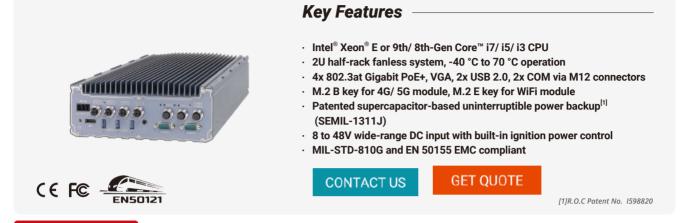


SEMIL-1300 Series

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



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 to 48V wide-range DC input with ignition power control for in-vehicle use while complying with EN 50155 EMC.

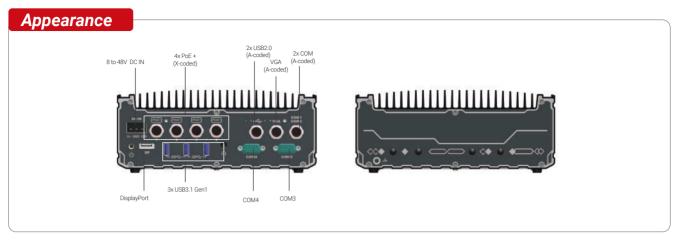
In addition, SEMIL-1311J is equipped with Neousys' patented SuperCAP-based UPS containing 2500 watt-second stored energy to sustain and safely shut down the system during unforeseen power outages. It is the perfect solution for data protection and applications in unstable power environments. With a standard 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.

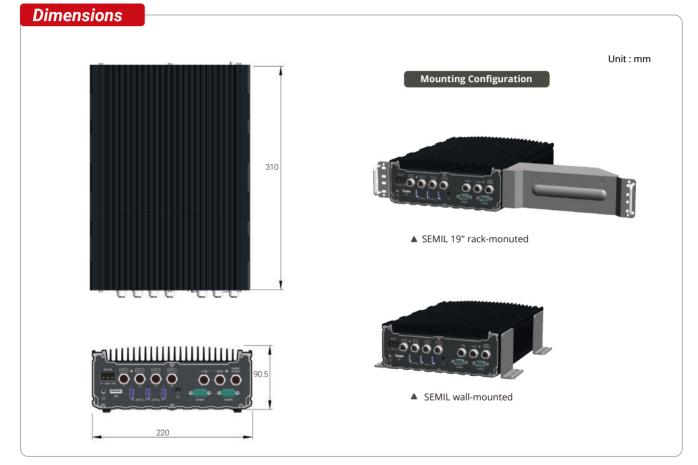
Specifications

	SEMIL-1301	SEMIL-1311J		SEMIL-1301	SEMIL-1311J
System Core			Expansion Bus		
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) - I7-9700E, I7-9700TE, I7-8700, I7-8700T - I5-9500E, I5-9500TE, I5-8500, I5-8500T - i3-9100E, i3-9100TE, I3-8100, I3-8100T		Mini PCI-E	2x full-size mini PCI Express socket 1x M.2 3042/ 3052 B key socket for 1x M.2 2242/ 2252 E key for selected	selected M.2 4G/ 5G module
			Power Supply		
Chipset	Intel [®] C246 platform controller hub		DC Input		/ DC input
Graphics	Integrated Intel [®] UHD Graphics 630		Ignition Control	Built-in igniti	ion power control
Memory	Up to 64 GB ECC/ non-ECC DDR4-2666/ 2400 SDRAM (two SODIMM sockets)		Power Backup Capacity		2500 watt-second
AMT	Supports AMT 12.0		Mechanical		
ТРМ	Supports TPM 2.0		Dimension	220mm (W) x 310mm (D) x 90.5	5mm (H) (excl. rack-mount bracket)
I/O Interface			Weight	5.8 kg	6 kg
PoE+	1x IEEE 802.3at (25.5W) Gigabit PoE+ ports by Intel [®] I219 (M12 X-coded) 3x IEEE 802.3at (25.5W) Gigabit PoE+ ports by Intel [®] I210 (M12 X-coded)		Mounting	Rack-mounting and wall-mounting	
10 GbE Port (Build Option)	Optional: 1x 10 GbE port by Intel [®] X550AT controller (M12 X-coded)		Environmental	with 35W CPU -40°C ~ 70°C ^[3]	
Native Video Port		orting 1920 x 1200 resolution porting 4096 x 2304 resolution	Operating Temperature	with >= 65W CPU -40°C ~ 70°C ^{[2]/[3]} (configured -40°C ~ 50°C ^{[2]/[3]} (configured	as 35W TDP mode)
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)		Storage Temperature	-40°C ~ 50°C (configured	as 65W IDP mode)
USB	3x USB 3.1 Gen1 2x USB 2.0 (M12 A-coded) 1x USB 2.0 (internal)		Humidity	10%~90% , non-condensing	
			Vibration	MIL-STD-810G, Method 514.7, Category 4	
Audio	1x 3.5 mm jack for mic-in and speaker-out		Shock	MIL-STD-810G, Method 516.7, Procedure I	
Storage Interface			EMC	EN 50121 (EN 50155 EMC)	
SATA HDD	2x Internal SATA port for 2 supporting RAID 0/ 1	2.5" HDD/ SSD installation,	CE/FCC Class A, according to EN 55032 & EN 55035 (2) For Xeon E 21766/ 22786E, i79700E, and i7-8700 running at 65W mode, the highest operating temperatus, shall be limited to 50°C and thermal throttling may occur when sustained full-loading applied. Users can configu CPU power in BIOS to obtain higher operating temperature. (3) For sub-zero operating temperature, a wide temperature HDD or Solid State Disk (SSD) is required		5W mode, the highest operating temperatu
mSATA	2x full-size mSATA po	rt (mux with mini-PCle)			
M.2	1x M.2 2280 M key socket or Intel [®] Optane™ memo	(PCle Gen3 x4) for NVMe SSD			

