

Complete Machine Series Product & Component Selection Guide



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Industrial Touchscreen Monitor

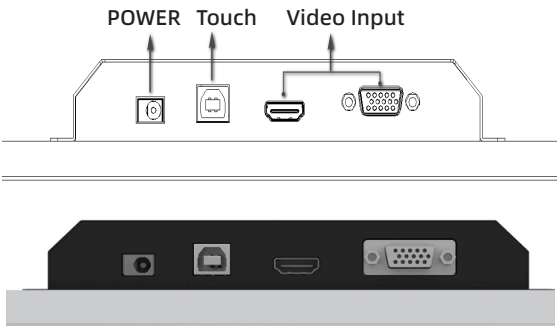
The ADB series of industrial touchscreen monitor adopts industrial-grade capacitive touch controller, offering high-precision touch and strong anti-interference capabilities. Equipped with high-brightness TFT, they provide excellent outdoor visibility. The full-metal housing design ensures robustness and durability, with an IP65 front-panel dustproof and waterproof rating, enabling adaptation to various harsh environments and ensuring long-term stable operation. Widely used in commercial self-service terminals, industrial automation control, medical equipment, and other fields, they significantly enhance human-machine interaction and operational efficiency.



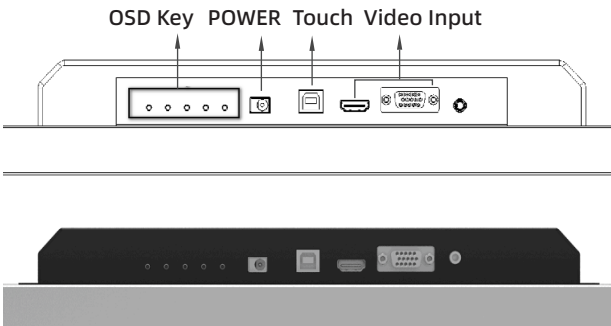
Product Features

-  Aluminum Frame
-  Capacitive Touch Panel
-  Standard Interface
-  VESA Mount or Embedded Installation
-  Fanless Cooling
-  High-brightness Backlight Sunlight-readable

External Interface



7" 、 10.1" External Interface



15.6" 、 21.5"、 32" External Interface

Specifications

Item	Description				
Size	7"	10.1"	15.6"	21.5"	32"
Resolution	1024*600	1280*800	1920*1080		
Viewing Angle	Free				
Luminance	1000 cd/m2 （Typ.）				
Life-Time	30,000 Hrs				
Touch Type	Capacitive Touch				
Interface	USB				
Touch Number	Multiple touch （Up to 10 Points）				
Transmittance	≥ 85%				
Surface Hardness	≥ 6H				
Video	HDMI Type-A （HDMI1.4） 、 VGA（ DB-15 Connector ）				
Audio	/		EARPHONE OUT（ 3.5mm）		
Power Input	JACK DC044B（for 5.5mm×2.1mm DC barrel plug）				
Power Voltage	DC 12V			DC 24V	
Consumption	7.3 W	10.1 W	15 W	42 W	73 W
Dimensions	210.00 ×140.40	260.40 ×177.40	390.00 ×240.00	532.00 ×324.00	752.00 ×450.00
Net Weight	0.78Kg	1.08Kg	3.41Kg	5.06Kg	13.09Kg
Operating Temperature	-20 ~ 70° C				
Storage Temperature	-30 ~ 80° C				
Humidity	10 ~ 95% RH（Non-condensing）				

Industrial Touchscreen Computer

The EPC Series delivers both low power consumption and exceptional computing power. Equipped with an industrial-grade CTP, it offers strong anti-interference capability and a high-brightness TFT for clear visibility even in outdoor sunlight. The full-metal enclosure ensures durability with IP65 protection, ideal for harsh industrial environments. Widely used in industrial automation, medical equipment, commercial terminals, and other fields, the EPC Series significantly enhances operational efficiency and human-machine interaction experience.

Product Features



Aluminum Frame



Capacitive Touch Panel



Fanless Cooling



High-brightness Backlight
Sunlight-readable



VESA Mount or
Embedded Installation



Supports Android &
Linux OS

Modular Design, Offers flexible CPU options

RK3568
Quad-core Cortex A55
Up to 2.0 GHz
1 TOPS NPU Mali-G52 GPU



i.MX 8M PLUS
Quad-core Cortex A53
Up to 1.8 GHz
2.3 TOPS NPU GC7000UL GPU

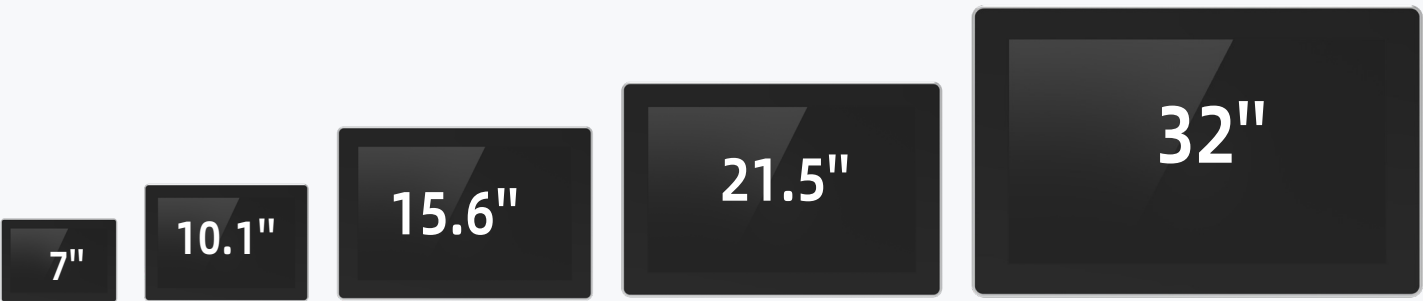


RK3576
Quad-core Cortex A72
Quad-core Cortex A53
Up to 2.2 GHz
6 TOPS NPU Mali-G52 GPU

