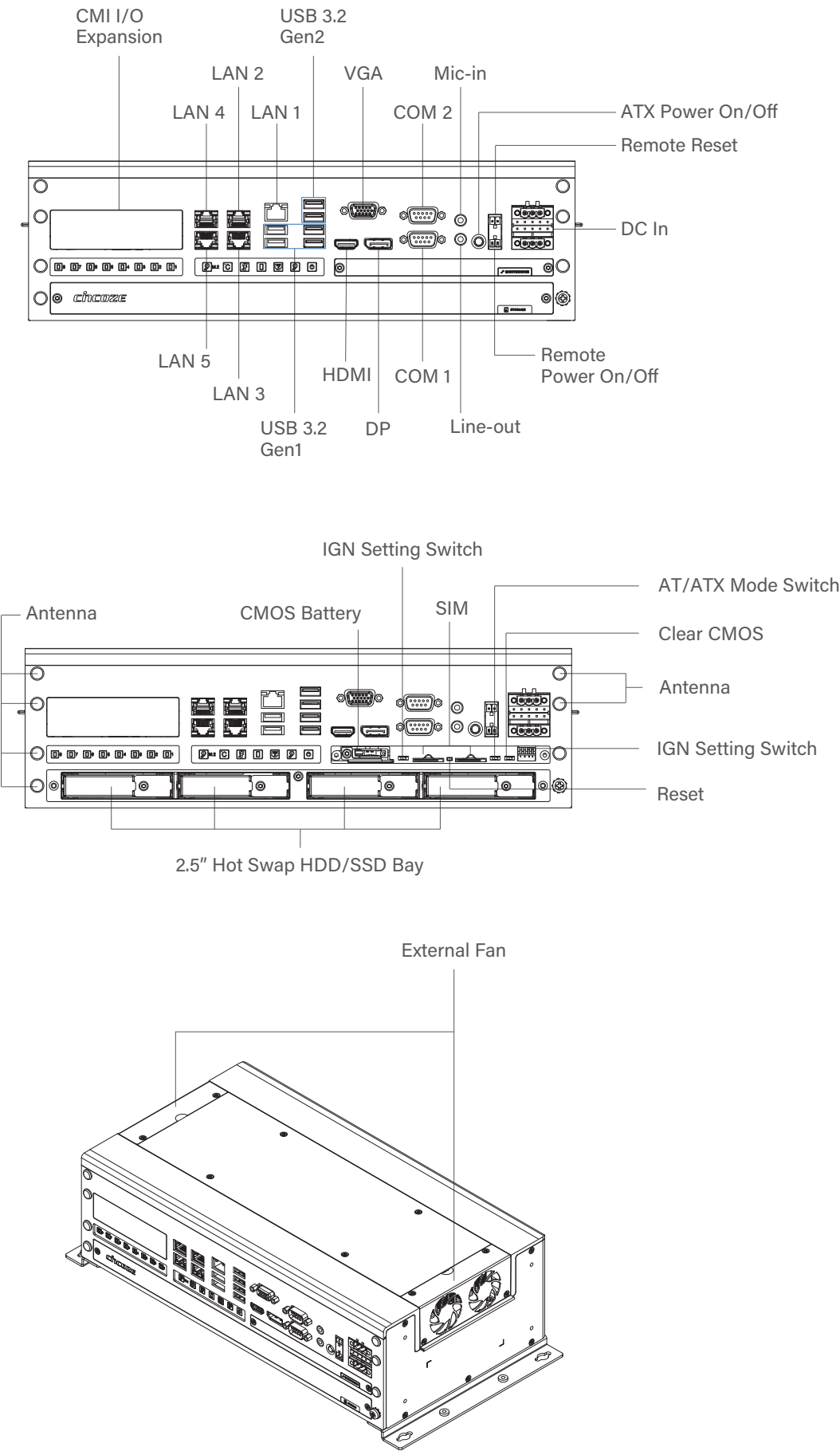
Model Name	GP-3000
System	
Processor	9th Generation Intel Coffee Lake-R S Series CPU: - Intel® Xeon® E-2278GE 8 Cores Up to 4.7 GHz, TDP 80W - Intel® Xeon® E-2278GEL 8 Cores Up to 3.9 GHz, TDP 35W - Intel® Core™ i7-9700E 8 Cores Up to 4.4 GHz, TDP 65W - Intel® Core™ i5-9500E 6 Cores Up to 4.2 GHz, TDP 65W - Intel® Core™ i3-9100E 4 Cores Up to 3.7 GHz, TDP 65W - Intel® Core™ i7-9700TE 8 Cores Up to 3.8 GHz, TDP 35W - Intel® Core™ i5-9500TE 6 Cores Up to 3.6 GHz, TDP 35W - Intel® Core™ i3-9100TE 4 Cores Up to 3.2 GHz, TDP 35W 8th Generation Intel Coffee Lake S Series CPU: - Intel® Xeon® E-2176G 6 Cores up to 4.7 GHz, TDP 80W - Intel® Xeon® E-2124G 4 Cores up to 4.5 GHz, TDP 71W - Intel® Core™ i7-8700 6 Cores up to 4.6 GHz, TDP 65W - Intel® Core™ i5-8500 6 Cores, up to 4.1 GHz, TDP 65W - Intel® Core™ i3-8100 4 Cores 3.6 GHz, TDP 65W - Intel® Core™ i7-8700T 6 Cores up to 4.0 GHz, TDP 35W - Intel® Core™ i5-8500T 6 Cores up to 3.5 GHz, TDP 35W - Intel® Core™ i3-8100T 4 Cores 3.1 GHz, TDP 35W - Intel® Pentium® G5400 2 Cores 3.7 GHz, TDP 58W - Intel® Pentium® G5400T 2 Cores 3.1 GHz, TDP 35W - Intel® Celeron® G4900 2 Cores 3.1 GHz, TDP 54W - Intel® Celeron® G4900T 2 Cores 2.9 GHz, TDP 35W
