SEMIL-2200

Fanless IP69K edge computer with Intel® Core™ 14th / 13th / 12th Gen CPU for industrial & mission-critical applications

BRESSNER
A HIPER Global Company

Features

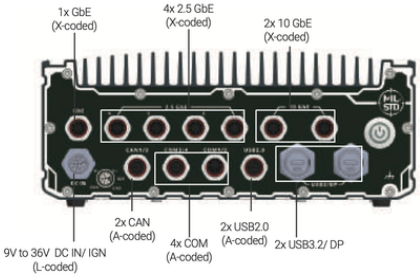
- Intel® Core™ 14th/13th/12th Generation Processor
- DDR5 4800 SODIMM, up to 128GB
- IP69K protection and MIL-STD-810H, -461G, and -1275D compliant
- M12 X-coded connectors
- Fanless design for reliable operation from –40 °C to 70 °C

SEMIL-2200 – Extremely rugged edge computer for demanding operating environments

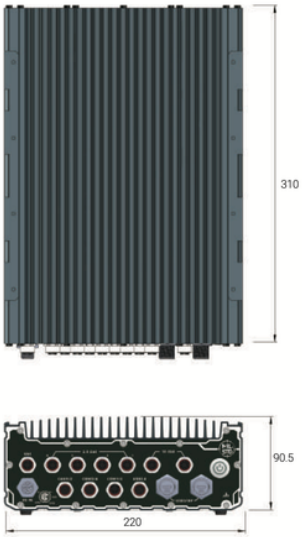
The SEMIL-2200 is a state-of-the-art, AI-enabled edge computing platform designed for mission-critical applications in particularly harsh environments. The system is housed in a 2U 19″ rackmount enclosure and is IP69K certified, ensuring complete protection against dust and high-pressure water. Thanks to its outstanding thermal design, the SEMIL-2200 operates reliably in a temperature range from –40 °C to 70 °C, even under the most demanding operating conditions. Powered by 14th, 13th, or 12th generation Intel® processors, the SEMIL-2200 offers an excellent combination of computing power and energy efficiency. With support for up to 128 GB of ECC/non-ECC DDR5-4800 RAM, the system is ideal for industrial control, automation, or AI applications at the edge.

The SEMIL-2200's stainless steel and aluminum housing is corrosion-resistant and provides reliable protection against moisture and salinity, making the system ideal for industrial, maritime, or mobile environments. Ruggedized M12 connectors ensure secure and stable connections even under vibration and shock. Features include two CAN-Bus 2.0 interfaces, multiple USB 3.2 ports, and seven Ethernet ports, including two 10 GbE ports for high-speed devices. The SEMIL-2200 meets MIL-STD-810H standards and has been tested for resistance to temperature fluctuations, humidity, vibration, and shock. In addition, the system is MIL-STD-461G compliant and offers high electromagnetic compatibility. For mobile or vehicle-based applications, it also complies with the MIL-STD-1275D specification.

Appearance



Dimension (in mm)