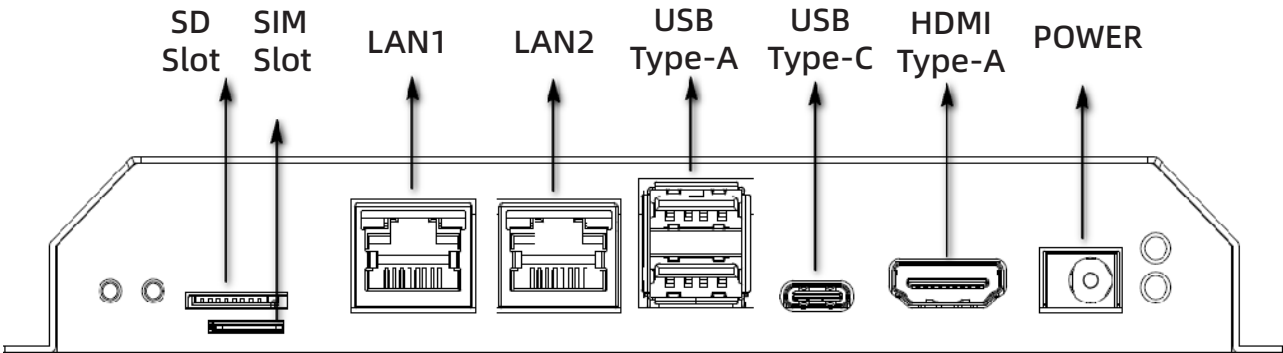


RK3588
Quad-core Cortex A76
Quad-core Cortex A55
Up to 2.4 GHz
6 TOPS NPU Mali-G610 GPU

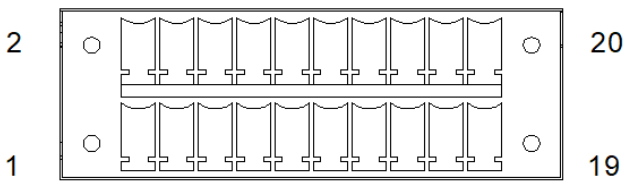




External Interface



Expansion I/O: Port:RS-232、RS-485、CAN



CAN H1	CAN L1	GND	RS-232 TX1	RS-232 RX1	GND	B1	A1	GND	GND
CAN H0	CAN L0	VDD GND	RS-232 TX0	RS-232 RX0	VDD RS-232	B0	A0	VDD RS-485	VCC-5V

Specifications

Item	Description				
Size	7"	10.1"	15.6"	21.5"	32"
Resolution	1024*600	1280*800	1920*1080		
Viewing Angle	Free				
Luminance	1000 cd/m2 （Typ.）				
Life-Time	30,000 Hrs				
Touch Type	Capacitive Touch				
Interface	USB				
Touch Number	Multiple touch （Up to 10 Points）				
Transmittance	≥ 85%				
Surface Hardness	≥ 6H				
CPU	RK3568 / NXP i.MX8M plus				
Memory	2GB/4GB				
Flash	16GB / 32GB / 64GB				
OS	Android / Linux				
USB	1× USB2.0 (Type-C) & 1 × USB3.0 (Type-A) & 1*USB2.0 (Type-A)				
Ethernet	2 ×RJ45 （100/1000 MBit/s ）				
Video	1×HDMI (Type-A)				
UART	2×RS-232、2×RS-485				
CAN	2×CAN 2.0				
Power Input	JACK DC044B (for 5.5mm×2.1mm DC barrel plug)				
Power Voltage	DC 12V			DC 24V	
Consumption	7.3 W	10.1 W	15 W	42 W	73 W
Dimensions(mm)	210.00 ×140.40	260.40 ×177.40	390.00 ×240.00	532.00 ×324.00	752.00 ×450.00
Net Weight	0.78Kg	1.08Kg	3.41Kg	5.06Kg	13.09Kg
Operating Temperature	-20 ~ 70° C				
Storage Temperature	-30 ~ 80° C				
Humidity	10 ~ 95% RH (Non-condensing)				