SEMIL-1300 Series







Ordering Information

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Model No.	Product Description	
SEMIL-1301	-1301 Half-Rack Rugged Fanless Computer supporting Intel® Xeon® E or 9th/ 8th-Gen Core™ processor with M12 I/Os	
SEMIL-1301-10G	Half-rack rugged fanless computer supporting Intel [®] Xeon [®] E or 9th / 8th-Gen Core™ processor with M12 I/Os and 10GbE port	
SEMIL-1311J	Half-Rack Rugged Fanless Computer supporting Intel [®] Xeon [®] E or 9th/ 8th-Gen Core™ processor with M12 I/Os and SuperCAP UPS	
SEMIL-1311J-10G	Half-rack rugged fanless computer supporting Intel [®] Xeon [®] E or 9th / 8th-Gen Core™ processor with M12 I/Os, SuperCAP UPS and 10GbE port	

Optional Accessories

PA-160W-OW	160W AC-DC power adapter, 20V/8A; 18AWG/120cm; cord end terminals for terminal block, operating temperature : -30 to 70°C.
JPlate-SL	Joint plate assembly for SEMIL
Cblkit-M12	Please refer to the Cable Kit Guide on the following page

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SEMIL-1000 Series

Туре	Model Name	Description
	Cbl-M12X8M-RJ45-CAT6A-500CM	M12 (8-pole-X-coded) to RJ45, CAT6, length : 500CM
	Cbl-M12A8M-2U2TA-180CM	M12 (8-pole-A-coded) to 2xUSB 2.0 type A (female), Length: 180CM
	Cbl-M12A17M-VGA-180CM3	M12 (17-pole-A-coded) to VGA (Male), Length: 180CM
	Cbl-M12A8M-2DB9M_OW2-180CM1	Cable 180cm, M12 A-Code Male 8P to x2 DB9 Male+2P
	Cbl-M12S4F-OW4-180CM1	Cable 180cm, M12 S-Code Female 4P to Open Wire 4P
	CbI-M12A8M-ADJ-180CM	M12 (8-pole-A-coded) to Audio Jack, Length : 180CM

Cable Kit		
SEMIL-1300 M12 cable kit		
	4x Cbl-M12X8M-RJ45-CAT6A-500CM	1x Cbl-M12A8M-2U2TA-180CM
Cblkit-M12-SEMIL1300	1x Cbl-M12A17M-VGA-180CM3	1x Cbl-M12A17M-2DB9M_OW2-180CM1
SEMIL-1300-10G M12 cable kit		
Cblkit-M12-SEMIL1300	5x Cbl-M12X8M-RJ45-CAT6A-500CM	1x CbI-M12A8M-2U2TA-180CM
CDINIC-WITZ-SLIWIE 1500	1x Cbl-M12A17M-VGA-180CM3	1x CbI-M12A8M-2DB9M_OW2-180CM1
SEMIL-1704 M12 cable kit		
	4x Cbl-M12X8M-RJ45-CAT6A-500CM	1x Cbl-M12A8M-2U2TA-180CM
Cblkit-M12-SEMIL1700	1x Cbl-M12A17M-VGA-180CM3	1x Cbl-M12A8M-2DB9M_OW2-180CM1
	1x Cbl-M12S4F-OW4-180CM1	
SEMIL-1704-10G M12 cable kit		
	5x Cbl-M12X8M-RJ45-CAT6A-500CM	1x Cbl-M12A8M-2U2TA-180CM
Cblkit-M12-SEMIL1700-10G	1x Cbl-M12A17M-VGA-180CM3	1x Cbl-M12A8M-2DB9M_OW2-180CM1
	1x Cbl-M12S4F-OW4-180CM1	
SEMIL-1708 M12 cable kit		
	8x Cbl-M12X8M-RJ45-CAT6A-500CM	2x Cbl-M12A8M-2U2TA-180CM
Cblkit-M12-SEMIL1708	1x Cbl-M12A17M-VGA-180CM3	1x Cbl-M12A8M-2DB9M_OW2-180CM1
	1x Cbl-M12S4F-OW4-180CM1	
SEMIL-1708-10G M12 cable kit		
	9x Cbl-M12X8M-RJ45-CAT6A-500CM	2x Cbl-M12A8M-2U2TA-180CM
Cblkit-M12-SEMIL1708-10G	1x Cbl-M12A17M-VGA-180CM3	1x Cbl-M12A8M-2DB9M_OW2-180CM1
	1x Cbl-M12S4F-OW4-180CM1	
SEMIL-1708-ADO M12 cable kit		
	8x Cbl-M12X8M-RJ45-CAT6A-500CM	2x Cbl-M12A8M-2U2TA-180CM
Cblkit-M12-SEMIL1708-ADO	1x Cbl-M12A17M-VGA-180CM3	1x Cbl-M12A8M-2DB9M_OW2-180CM1
	1x Cbl-M12S4F-OW4-180CM1	1x Cbl-M12A8M-ADJ-180CM
SEMIL-1708-10G-ADO M12 cable k	it	
	9x Cbl-M12X8M-RJ45-CAT6A-500CM	2x Cbl-M12A8M-2U2TA-180CM
Cblkit-M12-SEMIL1708-10G-ADO	1x Cbl-M12A17M-VGA-180CM3	1x Cbl-M12A8M-2DB9M_OW2-180CM1
	1x Cbl-M12S4F-OW4-180CM1	1x Cbl-M12A8M-ADJ-180CM