



SIO-W321-MTL

21.5" Stainless Steel Panel PC with Intel® Core™ Ultra 5 125U Processor, 2x LAN, 2x COM, 2x USB



Features

- 21.5" (16:9) FHD LCD Capacitive Touch
- 1x 262-Pin DDR5 5600 SO-DIMM. Max. up to 48GB
- 1x M.2 M-Key for NVMe/ SATA, Auto detect
- 1x M.2 B-Key for 4G/5G support, 1x M.2 E-Key for Wifi/Bluetooth
- 2x 2.5GbE LAN, 2x USB, 2x COM
- Support 110V to 240V AC power input
- Fanless Operation from -10°C to 50°C
- Full system IP66/IP69K with Stainless Steel SUS316 construction
- Scratch Resistant 7H Glass Hardness
- Optical Bonding for ultimate clarity
- Pressure Valve SUS316L VENT
- CE, FCC Class A



Specifications

Display

IP Rating	IP66/IP69K
LCD Size	21.5" (16:9)
Max. Resolution	1920 x 1080 (FHD)
Brightness (cd/m ²)	400 nits
Contrast Ratio	1000:1
LCD Color	16.7M
Pixel Pitch (mm)	0.248 (H) x 0.248 (V)
Viewing Angle	89 /89 /89 /89 (Typ.) (CR>=10)
Backlight Lifetime	50,000 hrs (LED Backlight)

Touch

Projected Capacitive Touch	Surface Hardness: 7H / IK07 Multi-touch: Default 2 point (Support Glove Mode) Anti-noise: CS 10V rms
Resistive Touch (Option)	Surface Hardness: 3H Touch Point: single Touch IP Rating: IP65

System

Processor	Intel® Core™ Ultra 5 Processor 125U 12M Cache, up to 4.30 GHz (2+8+2 core), 15W
System Chipset	SoC Integrated
LAN Chipset	GbE1: Intel i226V 2.5GbE LAN PXE Support GbE2: Intel i226V 2.5GbE LAN PXE Support
Audio Codec	Realtek ALC897
System Memory	1x 262-Pin DDR5 5600 MT/s SO-DIMM. Max. up to 48GB (Non-ECC)
BIOS	AMI uEFI 256MB SPI flash
Watchdog	Software Programmable Supports 1~255 sec. System Reset

Storage

M.2	1x M.2 M-Key (2280, PCIe x4 Gen 4/SATA) support for NVMe/ SATA SSD, Auto Detect
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Expansion

M.2	1 x M.2 B-Key (3042/3052, PCIe x2+USB 3.0+USB 2.0) support for 4G/5G 1 x M.2 E-Key (2230, PCIe+USB 2.0) for Wifi/Bluetooth
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I/O

COM	COM1: 1x RS232/422/485 by M12 A-Code 8-pin (Default RS232) COM2: 1x RS232 by M12 A-Code 8-pin
LAN	2x LAN by M12 X-Code 8-pin
USB	1x M12 A-code by 2x USB 2.0 (8-pin)
Others	4x Antennas (Optional) Power On/Off SUS 316 Vent

Operating System

Windows	Windows 10 IoT Enterprise LTSC (64-bit) Windows 11 IoT Enterprise LTSC (64-bit)
Linux	Ubuntu 22.04 / 24.04 LTS

Power

Power Mode	AT / ATX (default)
Power Supply Voltage	110 ~ 240V AC Input
Power Connector	M12 S-code 4-pin