Chipset	Intel® C246
BIOS	AMI BIOS
Memory	2x DDR4 2666/2400 MHz SO-DIMM Sockets * Xeon/i7/i5: Up to DDR4 2666MHz * i3/Pentium/Celeron: Up to DDR4 2400MHz - Supports ECC / non-ECC Type Up to 64GB
Graphics	
Graphics Engine	- Integrated Intel® UHD Graphics (Xeon/i7/i5/i3: UHD 630; Pentium/Celeron: UHD 610) - Supports Triple Independent Display (VGA/DisplayPort/HDMI)
Audio	
Audio Codec	Realtek® ALC888, High Definition Audio
I/O	
DisplayPort	1x DisplayPort Connector (4096 x 2304 @ 60Hz, According to CPU Specifications) * Verified maximum resolution: 3840x2160.
HDMI	1x HDMI Connector (4096 x 2160 @30Hz)
VGA	1x VGA Connector (1920 x 1200 @30Hz)
LAN	5x GbE LAN, RJ45 - GbE1: Intel® I219-LM - GbE2: Intel® I210 - GbE3: Intel® I210 - GbE4: Intel® I210 - GbE5: Intel® I210
COM	2x RS-232/422/485 with Auto Flow Control (Supports 5V/12V), DB9
USB	2x 10Gbps USB 3.2 Gen2, Type A 4x 5Gbps USB 3.2 Gen1, Type A
Line-out	1x Line-out, Phone Jack 3.5mm
Mic-in	1x Mic-in, Phone Jack 3.5mm
Power On/Off Switch Button	1x ATX Power On/Off Button

