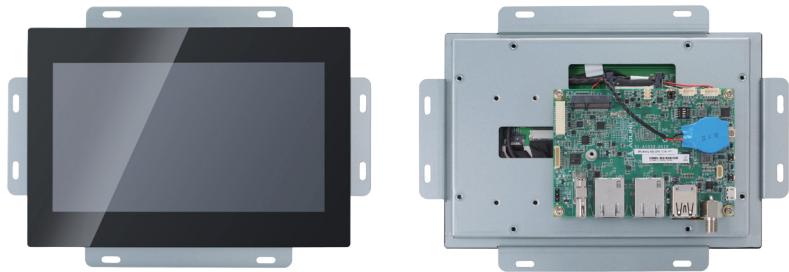


# SP2-IMX8 Series

NXP® ARM processor-based  
Open Frame Computer



## Features

- NXP i.MX8M Plus high-performance processor
- Projected capacitive touch screen, full flat design
- 12V DC in or 12-24V DC in
- 32GB eMMC and external Micro SD slot for storage expansion
- Expansible I/O design from edge I/O
- Physical Recovery and Reset button
- Support Speaker, Mic-in, Line-out and buzzer
- Support 1GbE LAN TSN

## Software Support

- Linux Yocto (Default)
- Android 13 (Optional)
- Windows 10 (By demand)

## Optional Accessories

- Adapter: 12V 60W power adapter
- I/O Cables: Power/Reset, I2C, DI/O, speaker, MIC in/Line out, COM port, and USB cables
- Wireless Kit: Wi-Fi module

## Ordering Information

- SP2-07WP-IMX8  
7" ARM-based open frame computer
- SP2-10WP-IMX8  
10.1" ARM-based open frame computer

