

VOSM2290 Evaluation Kit

A comprehensive tool kit for development of embedded products to implement industrial IoT applications

Overview

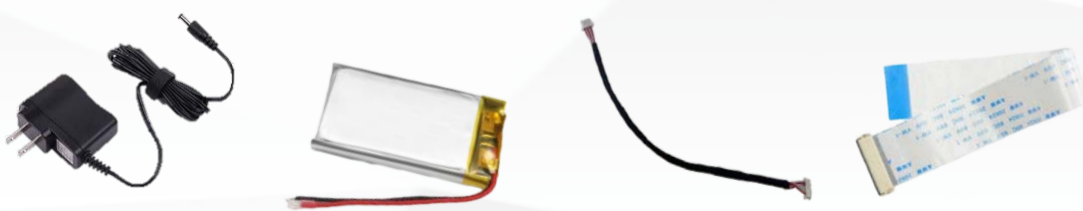
VOSM2290 evaluation kit is designed for programmers or developers who seek to reduce the time-to-market of their embedded products based on Vantron VOSM2290 system-on-module. The evaluation kit features a VOSM2290 evaluation board and a 10.1-inch touch LCD, providing an enhanced platform for better showcasing the performance and capabilities of the VOSM2290 system-on-module. This allows for the developers to integrate it into different applications.

The VOSM2290 evaluation board is powered by Qualcomm QCS2290 quad-core ARM cortex-A53 processor, with a main frequency of up to 2.0GHz. It offers 4GB LPDDR4x memory and 32GB eMMC flash storage. Additionally, it boasts a variety of expansion interfaces, including video output interfaces, on-board Wi-Fi and Bluetooth, USB 2.0, UARTs, and GPIOs to increase its versatility for diverse scenarios.

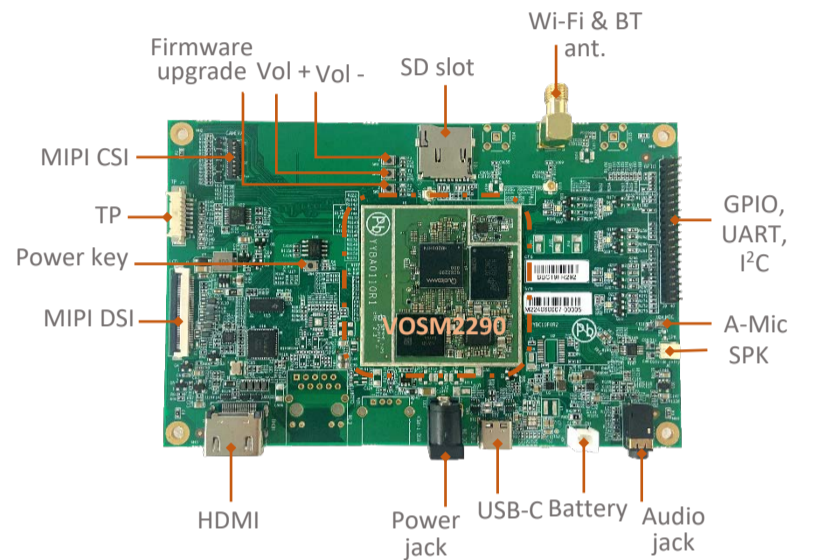
The touch LCD applies a 10.1-inch touch panel. It features quick response time, large visible area and wide viewing angles. It is designed to deliver excellent visual experience and improve human-machine interaction accuracy.

Accessories available in the kit

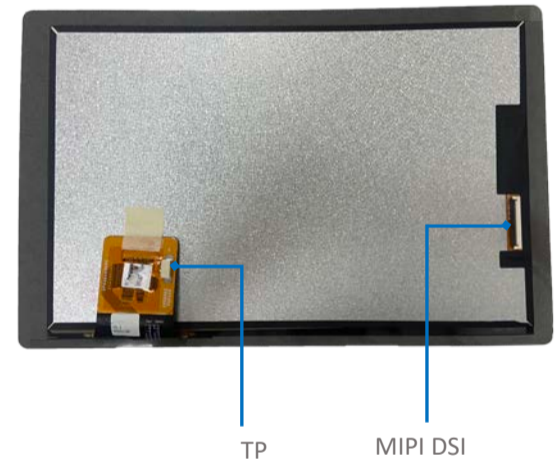
- VOSM2290 evaluation board (carrier board + SOM)
- 10.1" Touch LCD
- 5V DC power adapter for the board
- 3.3V battery pouch for peripherals
- I²C TP cable
- MIPI DSI FFC cable