Ordering Information

NO.	Part Number	Size	CPU	Memory	Flash
1	EPC-R388070CS-A0-S	7 "	Rockchip RK3568	2GB	32GB
2	EPC-R388101CS-A1-S	10.1"	Rockchip RK3568	2GB	32GB
3	EPC-R388156CS-A0-S	15.6"	Rockchip RK3568	2GB	32GB
4	EPC-R388215CS-A1-S	21.5"	Rockchip RK3568	2GB	32GB
5	EPC-R388320CS-A1-S	32"	Rockchip RK3568	2GB	32GB
6	EPC-N8MP070CS-A0-S	7 "	NXP i.MX 8M Plus	2GB	16GB
7	EPC-N8MP101CS-A0-S	10.1"	NXP i.MX 8M Plus	2GB	16GB
8	EPC-N8MP156CS-A0-S	15.6"	NXP i.MX 8M Plus	2GB	16GB
9	EPC-N8MP215CS-A0-S	21.5"	NXP i.MX 8M Plus	2GB	16GB
10	EPC-N8MP320CS-A0-S	32"	NXP i.MX 8M Plus	2GB	16GB

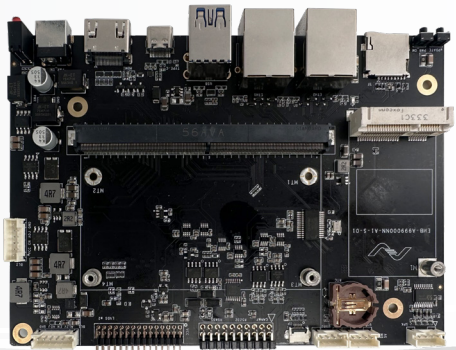
Note: Memory options include 2GB/4GB, and Flash storage options include 16GB/32GB/64GB. For configurations not listed in the table above, please contact AVD sales representatives for inquiries.

SMARC Core board & Carrier board Solution

This motherboard adopts a “SMARC core module + carrier board” architecture. The core module integrates central components such as the CPU, memory, and storage, achieving standardization and upgradability of core functionalities. The carrier board provides power management, expansion interfaces, and peripherals required for industry-specific applications. This design reduces development complexity and cycle time, enabling customers to rapidly customize differentiated hardware products while ensuring long-term supply stability and flexibility for performance upgrades. It is ideally suited for commercial self-service equipment with space constraints, low-power requirements, and demands for long-term reliability, as well as embedded application fields such as industrial automation, medical, and transportation.

Operating System





Carrier Board



Product Features

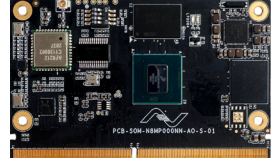
- Supports SMARC core board module
- Display output 18/24bit LVDS
- Operating temperature -20℃ ~ 70℃
- Supports 12V / 24V DC power input
- Supports 4G module, HDMI , SIM , Micro SD
- 2×LAN,2×CAN,2×RS-232, 2×RS-485,2×USB Type-A,USB Type-C,2×USB Pin Headers