CMOS Switch	• 1x Clear CMOS Switch
Remote Power On/Off Connector	• 1x Remote Power On/Off Connector, 2-Pin Terminal Block
Terminal Block	• 1x Remote Reset, 2-pin Terminal Block
AT/ATX Mode Switch	• 1x AT/ATX Mode Switch
Reset Button	• 1x Reset Button
Storage	
SSD / HDD	• 4x 2.5" Front Accessible SATA HDD/SSD Bay (SATA 3.0), Supports Up to 15mm in Height
M.2	• 1x M.2 Key M 2280 Socket, Supports PCIe x4 NVMe SSD or SATA SSD (Gen3)
RAID	• Supports RAID 0 / 1 / 5 / 10
Expansion	
PCIe	• Optional GPU Expansion Box - 1 x PCIe x 16 Slot (PCIe x 16 Signal) for GPU Card + 1 x PCIe x 4 Slot (Max. 25W) - 2 x PCIe x 16 Slot (PCIe x 8 Signal) for GPU Card + 1 x PCIe x 4 Slot (Max. 25W) + 1 x PCIe x 1 Slot (Max. 25W) * Single-GPU configuration: 300 W @ 24 VDC * Dual-GPU configuration: 500 W @ 24 VDC or 600 W @ 48 VDC (each GPU ≤ 300 W) * GPU Card Dimension (W x D x H): 138 x 328 x 64 mm
Mini-PCIe Socket	• 2x Full-size Mini-PCIe Socket
M.2	• 1x M.2 Key E 2230 Socket, Supports Intel CNVi Module • 1x M.2 Key M 2280 Socket, Support NVMe/SATA SSD
Universal Bracket	• 1x Universal Bracket
SIM Socket	• 2x SIM Socket
Antenna Holes	• 7x Antenna Holes
CMI (Combined Multiple I/O) Interface	• CMI Interface 1 x High Speed CMI (Combined Multiple I/O) Interface 1 x Low Speed CMI (Combined Multiple I/O) Interface • CMI Module - Optional Modules: - 4x GbE LAN, RJ45 - 4x GbE LAN, M12 A-Coded - 4x GbE LAN, M12 X-Coded - 2x 10GbE LAN, RJ45 - 2x RS-232/422/485 with Auto Flow Control (Supports 5V/12V), DB9 - 16x Optical Isolated DIO(8DI, 8DO), 2x 10 Pin Terminal Block • 1x CFM IGN Interface - CFM-IGN01: Ignition Sensing Function
CFM (Control Function Module) Interface	• CFM Interface 1x CFM(Control Function Module) IGN Interface 1x CFM(Control Function Module) PoE Interface • CFM Module - Optional Module - 1x Power Ignition Sensing Module with Delay Time Management and Selectable 12V/24V - 1x PoE Function Module Supports Up to 4x PoE+ with Individual port 25.5W
MEC Module	• Optional Modules: - 2x 5Gbps USB 3.2 Gen1, Type A
Other Function	
Fan Kits	• 2x Fan Kits (Air-flow isolated from the electronics)
Instant Reboot	• Support 0.2 sec. Instant Reboot Technology
CMOS Battery	• SuperCap Integrated for CMOS Battery Maintenance-free Operation
WatchDog Timer	• Software Programmable Supports 256 Levels System Reset