Exterior



VOSM2290 evaluation board



10.1-inch touch LCD

Features and benefits

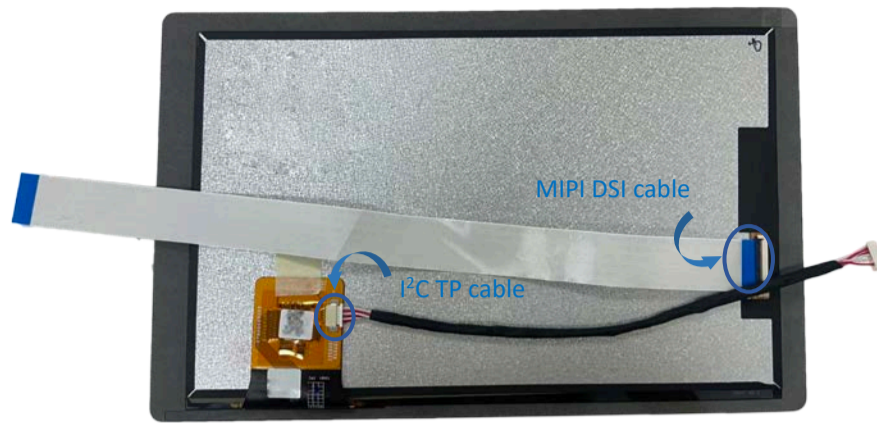
- 1080p @30fps, H.265/H.264 video codec
- Diverse I/Os on the evaluation board for diverse peripherals
- Android 13 and later systems supported
- Extended service life (7+ years)
- 10.1" TFT LCD, 350 nits, 1280 x 800
- Scalable platform
- Cost-effective solution

Evaluation Kit Datasheet

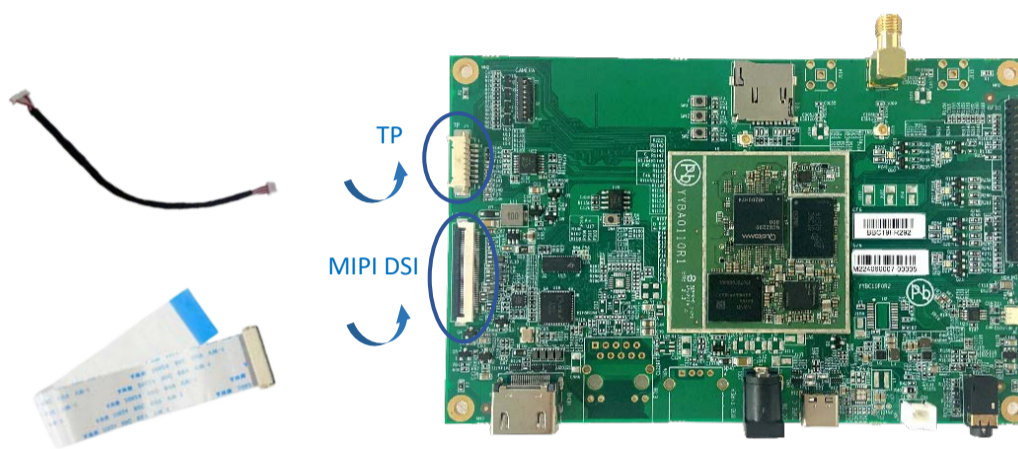
VT-SBC-VOSM2290-EVB Evaluation Board				
System	CPU	Qualcomm QCS2290 Quad-core ARM Cortex-A53 processor, up to 2.0GHz		
	GPU	Qualcomm Adreno 702 GPU @ 845 MHz		
	Memory	4GB LPDDR4x		
	Storage	32GB eMMC 5.1		
	EEPROM	2Kb (for hardware configuration information)		
Communication	Wi-Fi & Bluetooth	Wi-Fi 802.11 a/b/g/n/ac + Bluetooth 5.0		
Media	Video processing	1080p30, 8-bit decoder for H.265/H.264/VP9	1080p30, 8-bit encoder for H.265/H.264	
	Graphics processing	Support OpenGL ES 3.1, OpenCL 2.0, Vulkan 1.1		
	DSP	Qualcomm Hexagon DSP (QDSP6), for multimedia acceleration		
I/Os	Display	1 x 4-lane MIPI DSI (HD+, 720 x 1680 @60Hz) / 1 x HDMI 1.4 (up to 720p@60Hz)		
	Camera	1 x 4-lane MIPI CSI (25MP @30fps ZSL)		
	Audio	1 x 3.5mm Combo audio jack	1 x Speaker connector	
		1 x A-Mic		
	TP	1 x TP header		
	USB	1 x USB Type-C (USB 2.0 OTG supported)		
	GPIO header	9 x GPIO, 1 x Debug UART (1.8V), 2 x Communication UART (TTL), 1 x I ² C		
	SD slot	1 x Micro SD slot		
		Key	1 x Power key	1 x Firmware upgrade key
			1 x Volume + key	1 x Volume - key
Battery	1 x Battery connector			
Power	Input	5V/3A DC input	1 x Power jack	
	Software	Operating system	Android 13+	
Mechanical	Device management	BlueSphere MDM (optional)		
	Dimensions	142mm x 90mm x 20.33mm (EVB)	45mm x 45mm x 2.79mm (SOM)	
Environment Condition	Temperature	Operating: -20°C ~ +60°C	Storage: -40°C ~ +80°C	
	Humidity	≤95% RH (Non-condensing)		
	Certification	FCC, ISED, CE		
10.1" Touch LCD				
Display	Diagonal size	10.1" TFT LCD with LED backlight		
	Aspect ratio	16:10		
	Interface	MIPI DSI		
	Resolution	1280 x 800		
	Brightness	350 cd/m ²		
	Active area	135.36mm × 216.58mm		
	Contrast ratio	1000:1		
	Number of colors	16.7M		
	Response time	25ms		
	Viewing angle	80°/80°/80°/80° (U/D/L/R)		
Touch panel	Touch control interface	I ² C TP (3.3V)		
	Surface treatment	Anti-fingerprint, tempered glass	Hardness: 6H	
	Light transmittance ratio	>88%		
Mechanical	Dimensions	255.8mm x 161.9mm x 4.76mm		
	Structure	TP + OCA + LCM		
Power	Power input	3.3V DC		
Environment Condition	Temperature	Operating: -10°C ~ +60°C	Storage: -20°C ~ +70°C	
	Humidity	≤90% RH (non-condensing)		
	MTBF	50,000 hours		