SMARC Core Board

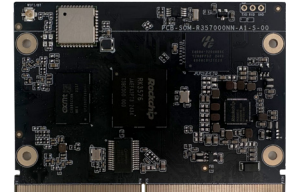
RK3568



i.MX8Mplus



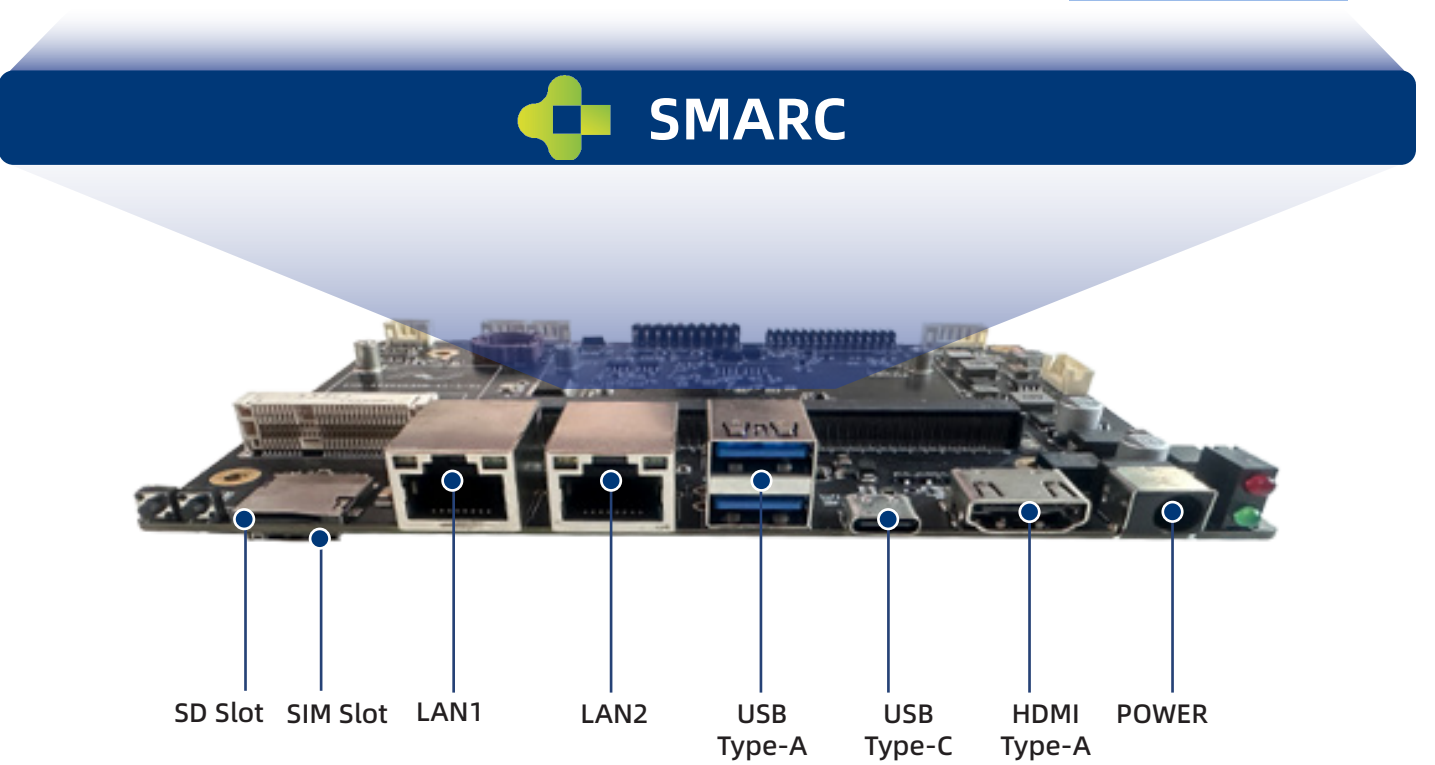
RK3576



RK3588

Developing





Applications



Industrial control



Commercial display



Access system



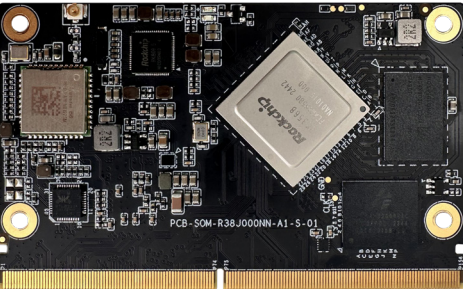
Kiosk



Advertising equipment

RK3568

SMARC CORE MODULE



SOM-R388000NN-A0-S

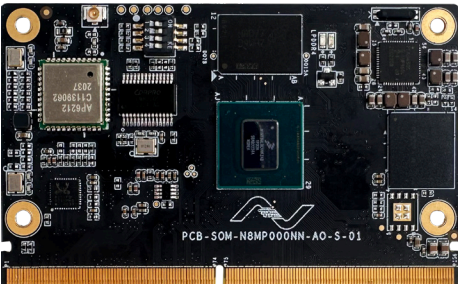
Features

- Rockchip RK3568 quad-core ARM Cortex-A55, up to 2.0 GHz.
- Neural network accelerator up to 1 TOPS
- On-board 2/4GB LPDDR4,16/32GB eMMC
- Supports HDMI 2.0, dual-channel LVDS/MIPI, and eDP
- Supports 4K H.264/H.265 video decoding
- 1×USB.3.0, 3×USB2.0,4×UART, 14GPIO
- 1×PCIe2.0,SATA,MIPI CSI, 2×Gigabit LAN
- 1x SDIO、1x I2S、1x SPI
- Supports Android, linux Yocto 、 Debian、 ubuntu

Specifications		
Processor	CPU	Rockchip RK3568 ARM Quad-core Cortex-A55, up to 2.0 GHz
	NPU	NPU up to 1 TOPS
Memory	Technology	LPDDR4
	Capacity	Onboard 2 GB LPDDR4, maximum supported is 8 GB
	Flash	32GB eMMC NAND Flash for OS and boot loader
Graphics	LVDS	1 x dual channel LVDS
	HDMI	1 x HDMI2.0, up to 4096 x 2160
	eDP	1 x eDP (Shared with LVDS, by BOM Option)
	MIPI-DSI	1 x MIPI-DSI (BOM option, shared with LVDS0)
	Graphics Engine	Arm Mali-G52 GPU, support OpenGL ES1.1/2.0/3.2, OpenCL2.0, Vulkan 1.0/1.1
Graphics	H/W Video Codec	Decoder: H.265 up to 4096x2304@60fps, H.264, VP9, VP8; Encoder: H.264 up to 1920x1080@100fps, H.265 up to 1920x1080@100fps (4096x4096@10fps with TILE)
	H/W Video Codec	Decoder: H.265 up to 4096x2304@60fps, H.264, VP9, VP8; Encoder: H.264 up to 1920x1080@100fps, H.265 up to 1920x1080@100fps (4096x4096@10fps with TILE)
Ethernet	Rate	100 /1000 MBit/s
I/O	Input/Output	PCIe、SATA、USB、Audio、SDIO、SPI、CAN、GPIO、I ² C
OS	Operating system	Linux & Android
Mechanical	Dimensions (W x D)	82×50 mm
Power	Voltage	4.75 - 5.25 V DC source
Env. Params.	Operating Temperature	-20 ~ 70 °C
	Humidity	10 ~ 95% RH (Non-condensing)

i.MX8M Plus

SMARC CORE MODULE



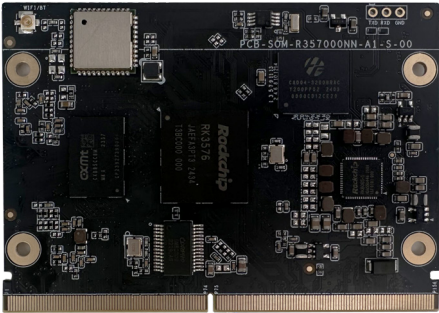
SOM-N8MP000NN-A0-S

Features

- NXP ARM Quad cortex-A53,up to 1.8GHz and 1×Arm Cortex-M7 core
- On-board 2GB LPDDR4,16GB eMMC
- Dual CAN bus / USB 2.0 / USB 3.0 interfaces
- LVDS, DSI, HDMI graphic output interfaces
- Neural network accelerator up to 2.3 TOPS
- Supports Android, linux Yocto 、 Debian、 ubuntu

