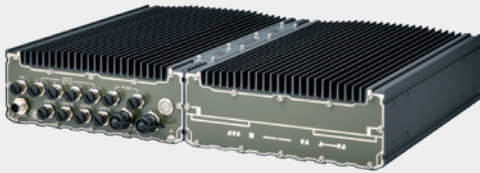


SEMIL-2000GC Series

19" rack mount IP69K waterproof computer including NVIDIA® L4, supporting Intel® 14th/ 13th/ 12th-Gen Core™ processor with 2x M12 10GbE and 4x M12 PoE+ ports

Key Features



- IP69K waterproof GPU computer with NVIDIA® L4 GPU
- -40°C to 70°C wide-temperature fanless operation
- 2x 10GbE, 1x GbE, and 4x 2.5GbE PoE+ via M12 X-coded connectors
- 2x SocketCAN and 2x USB3.2 Gen1 Type-C w/ DP alternative mode
- 8 to 48V wide-range DC input with reverse polarity protection and built-in ignition power control
- MIL-STD-810H compliant

Contact Neousys

Get Quote



*R.O.C Patent No. 1697759
*CN Patent Pending

Introduction

SEMIL-2000GC is an extreme-rugged IP69K dustproof and waterproof edge AI platform in a 2U 19" rack-mount form factor. SEMIL-2000GC incorporates Neousys' best-in-class thermal design to ensure fanless maximum GPU performance in wide range -40°C to 70°C temperatures. The system is also integrated with an NVIDIA® L4 GPU that offers up to 2.5 times the performance over Tesla T4.

Powered by Intel's 14th/ 13th/ 12th-Gen platform, SEMIL-2000GC benefits from Intel® 7 photolithography with performance and efficient core hybrid performances while supporting up to 64 GB DDR5 memory.

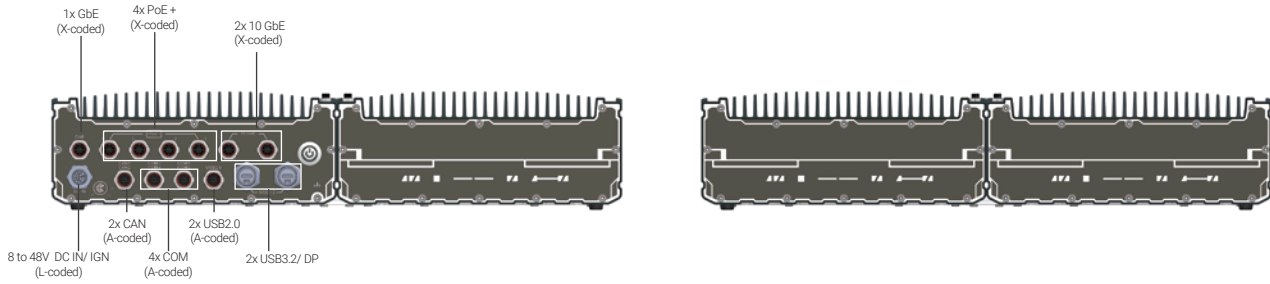
SEMIL-2000GC adopts a corrosion-proof stainless steel and aluminum chassis to counteract moisture and salinity. By utilizing M12 connectors, it offers extremely rugged connections in shock and vibration environments with two CAN bus 2.0 with SocketCAN driver, two USB 3.2, seven Ethernet (including two 10GbE), and four 802.3at PoE+ ports to supply 25.5W of power per port to connected compatible devices. Internally, there is an M.2 M-key socket to support NVMe SSD and mini-PCIe sockets for extending feature sets. Additionally, SEMIL-2000GC features two 2.5" SATA SDD/ HDD accommodation, 8-48V wide-range DC input with ignition power control, and it is also in compliance with MIL-STD-810H standards.

