BRESSN

SEMIL-1300 Series

Half-Rack Rugged Fanless Computer Supporting Intel® Xeon® E or 9th/8th-Gen Core™ **Processor with M12 Connectors**

Key Features

- · Intel[®] Xeon[®] E or 9th/ 8th-Gen Core[™] i7/ i5/ i3 CPU
- 2U half-rack fanless system, -40 °C to 70 °C operation
- 4x 802.3at Gigabit PoE+, VGA, 2x USB 2.0, 2x COM via M12 connectors
- M.2 B key for 4G/5G module, M.2 E key for WiFi module
- · Patented supercapacitor-based uninterruptible power backup* (SEMIL-1311J)
- 8~48V wide-range DC input with built-in ignition power control
- · CE, FCC and EN 50155 certified



Introduction

SEMIL-1300 series is a rugged fanless computer with robust M12 I/O connectors in a standard 2U 19" half-rack form factor enclosure. Powered by Intel® Xeon® E or 9th/ 8th-Gen Core™ CPU and coupled with workstation-grade Intel® C246 chipset, it supports up to 64 GB DDR4 ECC/non-ECC memory and offers flexible mounting options to wall or rack-mount up to two SEMILs side by side.

SEMIL-1300 series incorporates Neousys' best-in-class passive thermal design for proven -40 °C to 70 °C fanless operation. It offers a variety of I/O connectivities utilizing M12 connectors that are reliably robust, cost-effective and can be obtained off-the-shelf. There are also generic I/Os with screw-lock mechanisms to guarantee an extreme-rugged connection in shock and vibration environments. It has four 802.3at PoE+ ports, each supplying 25W of power to the connected device such as an IP or GigE camera. SEMIL-1300 is designed with 4G/5G and WiFi5/WiFi6 wireless connectivity in mind and it supports 8-48V wide-range DC input with ignition power control for in-vehicle use while complying with EN 50155.

In addition, SEMIL-1311J is equipped with Neousys' patented SuperCAP-based UPS containing 2500 watt-second stored energy to sustain and safely shut down the system during unforeseen power outages. It is the perfect solution for data protection and applications in unstable power environments. With a standard half-rack design, proven wide temperature operation capability, protected against shock/ vibration and power interruption, Neousys' SEMIL-1300 series is the ideal robust solution for extreme-rugged deployment.

Specifications

	SEMIL-1301J	SEMIL-1311J
System Core		
Processor	Supporting Intel* Xeon* E and 9 th / 8 th -Gen CPU (LGA1151 socket) - Xeon E 2278GE (8C/16T) / 2278GEL (8C/16T) / 2176G (6C/12T) - 17-9700E, 17-9700TE, 17-8700, 17-8700T - 15-9500E, 15-9500TE, 15-8500T - 13-9100E, 13-9100TE, 13-8100, 13-8100T	
Chipset	Intel® C246 platform controller hub	
Graphics	Integrated Intel® UHD Graphics 630	
Memory	Up to 64 GB ECC/ non-ECC DDR4-2666/ 2400 SDRAM (two SODIMM sockets)	
AMT	Supports AMT 12.0	
ТРМ	Supports TPM 2.0	
I/O Interface		
PoE+	1x IEEE 802.3at (25.5W) Gigabit PoE+ p 802.3at (25.5W) Gigabit PoE+ ports by I	oorts by Intel [®] I219 (M12 X-coded) 3x IEEE ntel [®] I210 (M12 X-coded)
10 GbE Port (Build Option)	Optional: 1x 10 GbE port by Intel [*] X550AT controller (M12 X-coded)**	
Native Video Port	1x VGA (M12 A-coded), suppor DisplayPort connector, suppo	
Series Port	2x 3-wires RS-232 ports COM1 & COM2 (M12 A-coded) 1x software-programmable RS-232/422/485 port (COM3, DB9) 1x RS-232 port (COM4, DB9)	
USB	3x USB 3.1 Gen1 2x USB 2.0 (M12 A-coded) 1x USB 2.0 (internal)	
Audio	1x 3.5 mm jack for mic-in and speaker-out	
Storage Interface		
SATA HDD	2x Internal SATA port for 2.5" HDD/ SSD installation, supporting RAID 0/ 1	
mSATA	2x full-size mSATA port (mux with mini-PCIe)	
M.2	1x M.2 2280 M key socket (PCIe Gen3 x4) for NVMe SSD or Intel [*] Optane™ memory installation	

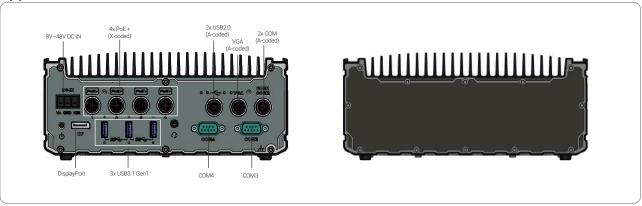
	SEMIL-1301J	SEMIL-1311J
Expansion Bus		
Mini PCI-E	2x full-size mini PCI Express sockets (mux with mSATA) 1x M.2 3042/ 3052 B key socket for selected M.2 4G/ 5G module 1x M.2 2242/ 2252 E key for selected WiFi module	
Power Supply		
DC Input	8~48V DC input	
Ignition Control	Built-in ignition power control	
Power Backup		
Capacity	-	2500 watt-second
Mechanical		
Dimension	220mm (W) x 310mm (D) x 86.5mm (H) (excl. rack-mount bracket)	
Weight	5.8 kg	6 kg
Mounting	Rack-mounting and wall-mounting	
Environmental		
Operating Temperature	with 35W CPU -40°C ~ 70°C **** with >= 65W CPU -40°C ~ 70°C ***/ **** (configured as 35W TDP mode) -40°C ~ 50°C ***/ **** (configured as 65W TDP mode)	
Storage Temperature	-40°C ~85°C	
Humidity	10%~90%, non-condensing	
Vibration	MIL-STD-810G, Method 514.7, Category 4	
Shock	MIL-STD-810G, Method 516.7, Procedure I	
	EN-50155, CE/FCC Class A, according to EN 55032 & EN 55035	

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SEMIL-1300 Series

Appearance



Dimensions



Ordering Information

Model No.	Product Description
SEMIL-1301	Half-Rack Rugged Fanless Computer supporting Intel [®] Xeon [®] E or 9th/ 8th-Gen Core™ processor with M12 I/Os
SEMIL-1311J	Half-Rack Rugged Fanless Computer supporting Intel [®] Xeon [®] E or 9th/8th-Gen Core™ processor with M12 I/Os and SuperCAP UPS

Optional Accessories

Joint-plate	Joint plate for dual SEMIL assembly
M12-Cable-Kit	4x PoE+, VGA, 2x USB2.0 (by Y-cable), 2x COM (by Y-cable) and DC power cables
PA-160W-OW	160W AC-DC power adapter, 20V/8A; 18AWG/120cm; cord end terminals for terminal block, operating temperature: -30 to 70°C.
PA-120W-OW	120W AC/DC power adapter, 20V/6A; 18AWG/120cm; cord end terminals for terminal block, operating temperature: -30 to 70°C.

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