Specifications		
Processor	CPU	NXP i.MX8M Plus Cortex-A53 Quad/Dual Core (up to 1.6GHz)NPU
	NPU	up to 2.3 TOPS
Memory	Technology	LPDDR4
	Capacity	Onboard 2 GB LPDDR4, maximum supported is 8 GB
	Flash	16GB eMMC NAND Flash for OS and boot loader
Graphics	LVDS	1 x dual channel LVDS
	HDMI	1 x HDMI2.0, up to 4096 x 2160
	Graphics Engine	Vivante GC7000Lite GPU, support OpenGL ES1.1/2.0/3.2, OpenCL2.0, Vulkan 1.0/1.1
	H/W Video Codec	Decoder: H.265 up to 3840×2160@60fps, H.264, VP9, VP8; Encoder: H.264 up to 1920x1080@120fps, H.265 up to 1920x1080@100fps (4096x4096@10fps with TILE)
Ethernet	Rate	100 /1000 MBit/s
I/O	Input/Output	PCIe、USB、Audio、SDIO、SPI、CAN、GPIO、I ² C
OS	Operating system	Linux & Android
Mechanical	Dimensions (W x D)	82×50 mm
Power	Voltage	4.75 - 5.25 V DC source
Env. Params.	Operating Temperature	-20 ~ 70 °C
	Humidity	10 ~ 95% RH (Non-condensing)

RK3576
SMARC CORE MODULE



SOM-R357000NN-A0-S
Features

- Quad-Core Cortex-A72 + Quad-Core Cortex-A53, Up to 2.2GHz
- On-board 4GB LPDDR4,32GB eMMC
- Dual CAN bus / USB 2.0 / USB 3.0 interfaces
- LVDS, DSI, HDMI graphic output interfaces
- Neural network accelerator up to 6 TOPS
- Supports Android , linux Yocto 、 Debian、 ubuntu

Specifications		
Processor	CPU	Rockchip RK3576 ARM Quad-core Cortex-A53, up to 2.0GHz
	NPU	NPU up to 6 TOPS
Memory	Technology	LPDDR4
	Capacity	4 GB LPDDR4 , maximum supported is 8 GB
	Flash	32GB eMMC NAND Flash for OS and boot loader
Graphics	LVDS	1 x dual channel LVDS
	HDMI	1 x HDMI2.0, up to 4096 x 2160
	Graphics Engine	Arm Mali-G52 MC3 GPU, support OpenGL ES1.1/2.0/3.2, OpenCL2.0, Vulkan 1.0/1.1
	H/W Video Codec	8K30 H.264/H.265/VP9/AV2/AVS2 Decoder 4K60 H.264/H.265 Encoder
Ethernet	Rate	100 /1000 MBit/s
I/O	Input/Output	PCIe、USB、I2S、SDIO、SPI、CAN、UART、GPIO、I ² C
OS	Operating system	Linux & Android
Mechanical	Dimensions (W x D)	82×50 mm
Power	Voltage	4.75 - 5.25 V DC source
Env. Params.	Operating Temperature	-20 ~ 70 °C
	Humidity	10 ~ 95% RH (Non-condensing)

