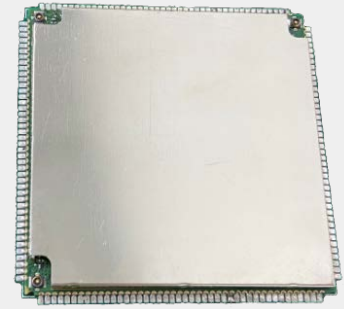


VT-SOM-I500P(-W) Module



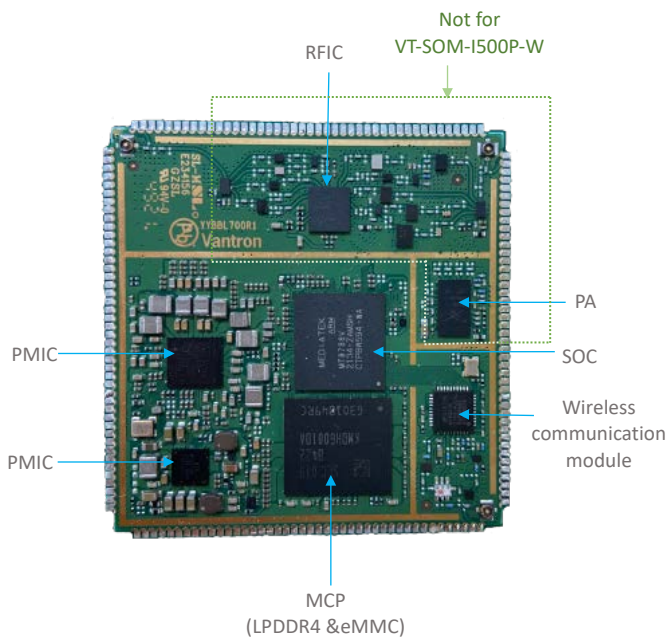
Product Brief Introduction

VT-SOM-I500P Module is based on MediaTek MT8788A processor, which integrates four ARM Cortex-A73 cores and four Cortex A53 cores with frequency up to 2 GHz to demonstrate ultra-high performance at very low power consumption. The module provides 4GB LPDDR4 memory capacity by default to be able to handle huge volume of data. The powerful Mali-G72 GPU offers powerful gaming or 3D graphics acceleration. The dual-core AI accelerator is up to 500 MHz to support deep learning, neural network acceleration and machine vision, which contributes to AI applications like face recognition and object recognition.









The module provides two USIM interfaces and supports a vast range of cellular connectivity apart from 4G LTE to enable efficient global connectivity. A variant of the module is VT-SOM-I500P-W that does not support cellular network communication as the LTE chipset is not implemented.

VT-SOM-I500P Module is very suitable for AIoT applications that requires high performance edge processing, advanced multi-media capabilities, or multi-task operating systems.

Exterior and Features



VT-SOM-I500P(-W)

-  MTK MT8788A processor
-  Android 10+ operating system
-  AI accelerator
-  64 GB eMMC V5.1, up to 128 GB
-  Flexible expansion
-  High-definition video encoding and decoding
-  Compact size, self-contained functions
-  RTC supported

