

VT-SBC-VOSM2290-EVB

Evaluation Board

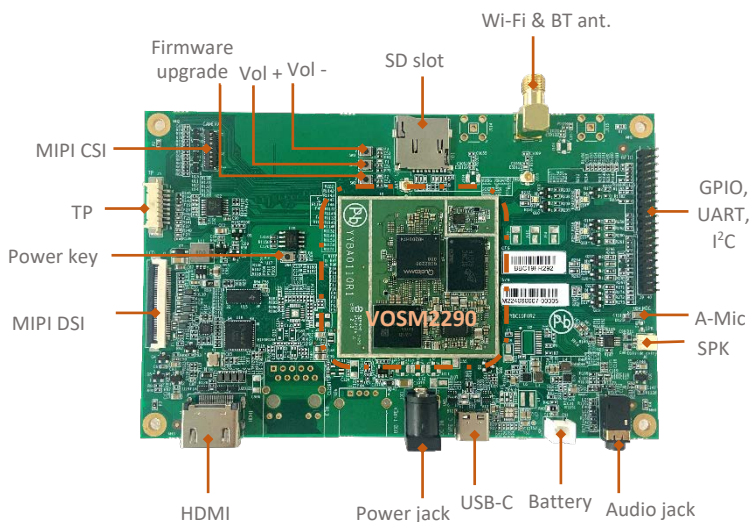


Product Brief

VT-SBC-VOSM2290-EVB evaluation board is based on Vantron’s cost-effective VOSM2290 system-on-board, offering a carrier board that implements diverse interfaces to facilitate the use of VOSM2290. It is powered by the Qualcomm QCS2290 chipset, which integrates a quad-core ARM Cortex-A53 processor, Qualcomm Adreno 702 GPU that supports 3D graphics accelerator with 64-bit addressing, and Qualcomm Hexagon DSP (QDSP6) to fit for applications that require voice and vision processing. It supports H.265/H.264 video codec for full high-definition video display. Its support for Wi-Fi and Bluetooth wireless connectivity functions increases its versatility for IoT scenarios. Additionally, it offers diverse interfaces to allow connection of diverse peripherals for testing the module and the board itself.

The board supports Android 13 and higher operating systems. Moreover, it provides an overall solution for customers when used in combination with an LCD monitor, making it ideal for such scenarios as retail point-of-sale (POS), industrial handhelds, smart home, camera applications, and digital media.

Exterior and Features



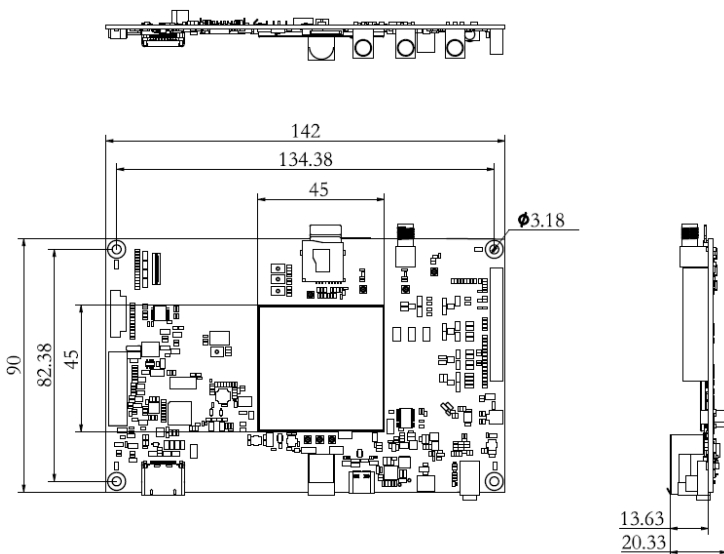
VT-SBC-VOSM2290-EVB

-  Qualcomm QCS2290 Quad-core processor
-  4GB LPDDR4x + 32GB eMMC
-  1080p @30fps, H.265/H.264 video codec
-  Internal DSP unit, low power design
-  Wi-Fi & BT connectivity
-  Rich interfaces, robust performance
-  Android 13 and later systems supported