RK3588
SMARC CORE MODULE

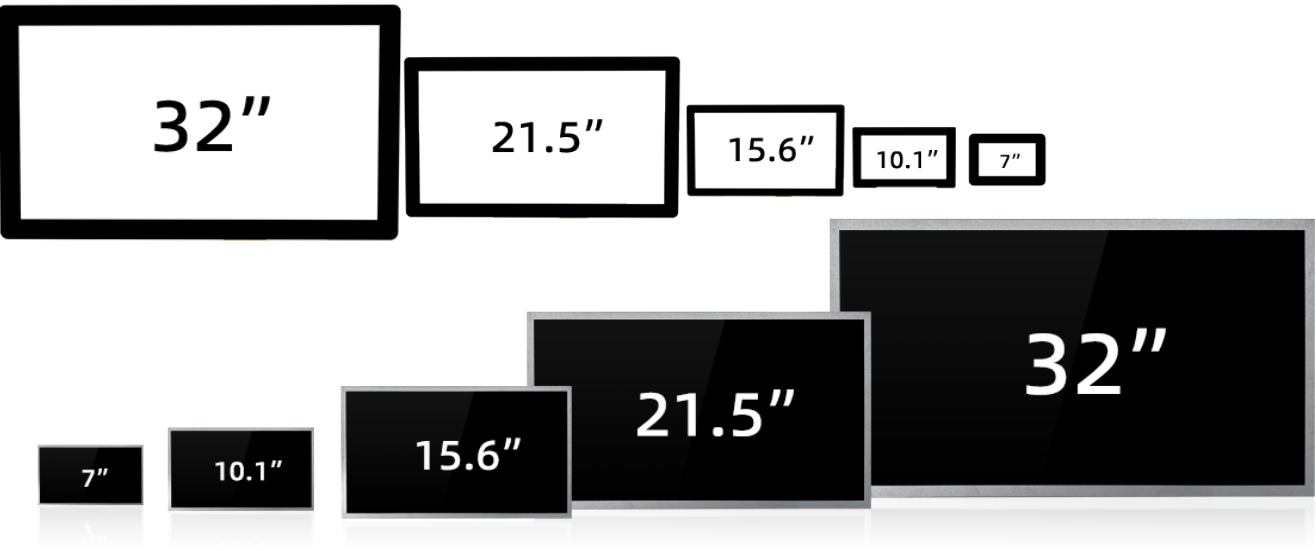


SOM-R358000NN-A0-S
Features

- Rockchip ARM Quad Cortex-A76,up to 2.4GHz,and Quad Cortex-A55 ,up to 1.8GHz
- On-board 4GB LPDDR5,32GB eMMC
- Dual CAN bus / USB 2.0 / USB 3.0 interfaces
- LVDS, DSI, HDMI graphic output interfaces
- Neural network accelerator up to 6 TOPS
- Supports Android , linux Yocto 、 Debian、 ubuntu

Specifications		
Processor	CPU	RK3588 ARM Quad Cortex-A76 + Quad Cortex-A55 , up to 2.4GHz
	NPU	NPU up to 6 TOPS
Memory	Technology	LPDDR5
	Capacity	Onboard 4 GB LPDDR5 , maximum supported is 8 GB
	Flash	32GB eMMC NAND Flash for OS and boot loader
Graphics	LVDS	1 x dual channel LVDS
	HDMI	1 x HDMI2.1, up to 4096 x 2160
	DP	1 x DP1.4
	eDP	1 x eDP (80M Option, share with LVDS1)
	MIPI-DSI	1 x MIPI-DSI (80M Option, shared with LVDS0)
	Graphics Engine	Arm Mali-G610 MP4 GPU, High performance OpenGL ES 1.1, 2.0 and 3.2, OpenCL 2.2, Vulkan1.2 etc.
	H/W Video Codec	Decoder: Decoder: H.265/VP9 8K@60fps, H.264 8K@30fps, H.263, VC-1, VP8, MVC, AV1, MPEG-4/2/1 Encoder: H.265/H.264 8K@30fps, Multi-channel encoder in parallel for less resolution)
Ethernet	Rate	100 /1000 MBit/s
I/O	Input/Output	PCIe、SATA、USB、Audio、SDIO、SPI、CAN、GPIO、I ² C
OS	Operating system	Linux & Android
Mechanical	Dimensions (W x D)	82×50 mm
Power	Voltage	4.75 - 5.25 V DC source
Env. Params.	Operating Temperature	-20 ~ 70 °C
	Humidity	10 ~ 95% RH (Non-condensing)

Standard TP & TFT Module



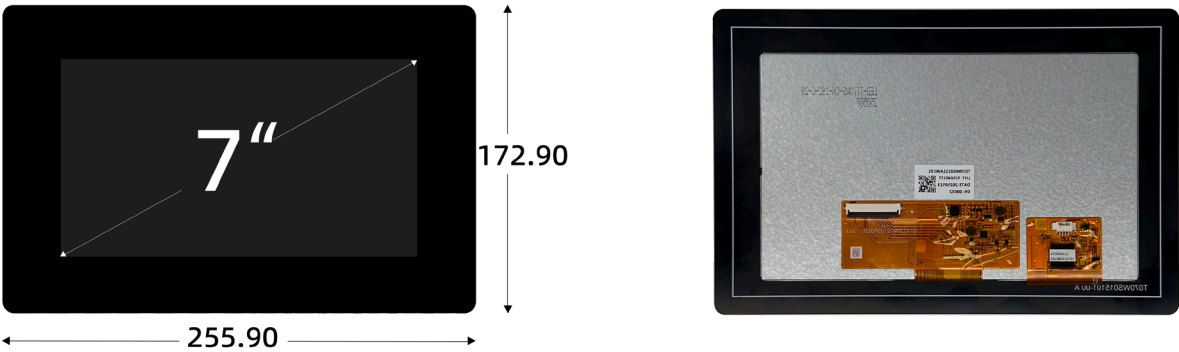
Features

- Glass + Glass Stack-up (CTP)
- USB interface (CTP)
- Enhanced Durability & Protection(CTP)
- High Brightness 1000 nits (TFT)
- Industrial-grade operating temperature: -20 ~ 70°C
- LVDS interface (TFT)
- Touch-Waterproof, Supports operation with gloves and wet hands (CTP)

Applications



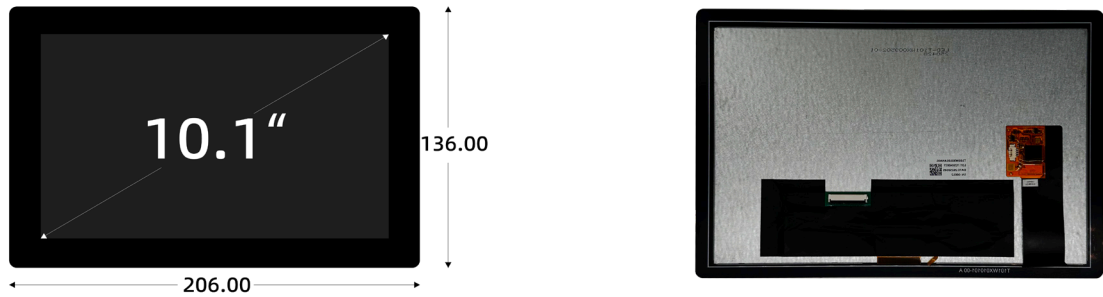
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Specifications