Environment

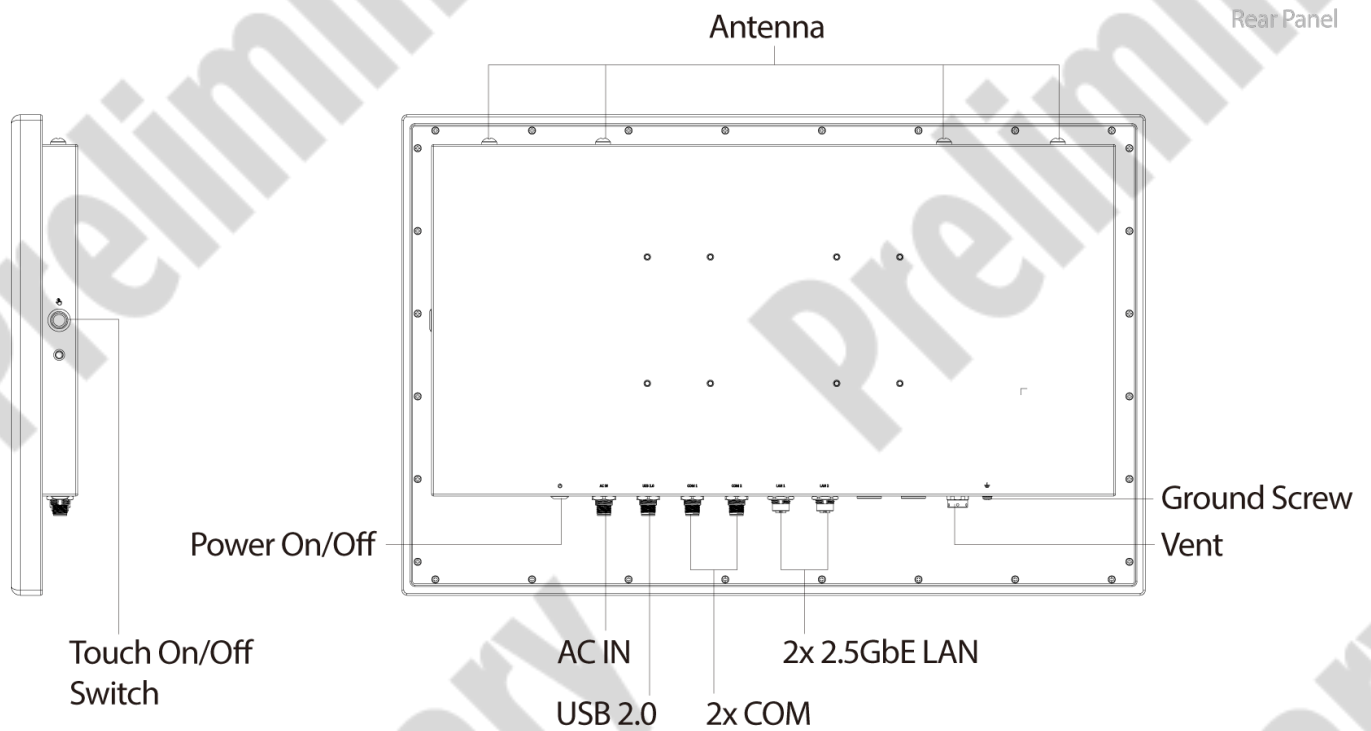
Operating Temperature	-10°C to 50°C
Storage Temperature	-20°C to 70°C

Relative Humidity	10% ~ 80% (non-condensing)
IP Level	Full System IP66/IP69K
Certification	CE, FCC Class A
Vibration	With SSD: 3 Grms (5 ~ 500 Hz, 0.5 hr/axis)
Shock	With SSD: 20G half-sin 11ms