Mounting Configuration

SEMIL 19″ rackmount

SEMIL wall mount

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	SEMIL-2200
SYSTEM	
CPU	Supports Intel® Core™ 14th Gen CPUs (LGA1700 socket, 35W TDP) – Intel® Core™ i9-14900T – Intel® Core™ i7-14700T – Intel® Core™ i5-14500T – Intel® Core™ i3-14100T Supports Intel® Core™ 13th Gen CPUs (LGA1700 socket, 35W TDP) – Intel® Core™ i9-13900TE – Intel® Core™ i7-13700TE – Intel® Core™ i5-13500TE – Intel® Core™ i3-13100TE Supports Intel® Core™ 12th Gen CPUs (LGA1700 socket, 35W TDP) – Intel® Core™ i9-12900TE – Intel® Core™ i7-12700TE – Intel® Core™ i5-12500TE – Intel® Core™ i3-12100TE
Chipset	Intel® R680E platform controller hub
Graphics	Integrated Intel® UHD Graphics 770 (32EU)
RAM	Up to 128GB ECC/non-ECC DDR5 4800 SDRAM (two SODIMM slots)
AMT	Supports Intel vPro / AMT 16.0
TPM	Supports dTPM 2.0
Storage	2x internal SATA connectors for 2.5" HDD/SSD installation, supporting RAID 0/1 1x M.2 2280 M-Key NVMe socket (PCIe Gen4 x4) for NVMe SSD
Expansion	3x full-size Mini-PCIe sockets with SIM slot 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
INTERFACE	
Ethernet	2x 10GbE Ethernet via X550-AT2 (with WoL) (M12 X-coded) 4x 2.5GbE Ethernet via Intel I226-IT (M12 X-coded) 1x GbE Ethernet via Intel I219-LM (with WoL) (M12 X-coded)
USB	2x USB 3.2 Gen1 x1 (5Gbps) Type-C ports (shared DisplayPort) 2x USB 2.0 ports (M12 A-coded)
COM	2x isolated 3-wire RS-232 ports (COM1/COM2) 1x isolated 3-wire RS-232 (COM3) 1x RS-422/485 port (COM4)
CANBus	2x isolated CAN 2.0 ports, supports SocketCAN under Linux
Video	2x Type-C USB port with DP output (shared USB 3.2 Gen1x1)
ENVIRONMENTAL	
Chassis	Corrosion-resistant stainless steel and aluminum chassis
Cooling	Fanless
Power Supply	9V to 36V DC input with reverse polarity protection (M12 L-coded) Built-in ignition power control (IGN/GND signal via M12 L-coded connector)
Operating Temperature	-40°C ~ 70°C
Storage Temperature	-40° ~ 85°C
Vibration / Shock Resistance	Vibration: MIL-STD-810H, 514.8C-IV. Category 4 Shock: MIL-STD-810H, 516.8 Procedure I
Humidity	10 ~ 90% , non-condensing
Dimensions (W x D x H)	220 x 310 x 90.5mm (without rack mount bracket)
Weight	6.2kg
Mounting	Rackmount (standard) and wall mounting (standard)
IP Protection	IP69K
Certifications	MIL-STD-461G: – CE102 (10 kHz to 10 MHz) – RE102 (2 MHz to 18 GHz) – RS103 (2 MHz to 18 GHz, 50 V/m) MIL-STD-1275D: Normal operation mode (ripple, surges, spikes)

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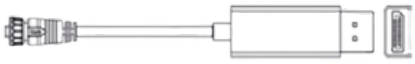
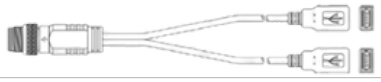
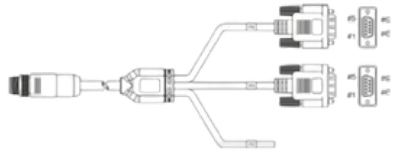
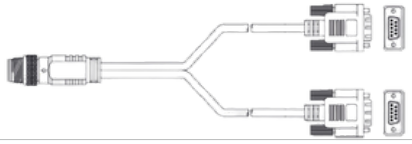
Ordering Information	SEMIL-2200
MODEL NO.	
SEMIL-2207	2U 19"/2 rack mount IP69K mission critical computer supporting Intel® 14th/ 13th/ 12th-Gen Core™ processor with 2x M12 10GbE and 4x M12 2.5GbE ports
OPTIONAL ACCESSORIES	
PA-280W-CW6P-2P	280W AC-DC power adapter 24V 11.67A, 85~264VAC, -30~+70°C w/ Wafer FML6P to 2P End Terminal cable for AWP/SEMIL
JPlate-SL	Joint plate for dual SEMIL assembly (for SEMIL-2000)
Rmkit-SL	Rack mount for single SEMIL (for SEMIL-2000)
M12 CABLE KIT	
Cblkit-M12-SEMIL2007	7x Cbl-M12X8M-RJ45-500CM 2x Cbl-M12A8M-2DB9M_OW2-180CM1 (COM 1/2 & CAN 1/2) 1x Cbl-M12L5F-CordEnd5-180CM 1x Cbl-M12A8M-2U2TA-180CM1 1x Cbl-M12A8M-2DB9M-180CM (COM3/4)

Cable Kit Guide	SEMIL-2200	
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