Item		Description
LCD	Size	7"
	Resolution	1024*600
	Viewing Angle	Free
	Luminance	1000 cd/m2 (Typ.)
	Life-Time	30,000 Hrs
CTP	Touch Type	Capacitive Touch
	Touch Controller	ILI2511
	Interface	USB
	Touch Number	Multiple touch (Up to 10 Points)
	Transmittance	≥ 85%
	Lens Thickness	1.1mm
	Surface Hardness	≥ 6H
Lamination Method		Air bonding (default), OCA bonding (optional)
Env. Params.	Operating Temperature	-20 ~ 70°C
	Storage Temperature	-30 ~ 80°C
	Operating Humidity	10 ~ 95% RH (Non-condensing)

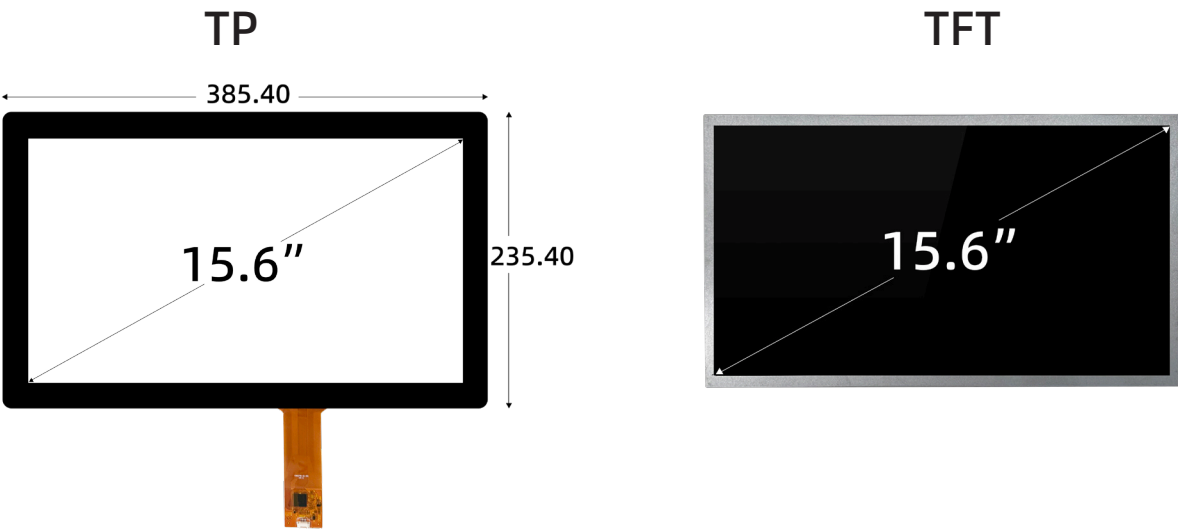
P/N: T101WX0101ANA01



Specifications

Item		Description
LCD	Size	10.1"
	Resolution	1280*800
	Viewing Angle	Free
	Luminance	1000 cd/m ² (Typ.)
	Life-Time	30,000 Hrs
CTP	Touch Type	Capacitive Touch
	Touch Controller	ILI2511
	Interface	USB
	Touch Number	Multiple touch (Up to 10 Points)
	Transmittance	≥ 85%
	Lens Thickness	1.1mm
	Surface Hardness	≥ 6H
Lamination Method		Air bonding (default), OCA bonding (optional)
Env. Params.	Operating Temperature	-20 ~ 70°C
	Storage Temperature	-30 ~ 80°C
	Operating Humidity	10 ~ 95% RH (Non-condensing)

P/N: T156GG0047NAI01 (CTP) P/N: T156FH0013NNC01 (TFT)