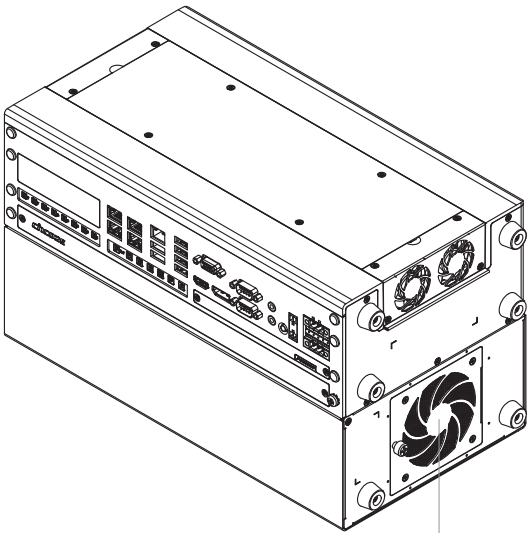
Power Requirement																					
Power Type	▪ AT / ATX																				
Total Power Budget	▪ 720W @24VDC (with GEB-3601-R10)																				
Power Supply Voltage	▪ 9~48VDC, Single Power Source																				
Connector Type	▪ 2x 3-pin Terminal Block, Each Terminal Block Current Limitation is 15A																				
Power Supply	▪ Optional AC/DC or DC/DC 24V 480W Power Supply ▪ Optional AC/DC or DC/DC 24V 1000W Power Supply																				
Physical																					
Dimension (W x D x H)	▪ 105 x 195 x 370 mm ▪ 209 x 195 x 370 mm (with GEB-3301) ▪ 305 x 195 x 370 mm (with GEB-3601)																				
Weight	▪ 8 kg ▪ 11.2 kg (with GEB-3301) ▪ 13.2 kg (with GEB-3601)																				
Construction	▪ Extruded Aluminum with Heavy Duty Metal																				
Mounting	▪ Versatile Mounting Methods (Tower Stand / Desktop / 19"Rack / Flat / Wall Mount)																				
Physical Design	▪ Unibody Chassis ▪ Jumper-less Design																				
Protection																					
Reverse Power Input Protection	▪ Yes																				
Over Voltage Protection	▪ Protection Range: 51~58V ▪ Protection Type: shut down operating voltage, re-power on at the preset level to recover																				
Over Current Protection	▪ 30A																				
Operating System																					
Windows	▪ Windows® 10																				
Linux	▪ Supports by Project																				
Environment																					
Operating Temperature	<table><tr><th> CPU GPU </th><th>Non-GPU</th><th>1 x 250W GPU</th><th>1 x 300W GPU</th><th>2 x 250W GPU</th></tr><tr><td>35W</td><td>-40°C to 70°C</td><td>-40°C to 40°C</td><td>-40°C to 35°C</td><td>-40°C to 35°C</td></tr><tr><td>65W</td><td>-40°C to 60°C</td><td>-40°C to 40°C</td><td>-40°C to 35°C</td><td>-40°C to 35°C</td></tr><tr><td>80W</td><td>-40°C to 50°C</td><td>-40°C to 40°C</td><td>-40°C to 35°C</td><td>-40°C to 35°C</td></tr></table> * With extended temperature peripherals; Ambient with air flow * According to IEC60068-2-1, IEC60068-2-2, IEC60068-2-14 * 100% CPU and GPU without thermal throttling	CPU GPU	Non-GPU	1 x 250W GPU	1 x 300W GPU	2 x 250W GPU	35W	-40°C to 70°C	-40°C to 40°C	-40°C to 35°C	-40°C to 35°C	65W	-40°C to 60°C	-40°C to 40°C	-40°C to 35°C	-40°C to 35°C	80W	-40°C to 50°C	-40°C to 40°C	-40°C to 35°C	-40°C to 35°C
CPU GPU	Non-GPU	1 x 250W GPU	1 x 300W GPU	2 x 250W GPU																	
35W	-40°C to 70°C	-40°C to 40°C	-40°C to 35°C	-40°C to 35°C																	
65W	-40°C to 60°C	-40°C to 40°C	-40°C to 35°C	-40°C to 35°C																	
80W	-40°C to 50°C	-40°C to 40°C	-40°C to 35°C	-40°C to 35°C																	
Storage Temperature	▪ -40°C to 85°C																				
Relative Humidity	▪ 95% RH @ 70°C (Non-condensing)																				
Shock	▪ MIL-STD-810G																				
Vibration	▪ MIL-STD-810G																				
MTBF	▪ 441,283hr																				
Fire Protection	▪ Fire Protection: EN 45545-2																				