Specifications

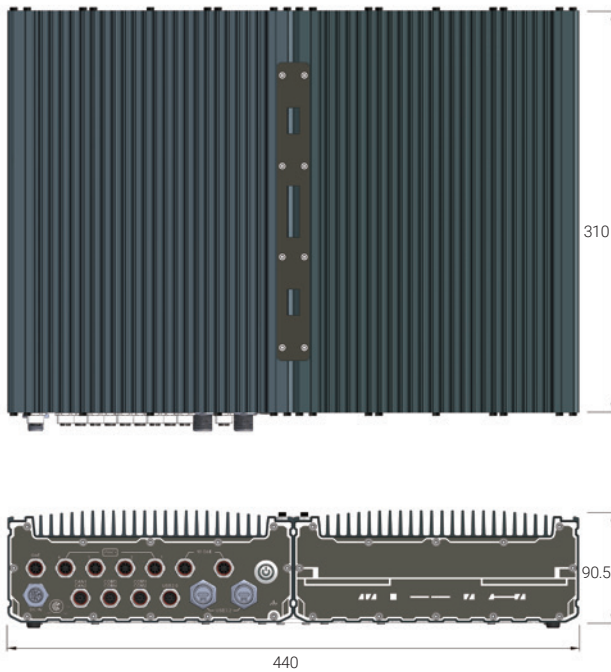
| System Core | |
|-------------------|--|
| Processor | Supporting Intel® 13th-Gen Core™ CPU (LGA1700 socket, 65W/ 35W TDP) - Intel® Core™ i9-13900E/ i9-13900TE - Intel® Core™ i7-13700E/ i7-13700TE - Intel® Core™ i5-13500E/ i5-13400E/ i5-13500TE - Intel® Core™ i3-13100E/ i3-13100TE |
| Chipset | Intel® Q670E platform controller hub |
| Graphics | Integrated Intel® UHD Graphics 770 (32EU) |
| Acceleration GPU | NVIDIA® L4 GPU |
| Memory | Up to 64 GB DDR5 4800 SDRAM (two SODIMM slots) |
| AMT | Supports Intel vPro/ AMT 16.0 |
| TPM | Supports dTPM 2.0 |
| I/O Interface | |
| Ethernet Port | 2x 10GbE Ethernet by X550-AT2 (with WoL) (M12 X-coded) 4x 2.5GbE Ethernet by Intel I226-IT (PoE+) (M12 X-coded) 1x GbE Ethernet by Intel I219-LM (with WoL) (M12 X-coded) |
| PoE+ | 4x IEEE 802.3at PoE+ PSE with 100 W total power budget |
| CAN Bus | 2x isolated CAN 2.0 port, supporting SocketCAN in Linux |
| USB | 2x Type-C USB 3.2 Gen1x1 (5Gbps) ports (shared DisplayPort) 2x USB 2.0 ports (M12 A-coded) |
| Video Port | 2x Type-C USB connector supporting DP output (shared USB3.2 Gen1x1) |
| Serial Port | 2x isolated 3-wire RS-232 ports (COM1/ COM2) 1x isolated 3-wire RS232 (COM3) & 1x RS-422/ 485 port (COM4) |
| Storage Interface | |
| SATA HDD | 2x Internal SATA port for 2.5" HDD/ SSD installation, supporting RAID 0/ 1 |
| M.2 | 1x M.2 2280 M key NVMe socket (PCIe Gen4x4) for NVMe SSD |

| Expansion Bus | |
|-----------------------|---|
| Mini PCI-E | 3x full-size mini PCI Express socket with SIM slot |
| M.2 | 1x M.2 2242/3052 B key socket with dual SIM slot for M.2 5G/ 4G module 1x M.2 2230 E key socket for Wi-Fi |
| Power Supply | |
| DC Input | 8V to 48V DC input, with reverse polarity protection (M12 L-coded) |
| Ignition Control | Built-in ignition power control (IGN/ GND signal via M12 L-coded connector) |
| Mechanical | |
| Dimension | 440mm (W) x 310mm (D) x 90.5mm (H) (excl. rack-mount bracket) |
| Weight | 12 kg |
| Mounting | Rack-mounting (standard) and wall-mounting (standard) |
| Environmental | |
| Operating Temperature | With 35W CPU -40°C to 70°C |
| | With CPU operating >= 65W CPU -40°C to 70°C (configured as 35W TDP mode) -40°C to 60°C (configured as 65W TDP mode) |
| Storage Temperature | -40°C ~85°C |
| Humidity | 10%~90% , non-condensing |
| Vibration | MIL-STD-810H, 514.8C-IV. Category 4 |
| Shock | MIL-STD-810H, 516.8 Procedure I |
| EMC | EN 50121 (EN 50155 EMC) CE/FCC Class A, according to EN 55032 & EN 55024 |
| Ingress Protection | IP69K |