## Specifications

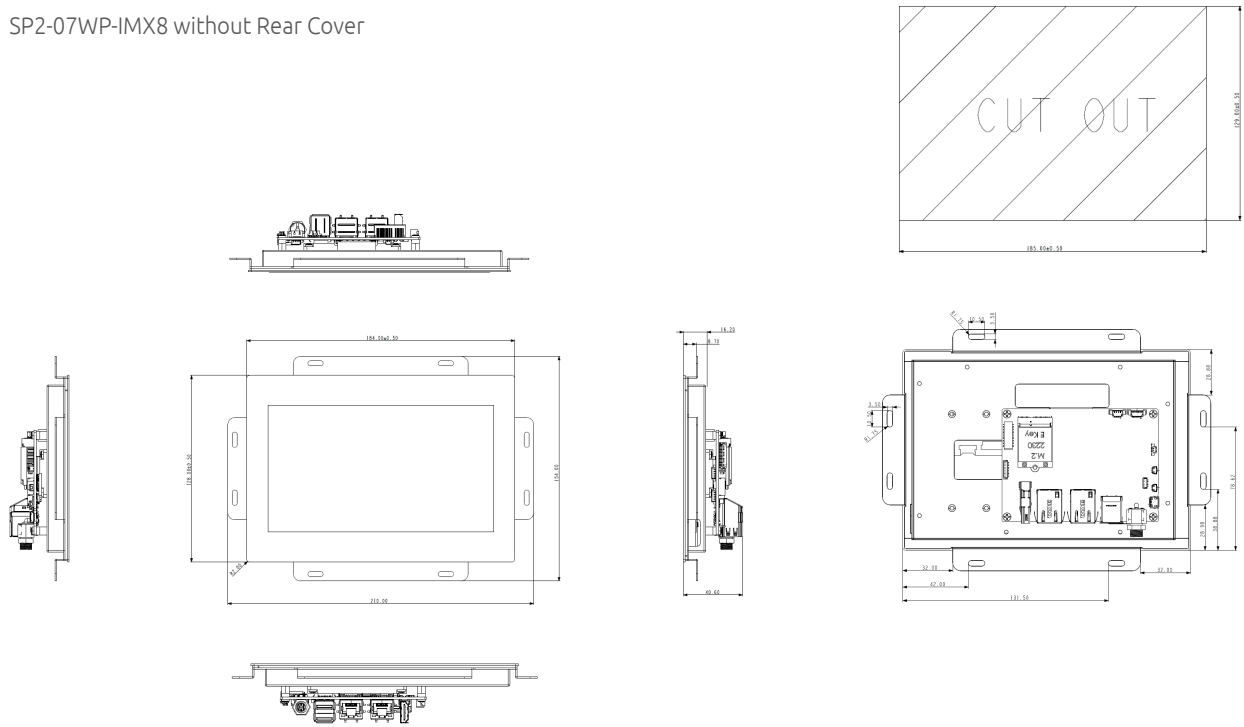
Model	SP2-07WP-IMX8	SP2-10WP-IMX8
<b>System</b>		
Size	7"	10.1"
Processor	NXP i.MX 8M Plus, ARM A53, 64-Bit, 1.8GHz, 4 Core / NXP i.MX 8M Plus, ARM A53, 64-Bit, 1.6GHz, 4 Core	
Memory	2 GB (Default) / 4 GB & 8 GB (Optional)	
Storage	32GB eMMC 5.1	
<b>Display and Touch</b>		
Size	7"	10.1"
Resolution	1024 x 600	1280 x 800
Contrast Ratio	800:1	800:1
Brightness	425 cd/m2 (typ)	300 cd/m2 (typ)
Backlight Life (Hrs)	70,000	50,000
Viewing Angle (U/D/R/L)	85/85/85/85	
Touchpoint	5 points	
Touchscreen Type	Capacitive touch screen, Glass/Glass, Resistive Touch Screen (customize)	
Surface Hardness	7H	
Surface Treatment	AG	
<b>External I/O</b>		
Ethernet	1x GbE port, RJ45 connector, 1G TSN, support wake on LAN, default 1x GbE port, RJ45 connector, support wake on LAN, optional	
USB Port	1x USB 3.2 Gen1 (5Gbps), Type A (default) or 1x USB 3.2 Gen1 (5Gbps) and 1x USB 2.0, Type A (Optional) 1x USB 2.0 Micro B OTG (default)	
DisplayPort	1x HDMI 2.0a, up to 3840x2160p30 for display, 1920x1080p60 for Video (Optional)	
Buttons	1x Reset button, 1x Function/Recovery button, 1x wafer to support power button	
<b>Internal I/O with Wire-to-Board Connectors</b>		
Serial Port	1x RS485, with auto flow control (default) 1x RS-232/422/485 programmable, auto flow (Optional)	
I2C	2x for I2C client, wafer	
Audio (optional)	1x for 2x stereo speaker (2 watts), 1x Mic-in (Mono) and Line-out (Stereo), 1x buzzer	
CAN	1x CAN Bus, wafer	
M.2	1x 2230 A/E key for WiFi/Bluetooth	
Expansion IO (Optional)	1x USB 3.2 Gen1 (5Gbps), 1x I2C, 1x SPI, 4GPI&4GPO	
<b>Power</b>		
Power Input	12V (default) or 12-24V (optional)	
Power Connector	1x 2.5 Φ DC Jack (default) or 4-pin power connector (optional)	
Backup Battery	1x RTC battery	
<b>Environmental</b>		
Operating Temperature	0°C ~ 60°C / -20°C ~ 60°C	0°C ~ 60°C / -20°C ~ 60°C
Storage Temperature	-20°C ~ 70°C	-20°C ~ 70°C
Humidity	40°C, 95%	
Vibration	OP 1 Grms, 5-500Hz (Refer to IEC60068-2-64) X, Y, Z axes, 60 min/axis	
Shock	OP 20G peak acceleration (Half-Sine), Pulse Duration: 11ms (Refer to IEC60068-2-27), ±X, ±Y, ±Z, 3 shocks/axes	
ESD	Air: ±15kV, Contact: ±8kV	
EMC/Safety Compliance	CE/FCC class B EN 55032:2015 + A11:2020; EN 55035:2017 + A11:2020 BS EN 55032:2015 + A11:2020; BS EN 55035:2017 + A11:2020 AS/NZS CISPR 32:2015 + A1:2020 EN 60601-1-2:2015 + A1:2021; IEC 60601-1-2:2014 + A1:2020 BS EN 60601-1-2:2015 + A1:2021; EN IEC 61000-3-2:2019+A1:2021 BS EN IEC 61000-3-2:2019+A1:2021; EN 61000-3-3:2013+A1:2019+A2:2021 BS EN 61000-3-3:2013+A1:2019+A2:2021 EN IEC 61000-6-4:2019; EN IEC 61000-6-2:2019; BS EN IEC 61000-6-4:2019 BS EN IEC 61000-6-2:2019; EN 50121-3-2:2016+A1:2019; BS EN 50121-3-2:2016+A1:2019 EN 55011:2016+A11:2020 (Group1, class B) BS EN 55011:2016+A11:2020 IEC/EN 60601-1; IEC/EN 62368-1 2nd	
<b>Software</b>		
Operating System	Yocto Kirkstone LTS (5.15) (default), Android 13 (optional), Windows 10 (by demand)	
<b>Mechanical</b>		
Construction	SGCC	
Dimension (H x W x D)	184 x 154 mm	257.6 x 202.2 mm
Weight (without rear cover)	860g ± 25g	950g ± 28g
Mounting kit (optional accessories)	1) Panel Mounting 2) Rear cover 3) VESA bracket	