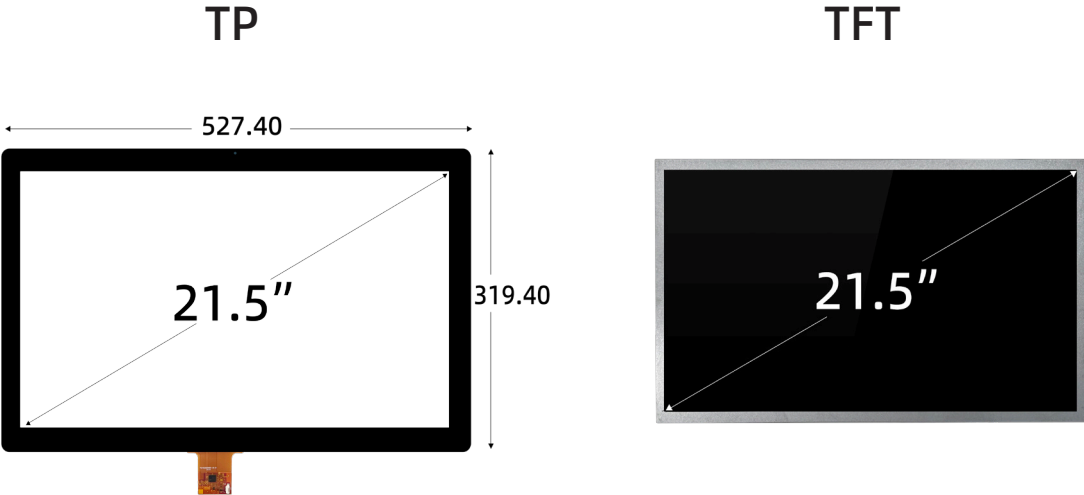


Specifications

Item		Description
LCD	Size	15.6"
	Resolution	1920*1080
	Viewing Angle	Free
	Luminance	1000 cd/m ² (Typ.)
	Life-Time	30,000 Hrs
CTP	Touch Type	Capacitive Touch
	Touch Controller	ILI2511
	Interface	USB
	Touch Number	Multiple touch (Up to 10 Points)
	Transmittance	≥ 85%
	Surface Hardness	≥ 6H
Lamination Method		Air bonding or OCA bonding
Env. Params.	Operating Temperature	-20 ~ 70°C
	Storage Temperature	-30 ~ 80°C
	Operating Humidity	10 ~ 95% RH (Non-condensing)

P/N: T215GG0010NAI01 (CTP)

P/N: T215FH0003NNC01 (TFT)

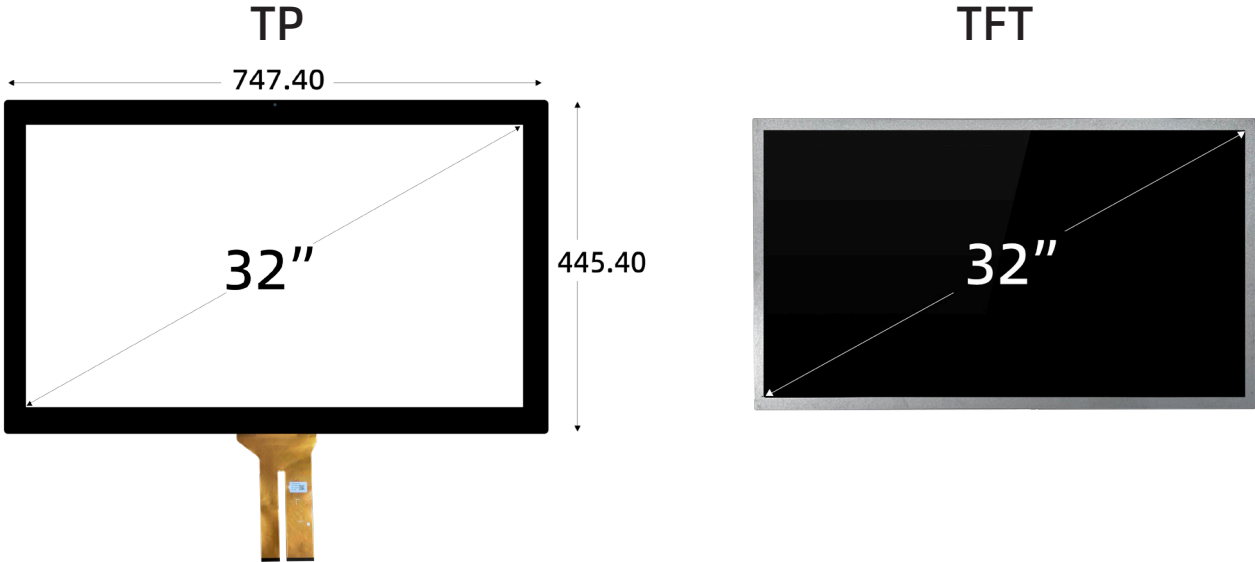


Specifications

Item		Description
LCD	Size	21.5"
	Resolution	1920*1080
	Viewing Angle	Free
	Luminance	1000 cd/m ² (Typ.)
	Life-Time	30,000 Hrs
CTP	Touch Type	Capacitive Touch
	Touch Controller	ILI2510
	Interface	USB
	Touch Number	Multiple touch (Up to 10 Points)
	Transmittance	≥ 85%
	Lens Thickness	2.0mm
	Surface Hardness	≥ 6H
Lamination Method		Air bonding or OCA bonding
Env. Params.	Operating Temperature	-20 ~ 70°C
	Storage Temperature	-30 ~ 80°C
	Operating Humidity	10 ~ 95% RH (Non-condensing)

P/N: T320GG0007NAI01 (CTP)

P/N: T320FH0002NNC01 (TFT)



Specifications

Item		Description
LCD	Size	32"
	Resolution	1920*1080
	Viewing Angle	Free
	Luminance	1000 cd/m ² (Typ.)
	Life-Time	30,000 Hrs
CTP	Touch Type	Capacitive Touch
	Touch Controller	ILI2312
	Interface	USB
	Touch Number	Multiple touch (Up to 10 Points)
	Transmittance	≥ 85%
	Lens Thickness	2.0mm
	Surface Hardness	≥ 6H
Lamination Method		Air bonding or OCA bonding
Env. Params.	Operating Temperature	-20 ~ 70°C
	Storage Temperature	-30 ~ 80°C
	Operating Humidity	10 ~ 95% RH (Non-condensing)