

SEMIL-2200GC Series

19" rack mount IP69K mission critical GPU computer including NVIDIA® L4, supporting Intel® 14th/ 13th/ 12th-Gen Core™ processor



Key Features

- 2U IP69K military GPU computer with NVIDIA® L4 GPU
- Up to 64 GB ECC/ non-ECC DDR5 4800 SDRAM
- -40°C to 70°C wide-temperature fanless operation
- 2x 10GbE, and 4x 2.5GbE via M12 X-coded connectors
- 2x SocketCAN and 2x USB3.2 Gen1 Type-C w/ DP alternative mode
- 9V to 36V wide-range DC input with built-in ignition power control
- MIL-STD-810H, MIL-STD-461G, MIL-STD-1275D compliant



Preliminary

Introduction

SEMIL-2200GC is a cutting-edge, ultra-rugged edge AI platform engineered for demanding environments. Housed in a 2U 19-inch rack-mount chassis, this IP69K-rated system is impervious to dust, water, and capable of flawless operations in -40°C to 70°C environments. The SEMIL-2200GC can achieve maximum GPU performance without the need for fans. At its core lies an NVIDIA® L4 GPU, and coupled with Intel's latest 14th, 13th, or 12th generation processors to offer exceptional computing power and efficiency.

The SEMIL-2200GC employs a corrosion-resistant stainless steel and aluminum chassis to safeguard against moisture and salinity. Its ruggedized M12 connectors can withstand shock and vibration, making it ideal for harsh industrial and field applications. Its comprehensive connectivity options include dual CAN bus 2.0, multiple USB 3.2, and seven Ethernet ports including two 10GbE to connected high-speed devices.

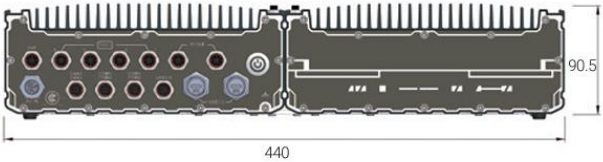
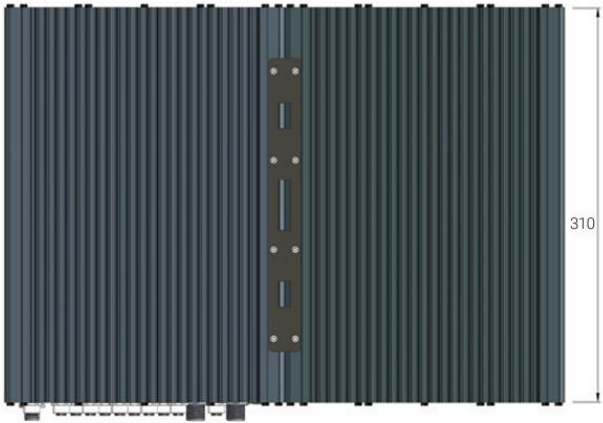
The SEMIL-2200GC is MIL-STD-810H compliant, proven to withstand extreme temperatures, humidity, vibration, and shock. Additionally, it complies with MIL-STD-461G standards, ensuring immunity to electromagnetic interference. For applications in mobile or vehicular environments, this platform meets the requirements of MIL-STD-1275D. With its exceptional performance, rugged construction, and adherence to stringent military standards, the SEMIL-2200GC is the ideal solution for critical applications demanding reliability, durability, and advanced AI capabilities.

Specifications

System Core		Storage Interface	
Processor	Supporting Intel® 14th-Gen Core™ CPU (LGA1700 socket, 35W TDP) - Intel® Core™ i9-14900T - Intel® Core™ i7-14700T - Intel® Core™ i5-14500T - Intel® Core™ i3-14100T	SATA HDD	2x internal SATA port for 2.5" HDD/ SSD installation, supporting RAID 0/1
	Supporting Intel® 13th-Gen Core™ CPU (LGA1700 socket, 35W TDP) - Intel® Core™ i9-13900TE - Intel® Core™ i7-13700TE - Intel® Core™ i5-13500TE - Intel® Core™ i3-13100TE	M.2 NVMe	1x M.2 2280 M key NVMe socket (PCIe Gen4x4) for NVMe SSD
Supporting Intel® 12th-Gen Core™ CPU (LGA1700 socket, 35W TDP) - Intel® Core™ i9-12900TE - Intel® Core™ i7-12700TE - Intel® Core™ i5-12500TE - Intel® Core™ i3-12100TE		Expansion Bus	
Chipset	Intel® R680E platform controller hub	Mini PCI-E	3x full-size mini PCI Express socket with SIM slot
Graphics	Integrated Intel® UHD Graphics 770 (32EU)	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
Acceleration GPU	NVIDIA® L4 GPU	Power Supply	
Memory	Up to 64 GB ECC/ non-ECC DDR5 4800 SDRAM (two SODIMM slots)	DC Input	9V to 36V DC input with isolation (M12 L-coded)
AMT	Supports Intel vPro/ AMT 16.0	Ignition Control	Built-in ignition power control (IGN signal via M12 L-coded connector)
TPM	Supports dTPM 2.0	Mechanical	
I/O Interface		Dimension	440mm (W) x 310mm (D) x 90.5mm (H) (excl. rack-mount bracket)
Ethernet	2x 10GbE Ethernet by X550-AT2 (with WoL) (M12 X-coded) 4x 2.5GbE Ethernet by Intel I226-IT (M12 X-coded) 1x GbE Ethernet by Intel I219-LM (with WoL) (M12 X-coded)	Weight	12 kg
CAN Bus	2x isolated CAN 2.0 port, supporting SocketCAN in Linux	Mounting	Rack-mounting (standard) and wall-mounting (standard)
USB	2x Type-C USB 3.2 Gen1x1 (5Gbps) ports (shared DisplayPort) 2x USB 2.0 ports (M12 A-coded)	Environmental	
Video Port	2x Type-C USB connector supporting DP output (shared USB 3.2 Gen1x1)	Operating Temperature	-40°C ~ 70°C
Serial Port	2x isolated 3-wire RS-232 ports (COM1/ COM2) 1x isolated 3-wire RS232 (COM3) & 1x RS-422/ 485 port (COM4)	Storage Temperature	-40°C ~ 85°C
		Humidity	10%~90% , non-condensing
		MIL-STD-810H	514.8C-VII. Category 4, 516.8 Procedure I
		MIL-STD-461G	CE102, RE102, RS103
		MIL-STD-1275D	Starting event, voltage spikes, voltage surges
		IP Rating	IP69K

Appearance & Dimensions

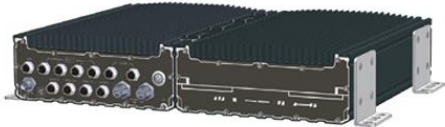
Unit : mm



Mounting Configuration



▲ SEMIL 19" rack-mount



▲ SEMIL wall-mount

Ordering Information

Model No.	Product Description
SEMIL-2207	19"/2 rack mount IP69K mission critical computer supporting Intel® 14th/ 13th/ 12th-Gen Core™ processor
SEMIL-2247GC	19" rack mount IP69K mission critical GPU computer including NVIDIA® L4, supporting Intel® 14th/ 13th/ 12th-Gen Core™ processor

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
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