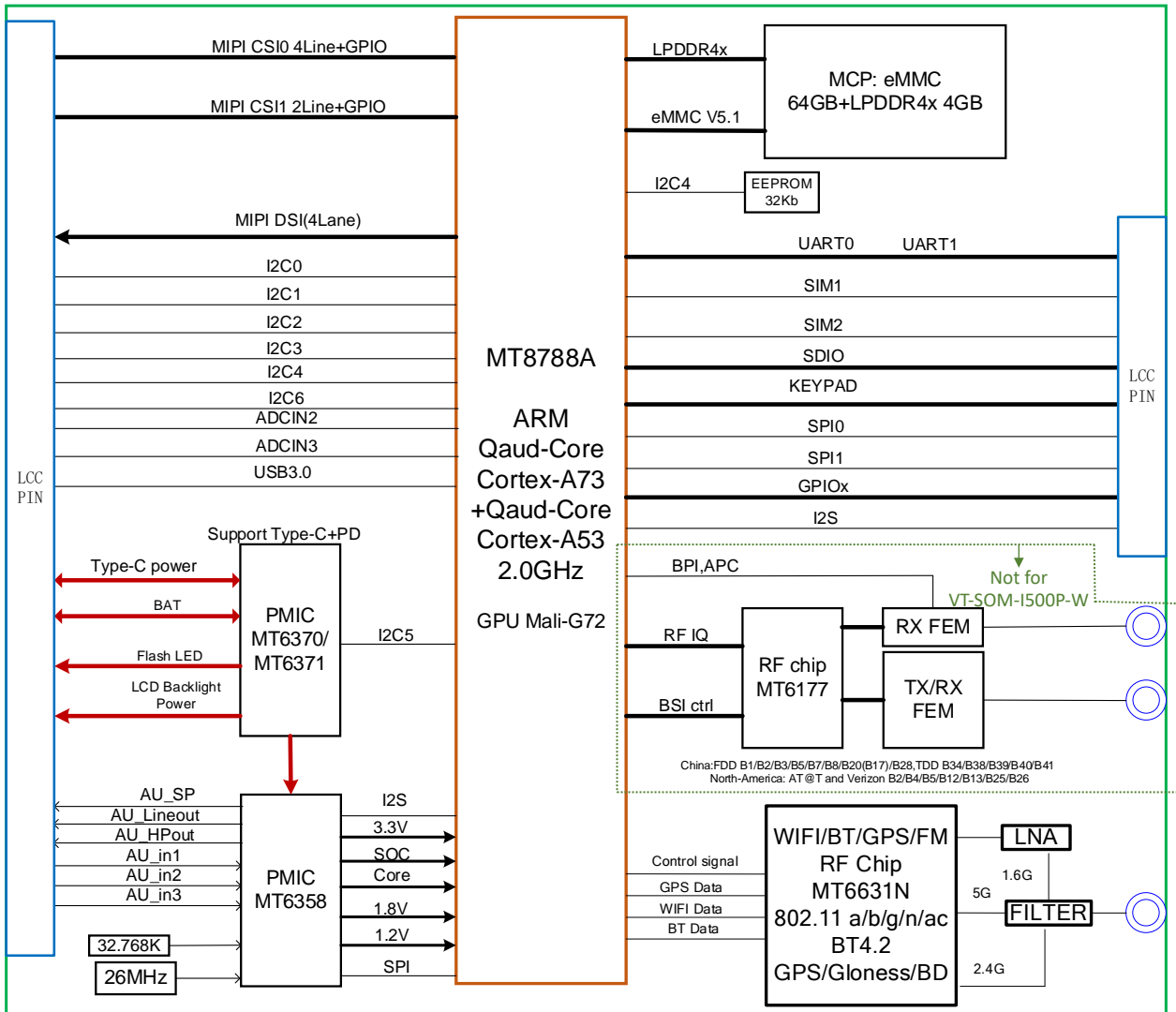
VT-SOM-I500P(-W) Module Datasheet

VT-SOM-I500P(-W)				
System	CPU	MTK MT8788A, Quad-Core ARM Cortex-A73 + Quad-Core ARM Cortex-A53, 2.0GHz (Max.)		
	Memory	4GB LPDDR4-3600 (Optional: 2GB, 8GB)		
	Storage	64 GB eMMC V5.1 (Optional: 32GB, 128GB)		
	EEPROM	2Kb (for hardware configuration information)		
	AI accelerator	Dual-core AI accelerator, up to 500 MHz		
Communication	Wi-Fi	802.11 a/b/g/n/ac 2400-2483.5MHz/5725-5850MHz/5925MHz, MT6631		
	Bluetooth	BT V2.1 + EDR, V3.0 + HS, V4.2 + HS, 2400-2483.5MHz, MT6631		
	GNSS	GPS, Beidou, Galileo, Glonass, QZSS, MT6631		
	Cellular network (Not applicable to VT-SOM-I500P-W)	GSM	B2/B3/B5/B8	
		EVDO/CDMA	BC0	
		TD-SCDMA	B34/B39	
		WCDMA	B1/B2/B5/B8	
4G FDD		EU & Asia: B1/B2/B3/B5/B7/B8/B20(B17)/B28 North America: B2/B4/B5/B12/B13/B25/B26		
4G TDD	B34/B38/B39/B40/B41			
Media	Display	1 x 4-lane MIPI DSI with backlight control, up to 2400 x 1080		
	Graphics	Mali-G72 GPU, 800MHz (Max.)		
	Camera	1 x 2-lane MIPI CSI, 1 x 4-lane MIPI CSI		
		Camera ISP	Up to 25MP @30fps	
	Video CODEC	Encoding: MPEG-4 Decoding: 1080P, H.264/H.265/HEVC		
	Audio	3 x Analog Mic input (1 x Combo audio input 2 x Noise cancellation Mic input)	1 x Class AB stereo headphone 1 x Class AB differential line out 1 x Class AB differential output to power amplifier	
I/Os supported	Serial	2 x UART (UART 0 for debugging)		
	USB	1 x USB 3.0 (USB 2.0 OTG supported for programming and debugging)		
	USIM	2 x USIM, 1.8V/3.0V		
	Antenna	1 x Wi-Fi/BT/GPS antenna	1 x Cellular main antenna	(Not applicable to VT-SOM-I500P-W)
		1 x FM antenna	1 x Cellular diversity antenna	
	RTC	Powered by PMIC MT6358		
	Oscillator	Supported (on MT6358)		
	SDIO	1 x SDIO 2.0/3.0, supporting SD/SDHC/MS/MSPRO/MMC		
	SPI	2 x SPI, up to 24M		
Expansion	I ² C	6 x I ² C, 1.8V level, for TP, G- sensor...		
	I ² S	1 x I ² S		
	Flash LED	Pinout to 2 x flash LED, for torch and camera flash		
Power	Battery	1 x VBAT, for battery power		
	Input	VBUS input (type-C), PD supported, MT6370		
Software	Operating system	Android 10+		
	Device management platform	BlueSphere MDM		
	OTA tool	BlueSphere OTA		
Mechanical	Packaging	LGA		
	Dimensions	47mm x 47mm x 3.15mm		
Environment Condition	Temperature	Operating: -20°C ~ +70°C Storage: -40°C ~ +85°C (Recommended: 25°C)		
	Certification	CE, FCC Part 15 Class B, PTCRB		