## Specification Comparison

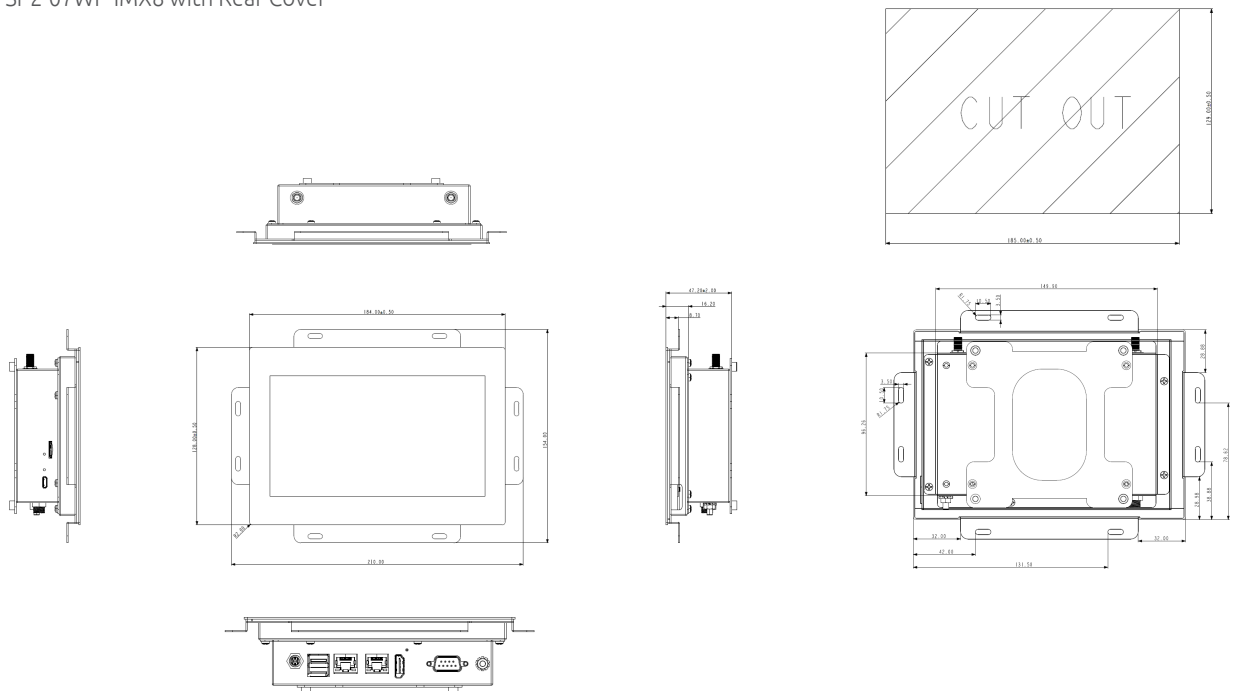
7"	93-P1500-00XX	93-P1500-01XX		Remark
10.1"	93-P1500-20XX	93-P1500-21XX		
SBC	SP2-IMX8-Q, 2GB, 32GB, 12V, CT1, 0-60°C	SP2-IMX8-Q, 2GB, 32GB, 12V, CT2, 0-60°C		
LPDDR4	2GB	2GB	4GB	
EMMC	32GB	32GB	32GB	
DC input	12V	12V	12-24V	
Power button	1	1	1	Support by cable: 30-22074-0000-A0
Function button	1	1	1	button on board or expand by cable: 30-22074-0000-A0
Reset button	1	1	1	button on board or expand by cable: 30-22074-0000-A0
Audio (Speakers/Mic-in/Line out)			Yes	Speaker cable: 23-51635-0020 MIC-in/Line-out: 30-22087-0000-A0
Buzzer	1	1	1	Buzzer cable: 23-51635-0020
Edge IO			1	Edge IO cable: 30-22088-0000-A0
HDMI		1	1	
LAN port	1	1	2	
CAN		1	1	3x DB9: 30-22075-0000-A0 all in one DB9: 30-22108-0000-A0
RS232/422/485		1	1	
RS485	1	1	1	
Micro SD	1	1	1	
TPM			1	
USB IO Type A	USB 3.0 x1	USB 2.0 + USB 3.0 combo x1	USB 2.0 + USB 3.0 combo x1	
USB IO Type B for OTG	1	1	1	OTG cable: 30-01633-1000-A0
M.2 2230 slot	1	1	1	
Rear cover and VESA bracket				Optional