EMC	• CE, UKCA, FCC, ICES-003 Class A • EN 50155 (EN 50121-3-2 Only) • E-mark
EMI	• CISPR 32 Conducted & Radiated: Class A • EN/BS EN 50121-3-2 Conducted & Radiated: Class A • EN/BS EN IEC 61000-3-2 Harmonic current emissions: Class A • EN/BS EN61000-3-3 Voltage fluctuations & flicker • FCC 47 CFR Part 15B, ICES-003 Conducted & Radiated: Class A
EMS	• EN/IEC 61000-4-2 ESD: Contact: 6 kV; Air: 8 kV • EN/IEC 61000-4-3 RS: 80 MHz to 1000 MHz: 20 V/m • EN/IEC 61000-4-4 EFT: AC Power: 2 kV; Signal: 2 kV • EN/IEC 61000-4-5 Surges: AC Power: 2 kV • EN/IEC 61000-4-6 CS: 10V • EN/IEC 61000-4-8 PFMF: 50 Hz, 1A/m • EN/IEC 61000-4-11 Voltage Dips & Voltage Interruptions: 0.5 cycles at 50 Hz
Safety	• LVD IEC/EN 62368-1

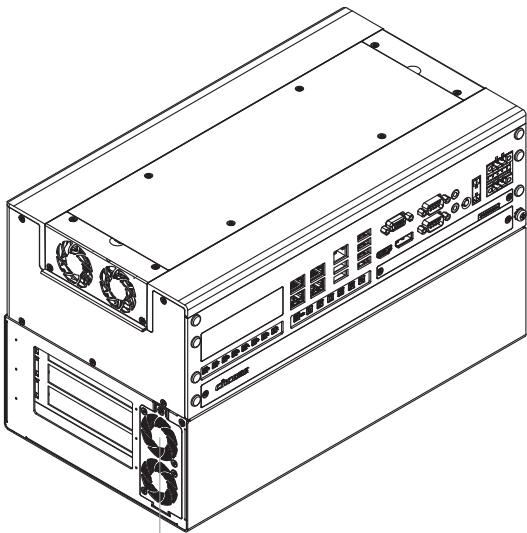
GP-3000 External Layout



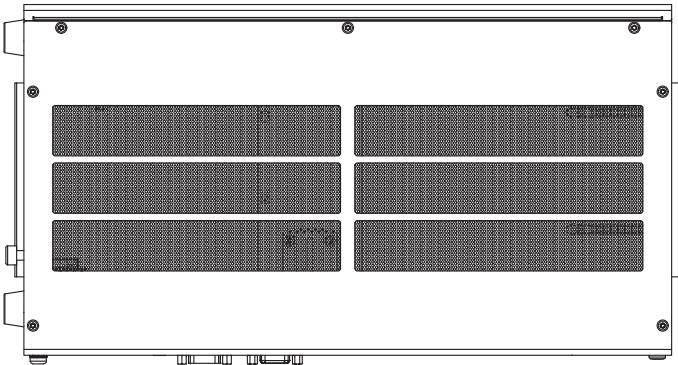
GP-3000/GEB-3301 External Layout



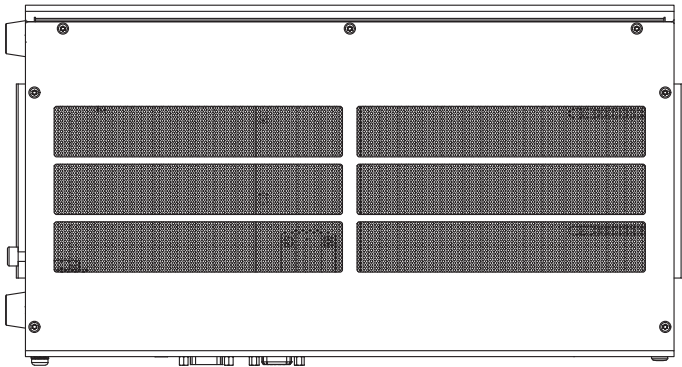
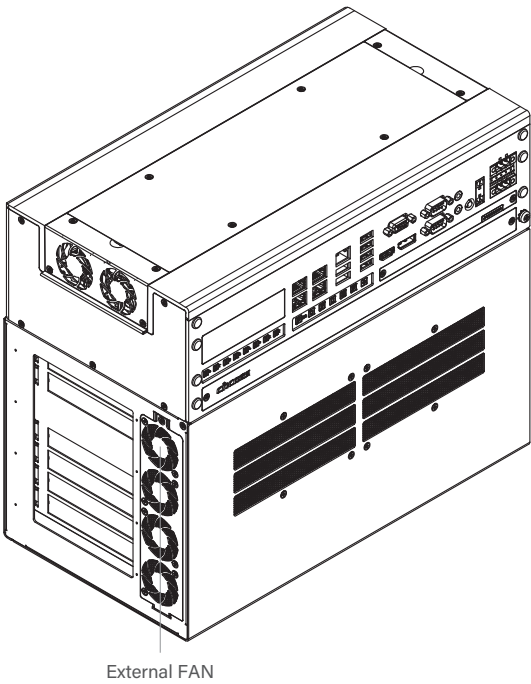
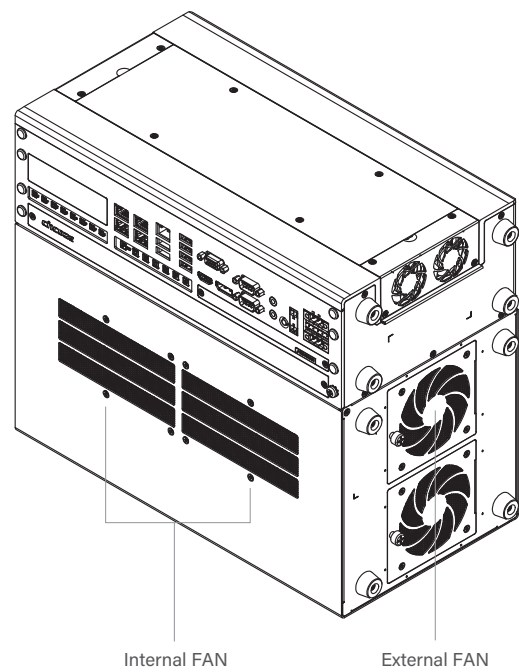
External FAN