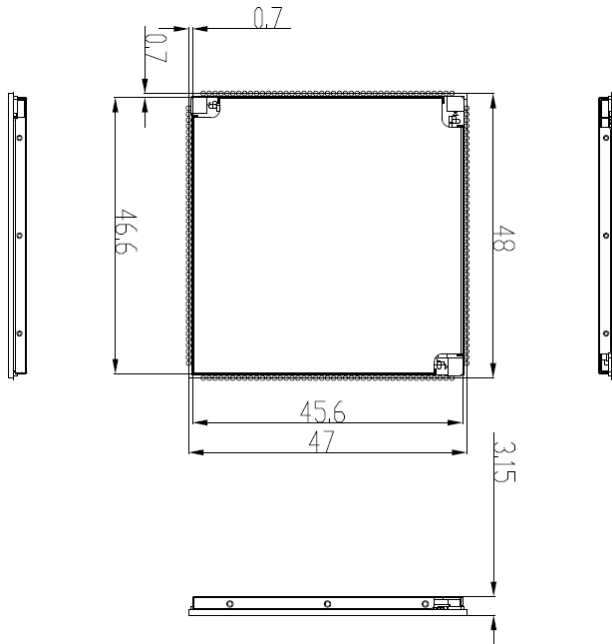
Block Diagram

VT-SOM-i500P

Temperature: -20~+70°C Android10+



Product Outlines



Company Profile

Since 2002 established by two Silicon Valley entrepreneurs, Vantron Technology has been a pioneer in connected IoT devices and IoT platform solutions. Today, Vantron serves countless customers all over the world, some of them are Fortune 500 companies. Products lines cover edge intelligent hardware, IoT communication devices, industrial displays and BlueSphere cloud device management platform.

Vantron has 20 years of experience in R&D of embedded edge intelligent hardware like SOM board and motherboard, and provided users with various embedded solutions with ARM and X86 architecture. From Linux to Windows, from embedded to desktop level, from gateway to server. At the same time, we provide our users with system clipping, driver transplantation and other services.

Vantron IoT communication devices support multi-protocol connection of industrial equipment, edge computing of local data. Abundant wired and wireless connectivity make remote operations and maintenance possible. From electricity and transportation to smart retail, medical and warehousing, Vantron IoT communication device can be deployed anywhere in any business section. Vantron believes its IoT solution to help many companies finish their digital transformation, efficiency of manufacturing and productivities have been improved significantly.

Vantron industrial display systems, ARM and X86 series, are equipped with Rockchip, NXP, MediaTek, Intel and other high-performance processors. It supports various operating systems such as Windows, Linux, and Android. Diverse wireless communications keep your device online all the time. Multiple installation methods make it suitable for a variety of application scenarios. Features like waterproof, dustproof, shatter resistant guarantee the best performance in any environment.

Vantron BlueSphere device management platform, a software product, is playing a big role in Vantron overall IoT solution. Today, Vantron puts more focus on offering complete cost effective, leading-edge yet reliable solutions to help customers carry out their visions.