Appearance



Dimensions

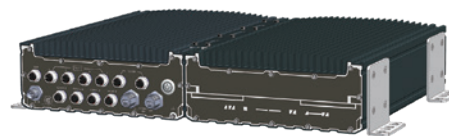


Unit : mm

Mounting Configuration



▲ SEMIL 19" rack-mount



▲ SEMIL wall-mount

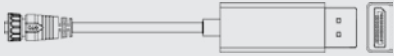
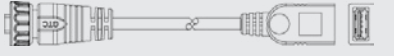
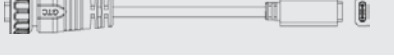
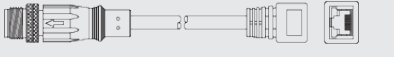

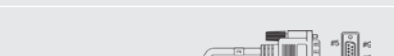


Ordering Information

| Model No. | Product Description |
|--------------|---|
| SEMIL-2047GC | 19" rack mount IP69K waterproof computer including NVIDIA® L4, supporting Intel® 14th/ 13th/ 12th-Gen Core™ processor with 2x M12 10GbE and 4x M12 PoE+ ports |

Optional Accessories

| | |
|-----------------|---|
| PA-280W-CW6P-2P | 280W AC-DC power adapter 24V 11.67A, 85~264VAC, -30~+70°C w/ Wafer FML6P to 2P End Terminal cable for AWP/SEMIL |
| PA-600W-C4PY-4P | 600W AC-DC power adapter 24V 25A, 85~264VAC, -20~+70°C, w/ 4PY Terminal to 4P End Terminal cable for AWP/SEMIL |

SEMIL-2000 Series

| Type | Model Name | Description |
|---|-----------------------------|--|
|  | Cbl-TpCPlug-DPM-1M | TypeC Male Plug to DP Male Cable, Length : 1M |
|  | Cbl-TpCPlug-U3TA-50CM | TypeC Male Plug to USB3.0 Type-A FML, Length: 50CM |
|  | Cbl-TpCPlug-UTpCF-50CM | TypeC Male Plug to USB Type-C FML Cable, Length : 50CM |
|  | Cbl-M12X8M-RJ45-500CM | M12(8-pole-X-coded) to RJ45, CAT6, Length : 500CM |
|  | Cbl-M12A8M-2U2TA-180CM1 | M12 (8-pole-A-coded) to 2xUSB 2.0 type A (female), Length: 180CM |
|  | Cbl-M12A8M-2DB9M_OW2-180CM1 | M12 A-Code Male 8P to x2 DB9 Male+2P, Length: 180CM |
|  | Cbl-M12A8M-2DB9M-180CM | M12 (8-pole-A-coded male) to 2x DB9 male, Length: 180CM |
|  | Cbl-M12L5F-CordEnd5-180CM | M12 L-Code 5P(FML) to Cord End Terminal 5P, Length: 1.8M |

Cable Kit

| SEMIL-2000 M12 cable kit | | |
|-----------------------------|--|------------------------------------|
| Cblkit-M12-SEMIL2000 | 7x Cbl-M12X8M-RJ45-500CM | 1x Cbl-M12A8M-2U2TA-180CM1 |
| | 2x Cbl-M12A8M-2DB9M_OW2-180CM1 (COM1/2 & CAN1/2) | 1x Cbl-M12A8M-2DB9M-180CM (COM3/4) |
| | 1x Cbl-M12L5F-CordEnd5-180CM | |