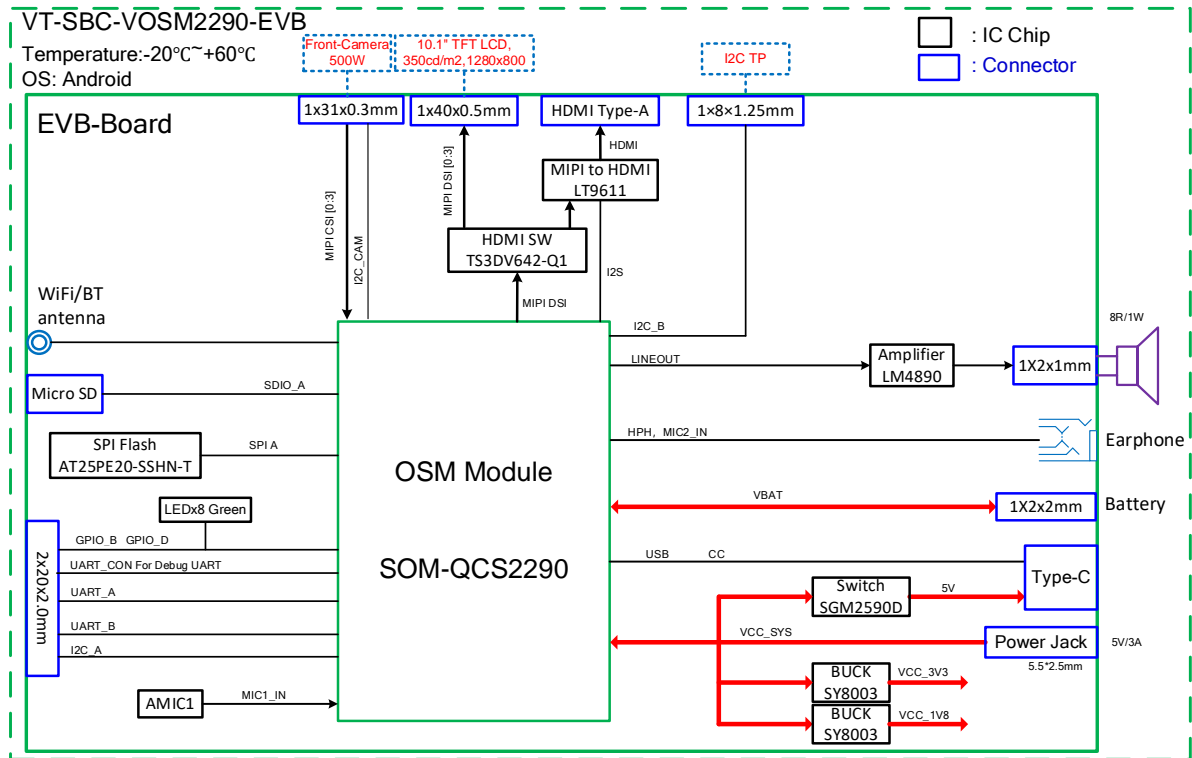
VT-SBC-VOSM2290-EVB Evaluation Board Datasheet

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		

Product Outlines



Block Diagram



Ordering Information

Ordering No.	Memory + Storage	Description	Operating system
VT-SBC-VOSM2290-EVB	4GB LPDDR4x, 32GB eMMC	VOSM2290 + carrier board, HDMI/MIPI DSI, MIPI CSI, UART, USB Type-C, TP, I ² C, GPIO	Android 13+

Packing list	
VT-SBC-VOSM2290-EVB evaluation board	1
On-board Wi-Fi and Bluetooth antenna	1

Optional accessories	
5V 3A DC Power adapter	1
Power cord	1

Since its establishment in 2002 by two Silicon Valley entrepreneurs, Vantron Technology has been at the forefront of the connected IoT devices and IoT platform solutions. Today, Vantron boasts a global customer base that includes many Fortune Global 500 companies. Its product lines cover edge intelligent hardware, IoT communication devices, industrial displays, and BlueSphere cloud platforms.

With over 20 years of experience in R&D of intelligent edge hardware, Vantron has provided users with diverse embedded solutions featuring ARM and X86 architectures. Its offerings range from Linux, Android to Windows, from embedded to desktop level, and from gateways to servers. In addition, it provides users with system trimming, driver transplantation and more to cater to the unique needs of its users.