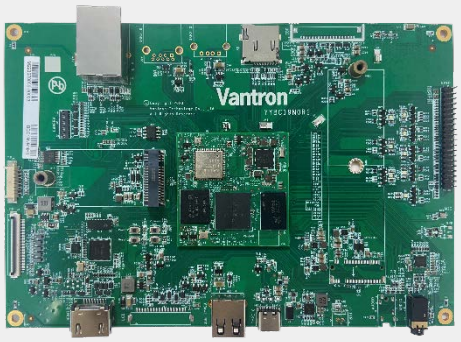
VT-SBC-VOSM800-EVB

Evaluation Board

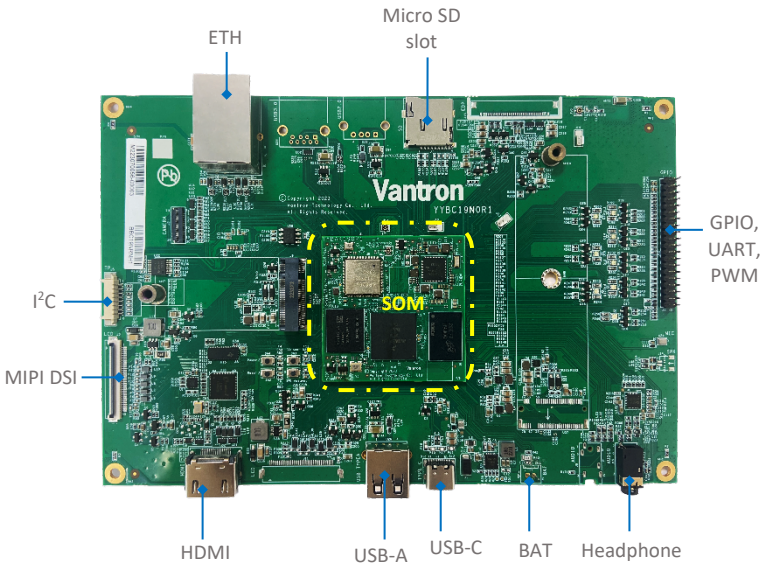


Product Brief

VT-SBC-VOSM800-EVB evaluation board is based on the VOSM800 system-on-board, offering a carrier board that implements diverse interfaces to facilitate the use of VOSM800. It is powered by NXP i.MX 8M Mini quad-core processor, offering on-board 4GB LPDDR4 memory and 64GB eMMC storage, with expansion options. It supports H.265/H.264 video decoder and H.264 video encoder to deliver optimized video output performance. The board provides Wi-Fi, Bluetooth, and an Ethernet jack as connectivity options, increasing its versatility for IoT scenarios. Additionally, it offers diverse interfaces to allow connection of peripherals to give play to the board functionalities.

The board supports Android 11 operating system, with option available for Linux distributions. When used together with a Vantron TMO/TMC series touchscreen monitor, it provides an overall display solution for customers, making it ideal for such scenarios as smart retail, self-service terminals, industrial automation, intelligent medical health, and digital media.

Exterior and Features

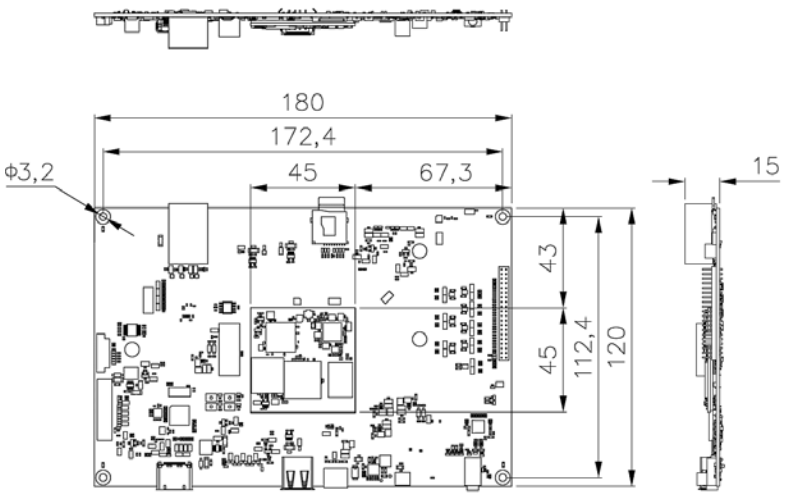


VT-SBC-VOSM800-EVB
NXP i.MX 8M Mini quad-core processor
Diverse interfaces, robust system performance
H.265/H.264 video codec
Full HD video output
ETH, Wi-Fi & BT connectivity
RTC & watchdog supported
Android and Linux systems supported