Physical

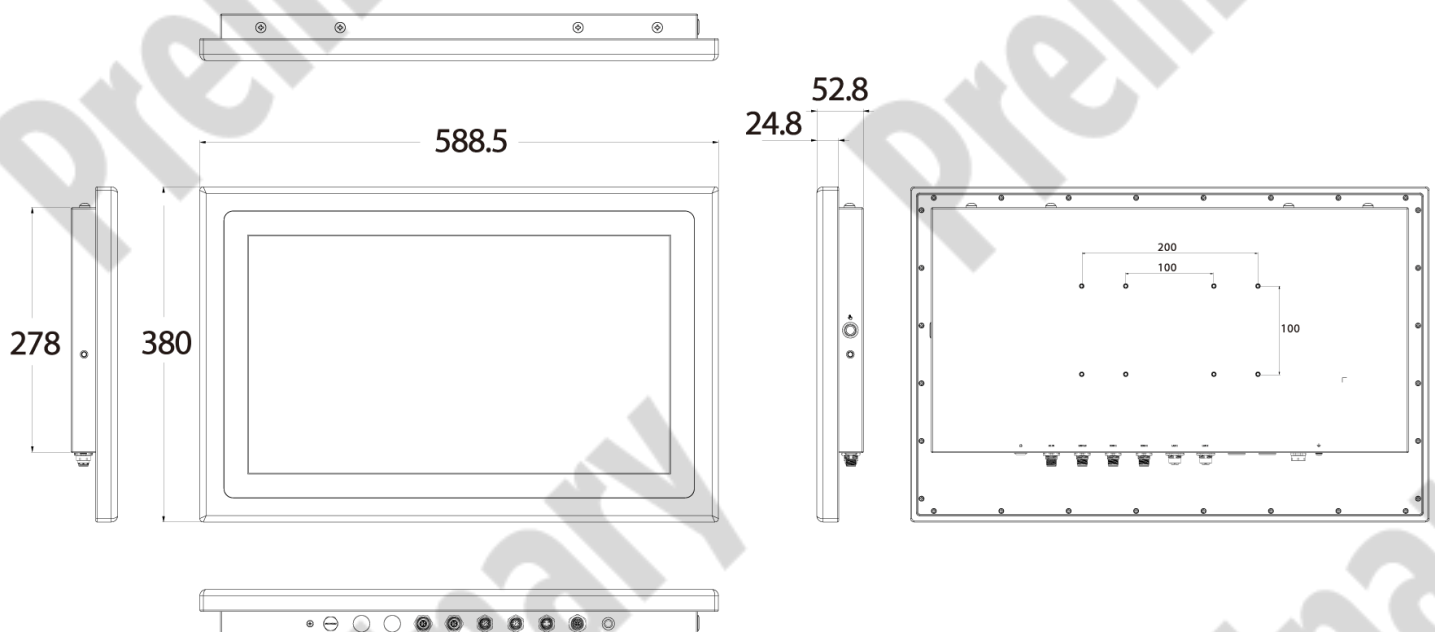
Dimensions	588.5 (W) x 380 (H) x 52.8 (D) mm
Weights	10 kg
Construction	Stainless Steel SUS316 with Optical bonding
Mounting Options	VESA Mounting Holes 100 x 100 mm or 200 x 100 mm Optional Yoke Mount

External I/O Mechanical Layout



Dimension

Unit: mm



Compliances and Standards

Shock	With SSD: 20G half-sin 11ms IEC60068-2-27:2008 Designed to comply with MIL-STD-810H Method 516.8 Procedure I
Vibration	With SSD: 3 Grms (5 - 500 Hz, 0.5 hr/axis) IEC60068-2-64:2008 Designed to comply with MIL-STD-810H Method 514.8 Procedure I
Operating Temperature	-10°C to 50°C IEC60068-2-1:2007 (Cold test procedure) IEC60068-2-2:2007 (Dry heat test procedure) IEC60068-2-3:2007 (Damp heat, steady state, test procedure) IEC60068-2-14:2009 (Wide temperature range thermal shock)
EMI	- FCC Class A (47 CFR part 15.109 and part 15.107) - CE - ICES-003 - UKCA

Available Models

Model No.	Description
SIO-W321C-125U	21.5" FHD Capacitive Touch Stainless Steel Panel PC with Intel® Core™ Ultra 5 125U Processor, 2x LAN, 2x COM, 2x USB
SIO-W321R-125U	21.5" FHD Resistive Touch Stainless Steel Panel PC with Intel® Core™ Ultra 5 125U Processor, 2x LAN, 2x COM, 2x USB

Optional Accessories

Model No.	Description
1-TPWR00092	Waterproof M12 S-CODE 4P PWR Cable (SUS316L) Type US 3M
1-TPWR00106	Waterproof M12 S-CODE 4P PWR Cable (SUS316L) Type EU 3M
1-TPWR00247	Waterproof M12 S-CODE 4P PWR Cable (SUS316L) Type UK 3M
1-TPWR00248	Waterproof M12 S-CODE 4P PWR Cable (SUS316L) Type AU 3M
1-TCOM00032	Waterproof COM Cable 1.5M
1-TLAN00024	Waterproof LAN Cable 1.5M
1-TUSB00057	Waterproof USB 2.0 Cable 1.6M
1-TGND00001	Grounding extension cable 3M

Packing List

1x SIO-W321 Stainless Steel Panel PC
1x Waterproof Connector Cover Set
1x Waterproof AC Power Input M12 S-CODE 4P PWR Cable

US Exports And Tariff Codes

ECCN	EAR99
HTS	8528.59.1500
Schedule B	85.28

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