Wiring

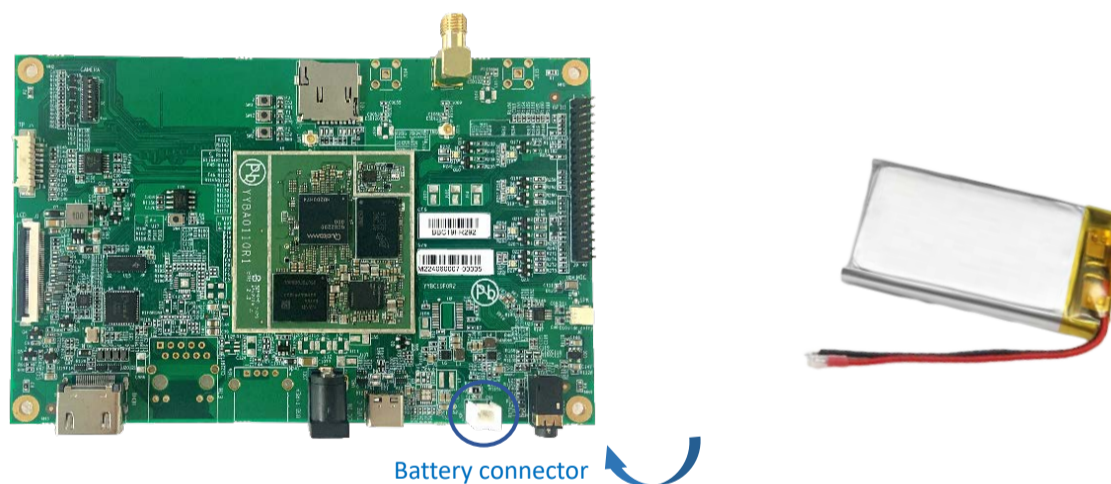
1. Insert one end of the I²C TP cable and MIPI DSI cable separately into their designated ports on the 10.1-inch LCD;



2. Insert the other ends of the I²C TP cable and MIPI DSI cable to the TP and MIPI DSI connectors on the evaluation board, respectively;



3. Connect the battery connector on the evaluation board to a 3.3V battery pouch to supply power to the peripherals;



4. Plug the power cord of the 5V DC power adapter into the power jack on the evaluation board, then connect the adapter to an outlet to power on the evaluation board.

