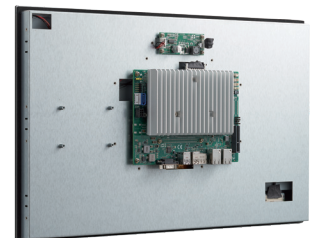
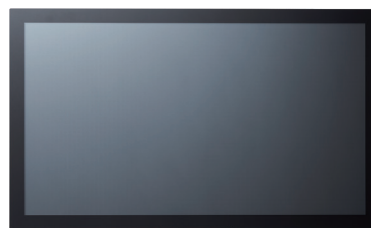


# SP2-TGL Series

11th Gen. Intel® Core™ Processor-based Fanless Open-Frame Panel PC



## Features

- High performance with 11th Gen. Intel® Core™ Processor
- Extensive I/O and function expansion through wire-to-board connectors and custom function module
- Extensive expansion and customization options for fast and easy integration with all form factor, kiosk and all-in-one panel PC application
- Enhanced data integrity and protection in case of sudden power outage with support for optional back-up battery
- Low-risk cost-effective choice with pre-compliance EMC testing and high ESD tolerance
- High applicability and reliability in case of power fluctuation with a 9-36V voltage range

## Software Support

- Windows® 10 IoT Enterprise, Linux Ubuntu 20.04

## Optional Accessories

- Memory  
Up to 64GB DDR4 memory
- Storage  
M.2 SSD, 2.5" HDD/SSD
- Adapter  
12V 160W power adapter  
12V 84W power adapter

## Ordering Information

Model	CPU
SP2-10WP-TGL	10.1" fanless open frame panel PC
SP2-15WP-TGL	15.6" fanless open frame panel PC
SP2-21WP-TGL	21.5" fanless open frame panel PC

- I/O Cables  
Power/Reset, keypad, I2C, DI/O, speaker, buzzer, MIC in/Line out, LED, COM port, fan, and USB cables
- Wireless Kit  
Wi-Fi/BT/4G LTE wireless kit
- Function Module with External I/Os  
SP-FM | Titan FM | USB FM



• SP-FM



• Titan FM



• USB FM

## Specifications

Model	SP2-10WP-TGL	SP2-15WP-TGL	SP2-21WP-TGL
<b>System</b>			
Processor	Default Intel® Core™ i7-1185G7E, 1.80GHz, 4-Core Intel® Core™ i5-1145G7E, 1.50GHz, 4-Core Intel® Core™ i3-1115G4E, 2.20GHz, 2-Core Intel® Celeron® 6305E, 1.80GHz, 2-Core By Request Intel® Core™ i7-1185GRE, 1.80GHz, 4-Core Intel® Core™ i5-1145GRE, 2.60 GHz, 4-Core Intel® Core™ i3-1115GRE, 3.00 GHz, 2-Core		
Memory	2x SODIMM non-ECC 2400/3200 MHz DDR4 memory up to 64GB		
Storage	1x M.2 SATA 6 Gbps port, M key 2280 and 1x 2.5" SSD/HDD SATA 6 Gbps port (Optional)		
<b>Display and Touch</b>			
Size	10.1"	15.6"	21.5"
Resolution	1280 x 800	1920 x 1080	
Contrast Ratio	800:1	1000:1	
Brightness (Nits)	400 cd/m2 (typ)	420 cd/m2 (typ)	400 cd/m2 (typ)
Backlight Life (Hrs)	50,000		
Viewing Angle (U/D/R/L)	89/89/89/89		
Touch screen	10 points		
Surface Hardness	7H		
Surface Treatment	Anti-Fingerprint		
<b>External I/O</b>			
Ethernet	2x GbE (Intel® I225), RJ-45, WOL, Up to 2.5 Gb/s		
Serial Port	1x RS-232/422/485 programmable, auto flow		
USB Port	1x USB 2.0, Type A, OCP, 1000mA 1x USB 3.2, 5 Gbps, Type A, OCP, 1600mA 2 x USB 3.2, gen 2, 10 Gbps, Type A, OCP, 1600mA		
DisplayPort	1x DP, DP++, supports resolutions up to 5120x3200@60Hz 1x MiniDP, DP++, supports resolutions up to 5120x3200@60Hz		
<b>Internal I/O with Wire to Board Connectors</b>			
USB Port	1x USB 2.0 client		
I <sup>2</sup> C	2x for I <sup>2</sup> C client		
Audio	1x for 2x stereo speaker (2 watt) 1x Mic-in and Line-out 1x buzzer		
Keys	1x for 32 physical keys (BOM optional), 1x supports LCD backlight up/down and volume up/down (BOM optional)		
COM Port	1x RS-232/422/485 programmable, auto flow		
GPIO	1x supports 8-pin GPIO		
PCIe Slot	1x PCIe Gen 4 x4 (Optional)		
M.2	1x A/E key 2230 (Wi-Fi/BT) 1x B key 3042 (4G/5G)		
SIM	1x SIM slot for 4G/5G communication		
<b>Power with Wire to Board Connector</b>			
Power Input	AT/ATX (Default: AT mode) 12V ±5% / 9-36V, both with OVP/UVp protection		
Power Connector	1x 6-pin power connector		
Power/Fail Reset	1x wafer, support system reset & power button and power LED		
Backup Battery	1x wafer for UPS kit to backup data when AC shuts down (Optional)		
<b>Environmental</b>			
Operating Temperature	0°C to 60°C (Default) -20°C to 60°C (By Request)		0°C to 60°C
Storage Temperature	-20°C to 70°C		-20°C to 60°C
Humidity	10% to 95%		
Vibration	OP 1 Grms, 5-500Hz w/SSD, (IEC60068-2-64) X, Y, Z axes, 60 min/axis		
Shock	OP 20G peak acceleration, 11 ms (IEC60068-2-64) ±X, ±Y, ±Z, 3 shocks/asix		
IP Rating	IP65 for front		
ESD	Air: ±15kV, Contact: ±8kV		
EMC/Safety Compliance	EMI: IEC/EN 61000-3-2, IEC/EN 61000-3-3, EN 61000-6-4, EN 55032 EMS: EN 55035, EN 61000-6-2 EMC: CE, FCC Class B, IEC 60601-1-2:2014/EN60601-1-2:2015, UNECE R10, EN 50121-3-2 Safety: Compliant with 60601-1/61010-1/62368-1 *SP2-TGL has passed pre-compliance testing of EMI, EMS, EMC, and Safety.		
<b>Software</b>			
WDT	Watch Dog Timer supported		
Operating System	Windows® 10 IoT Enterprise x64 bit, Linux Ubuntu 22.04		
<b>Mechanical</b>			
Construction	SGCC		
Dimension (W x L x D)	249.66 x 168.3 x 64.4 ± 2mm	383.15 x 232.79 x 65.1 ± 2mm	517.46 x 309.19 x 67.6 ± 2mm
Weight	2.06 ± 0.2kg	3.02 ± 0.2kg	4.85 ± 0.2kg
Mounting Kit (optional accessories)	1) Panel mounting 2) VESA mounting, support by a rear cover		