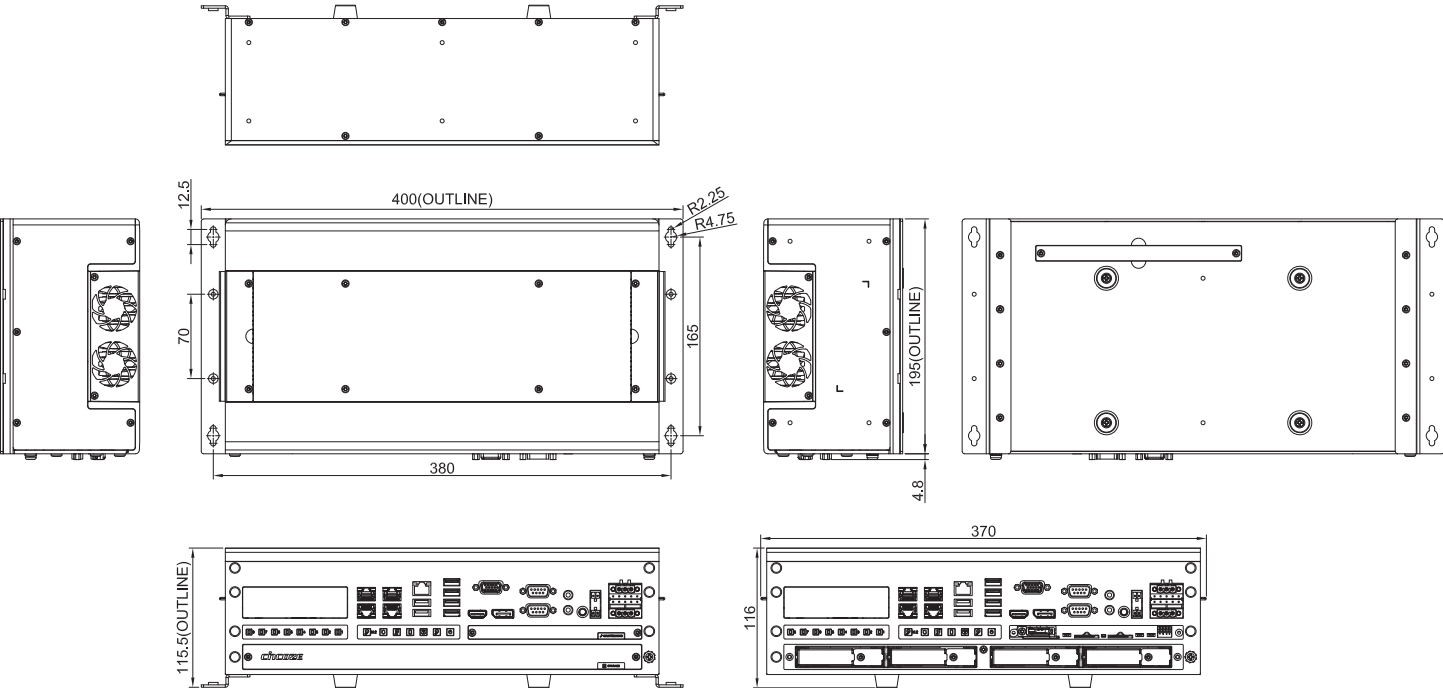
External FAN



GP-3000/GEB-3601 External Layout

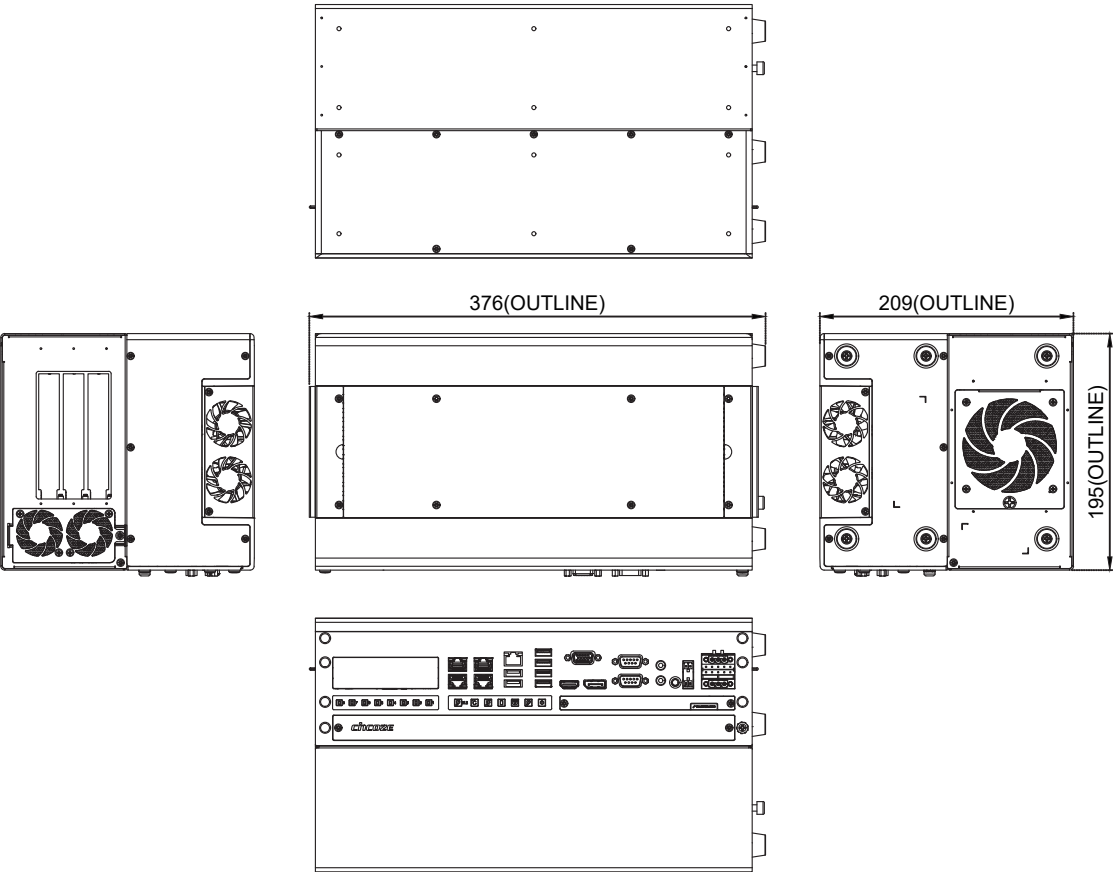


GP-3000 Dimensions



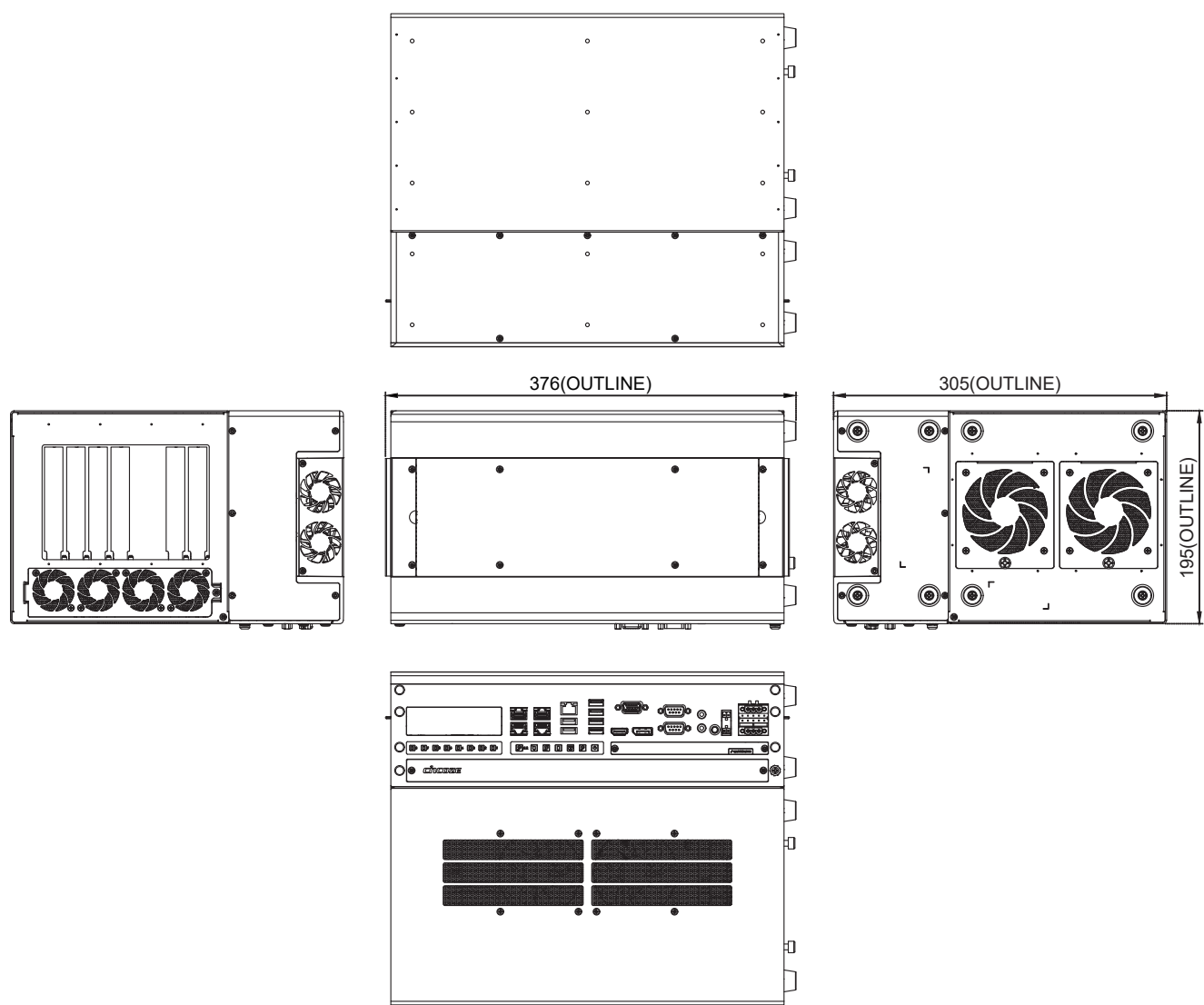
Unit: mm

GP-3000/GEB-3301 Dimensions



Unit: mm

GP-3000/GEB-3601 Dimensions



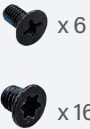
Unit: mm

Ordering Information

Available Models

GP-3000-R10 	9th/8th Gen Intel® Xeon®/Core™ GPU Computer, Supports Dual Full-length GPU Expansion
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Package Checklist

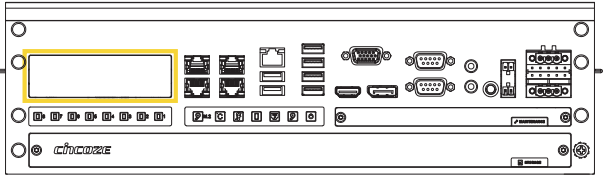
	Wall Mount Bracket
	1 x Desktop Mount Kit
	CPU Heatsink and Thermal Pad Kit
 x 6  x 2  x 16  x 4	4 x Screw Pack
	1 x Rubber Foot Kit
	2 x Power Terminal Block Connector
	2 x Remote Function Terminal Block Connector

Optional Module

Available Models

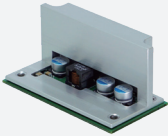
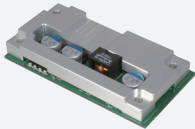
GEB-3301-R10 	GPU Expansion Box with 1x PCIe x16 and 1x PCIe x4 Slots
GEB-3601-R10 	GPU Expansion Box with 2x PCIe x16 (Signal PCIe x8), 1x PCIe x4 and 1x PCIe x1 Slots