## Mechanical Overview

SP2-07WP-IMX8 without Rear Cover

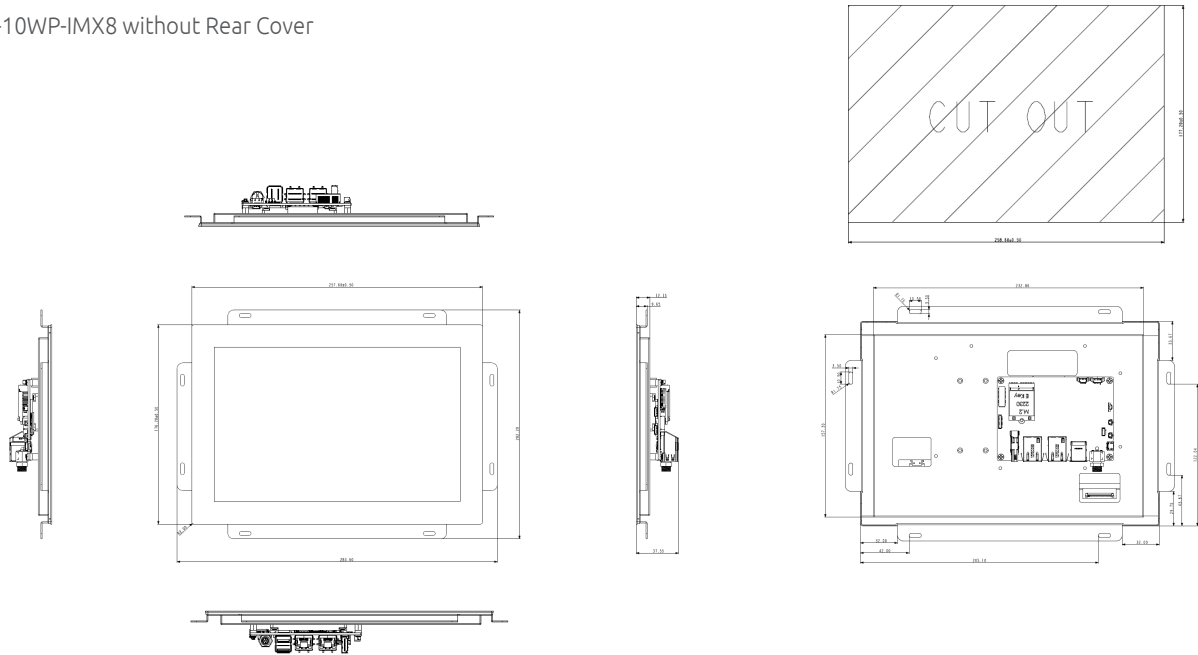


SP2-07WP-IMX8 with Rear Cover



## Mechanical Overview

SP2-10WP-IMX8 without Rear Cover



SP2-10WP-IMX8 with Rear Cover