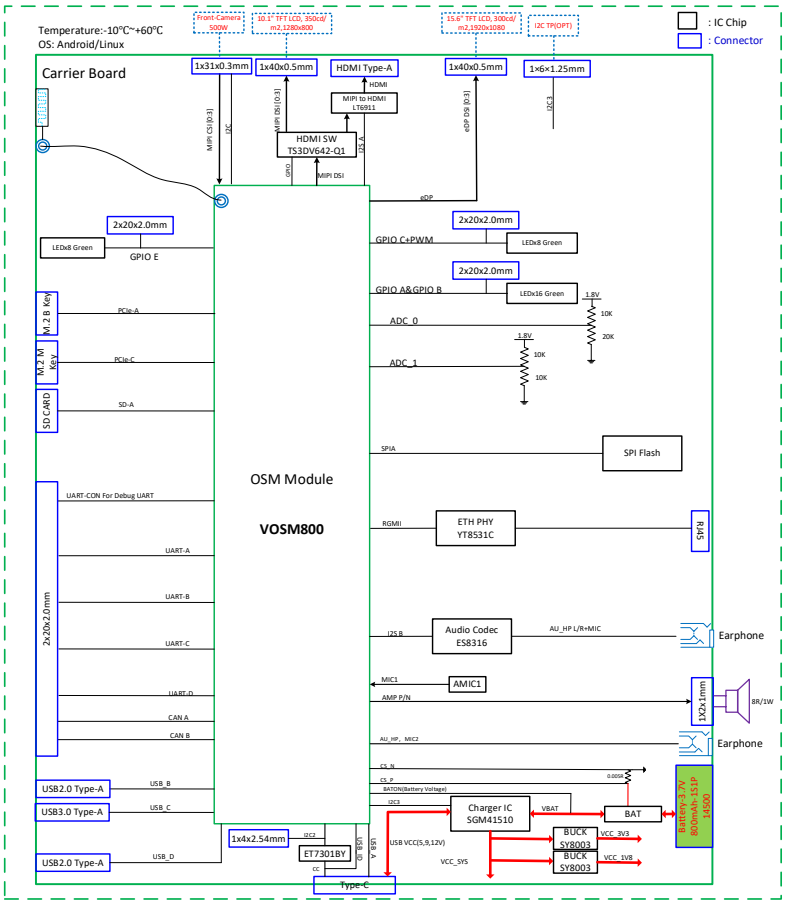
VT-SBC-VOSM800-EVB Evaluation Board Datasheet

VOSM800 Evaluation Board			
System	CPU	NXP i.MX 8M Mini, Quad-core ARM Cortex-A53, up to 1.8GHz	
	Memory	2GB LPDDR4 (Optional: 4GB)	
	Storage	16GB eMMC 5.1 (Optional: 64GB)	
	EEPROM	2Kb (for hardware configuration information)	
	PMIC	PCA9450AHN	
Communication	Ethernet	1 x RJ45, 10M/100/1000Mbps	
	Wi-Fi & Bluetooth	Wi-Fi 802.11 a/b/g/n/ac + Bluetooth 5.0	
Media	Video processing	1080p60 H265, VP9 decoder 1080p60 H264, VP8 decoder	1080p60 H.264, VP8 encoder
	Graphics processing	GCNanoUltra for 3D acceleration	GC320 for 2D acceleration
I/Os	Display (Single display mode)	1 x 4-lane MIPI DSI (up to 1080P @60Hz output) 1 x HDMI	
	MIPI CSI	1 x 4-lane MIPI CSI	
	Audio	1 x Headphone jack	
	USB	1 x USB 2.0 Type-A	1 x USB Type-C (USB 2.0 OTG, power supply)
	I^2C	1 x I^2C	
	GPIO header	12 x GPIO, 1 x Debug UART (1.8V level), 2 x Communication UART (TTL), 2 x PWM	
	SD slot	1 x Micro SD slot	
	JTAG	Supported	
	Key	1 x Power key	1 x Reset key
Power	Input	5V/2A DC input	
Software	Operating system	Android 11, Linux (support by request)	
	Device management	BlueSphere MDM (Optional for Android version)	
Mechanical	Dimensions	180mm x 120mm x 15mm (EVB)	45mm x 45mm x 1mm (SOM)
Environment Condition	Temperature	Operating: -10℃ ~ +60℃ (Optional: -40℃ ~ +85℃)	Storage: -20℃ ~ +70℃
	Humidity	≤95% RH (Non-condensing)	
	Certification	CE, FCC, CCC	

Product Outlines



Block Diagram



Ordering Information

Ordering No.	Chipset	Memory	Storage	Description
VT-SBC-VOSM800-EVB-L	i.MX 8M Mini	2GB LPDDR4	16GB eMMC	VOSM800 + Carrier board, MIPI DSI, HDMI, MIPI CSI, UART, USB, I^2C, GPIO
VT-SBC-VOSM800-EVB-H	i.MX 8M Mini	4GB LPDDR4	64GB eMMC	

Packing list	
VT-SBC-VOSM800-EVB evaluation board	1
On-board Wi-Fi and BT antenna	1

Optional accessories	
5V 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.