Available Models



Model No.	Description
CMI-LAN01-R12/UB1412	
	CMI Module with 4x Intel I210 GbE LAN, RJ45 Port / 1x Universal Bracket with 4x RJ45 Cutout for GP-3000 Series
CMI-M12LAN01-R12/UB1410	
	CMI Module with M12 A-Coded Connector, 4x Intel I210 GbE LAN / 1x Universal Bracket with 4x M12 Cutout for GP-3000 Series
CMI-XM12LAN01-R10/UB1410	
	CMI Module with M12 X-Coded Connector, 4x Intel I210 GbE LAN Ports / Universal Bracket with 4x M12 Cutout for GP-3000 Series
CMI-2P5GLAN02-R10/UB1412	
	CMI Module with 4x Intel 2.5GbE LAN, RJ45 Port / 1x Universal Bracket with 4x RJ45 Cutout for GP-3000 Series
CMI-10GLAN02-R10/UB1428	
	CMI Module with 2x Intel X550 10GbE LAN, RJ45 Port / 1x Universal Bracket with 2x RJ45 Cutout for GP-3000 Series
CMI-10GXM12LAN02-R10/UB1437-R10	
	CMI Module with 2x Intel 10GbE LAN, M12 X-Coded Connector / Universal Bracket with 2x M12 X-coded Cutout
CMI-CAN01-R10/UB1438-R10	
	CMI Module with 2x CAN FD Ports / Universal Bracket with 2x DB9 and 1x Switch Cutout for CMI-CAN Expansion
CMI-COM04-R10/UB1403	
	CMI Module with 2x RS232/422/485 Ports (Support 5V/12V) / 1x Universal Bracket with 2x DB9 Cutout for GP-3000 Series
CMI-DIO04-R11/UB1418	
	CMI Module with 16DIO (8in 8out) / 1x Universal Bracket with DIO Cutout for GP-3000 Series
MEC-USB-M102-30/UB1414	
	Mini-PCIe Module with 2x USB 3.2 Gen1 Ports, 1x30 cm cable, 1x Universal Bracket with 2x USB Cutout

Accessories - Function Module

CFM-PoE07-R10 	CFM Module with PoE Function, Individual Port 25.5W (Enable PoE function for CMI-LAN01-R12, CMI-M12LAN01-R12, CMI-XM12LAN01-R10)
CFM-PoE01 	CFM Module with PoE Function, Individual Port 25.5W (Enable PoE function for onboard LAN 2 to LAN 5)
CFM-IGN03-R11 	CFM Module with Power Ignition Sensing Function, 12V/24V Selectable

Mounting Kit

RM01-R10 	19" Rack Mount Kit for GP-3000
RM02-R10 	19" Rack Mount Kit for GP-3000/GEB-33 Series
RM03-R10 	19" Rack Mount Kit for GP-3000/GEB-36 Series

Power Supply / Power Cord / Power Cable

	Adapter AC/DC 24V 9.2A 220W with 3pin Terminal Block Plug and Tubes, Level VI
	Adapter AC/DC 24V 15A 360W with 3pin Terminal Block Plug and TUBES, Level VI
	Railway Single Output DC-DC Converter 200W / DC 24V
	DIN Rail Power Supply 480W 24V, SDR-480-24
	Power Supply 1000W 24V, HEP-1000-24
	1.8M US Power Cord, Stripped and Tinned End with Tube
	1.8M EU Power Cord, Stripped and Tinned End with Tube
	1M Power Cable with 3-Pin Terminal Block Plug, Stripped and Tinned End with Tube

Compatible GPU List

Model	Architecture	Dimesion (D x W mm)	Slot	Power Consumption
RTX PRO 6000 Blackwell Max-Q Workstation Edition	Blackwell	266.7 x 111.8	dual slot	300W
RTX PRO 5000 Blackwell	Blackwell	266.7 x 111.8	dual slot	300W
RTX PRO 4500 Blackwell	Blackwell	241.3 x 111.8	dual slot	200W
RTX PRO 4000 Blackwell	Blackwell	266.7 x 111.8	single slot	140W
RTX PRO 4000 SFF Blackwell	Blackwell	167.6 x 68.6	dual slot	70W
RTX PRO 2000 Blackwell	Blackwell	167.6 x 68.6	dual slot	70W
RTX 6000	Ada Lovelace	266.7 x 111.8	dual slot	300W
RTX 5000	Ada Lovelace	266.7 x 111.8	dual slot	250W
RTX 4500	Ada Lovelace	266.7 x 111.8	dual slot	210W
A800 40GB Active	Ampere	266.7 x 111.8	single slot	130W
RTX A6000	Ampere	266.7 x 111.8	dual slot	70W
RTX A5500	Ampere	266.7 x 111.8	dual slot	230W
RTX A5000	Ampere	266.7 x 111.8	dual slot	230W
RTX A4500	Ampere	266.7 x 111.8	dual slot	200W
RTX A4000	Ampere	241.3 x 111.8	single slot	140W
RTX A2000 RTX A2000 12GB	Ampere	167.6 x 68.6	dual slot	70W

**An optional GPU expansion box is required for GPU usage.