

IBOXG720 Edge AI

Embedded Industrial Computer

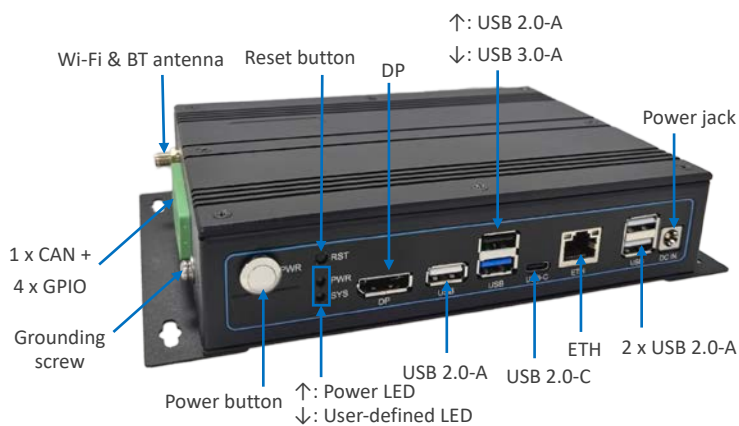


Product Brief

Vantron IBOXG720 is a high-performance edge AI embedded industrial computer, engineered to deliver exceptional computing power for edge AI and industrial applications. Powered by the MediaTek MT8391 chipset, the product integrates an octa-core high-performance processor, an Arm Mali-G57 MC2 GPU and a MediaTek 8th-generation NPU, offering a maximum computing power of 9 TOPS.

IBOXG720 supports 4K@30fps H.265/H.264 video encoding and 4K@60fps H.265/H.264/VP9 video decoding. Complemented by rich expandable I/O interfaces and robust networking capabilities, the product is perfectly tailored for diverse high-precision and high-reliability applications including edge AI computing, industrial automation, intelligent traffic management, mobile robots, AGVs, machine vision inspection, and interactive kiosks.

Layout and Features



High-performance, low-power edge AI processor



4K@30 & 4K@60 H.265/H.264 video codec



Flexible connectivity via GbE, Wi-Fi 6 and Bluetooth 5.4



Multi-OS support: Android, Linux Yocto



9 TOPS of computing performance for AI inference



Rich I/O: DP, USB, RS485/232, CAN FD, GPIO, etc.



8GB LPDDR5 + 64GB UFS2.2 for edge deployments

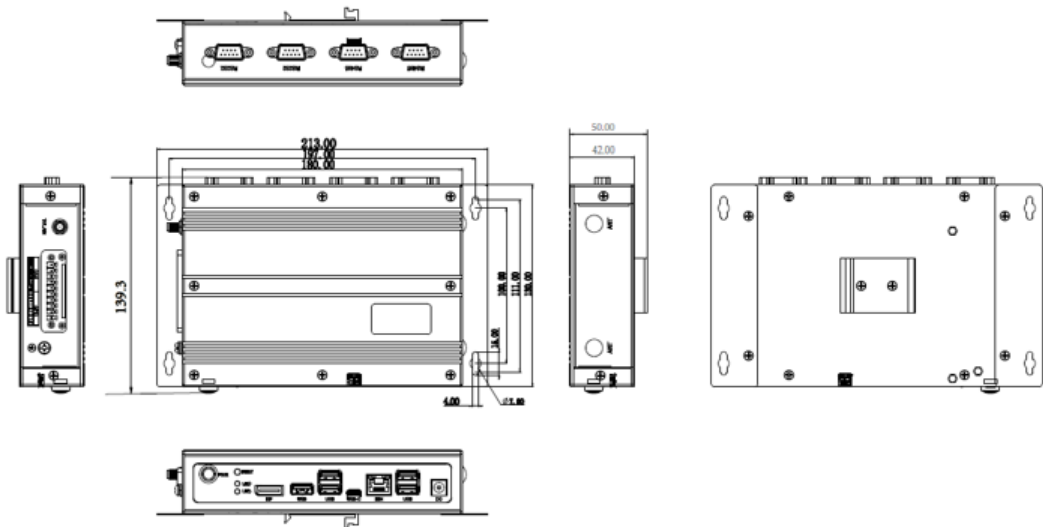


Industrial-grade wide-temp & wide-voltage support

Specifications

IBOXG720			
System	CPU	MediaTek MT8391 (G720), dual-core ARM Cortex-A78 (2.6 GHz) + hexa-core ARM Cortex-A55 (2.0 GHz)	
	GPU	Arm Mail G57 MC2, 1.1GHz, API support: OpenGL ES 3.2, Vulkan 1.1, OpenCL 2.2	
	NPU	MediaTek 8 th -gen NPU, 9 TOPS	
	Memory	8GB LPDDR5	
	Storage	64GB UFS2.2	1 × Micro SD slot
Communication	Ethernet	1 × RJ45, 10M/100M/1000Mbps (with TSN support)	
	Wi-Fi & Bluetooth	Wi-Fi 6: IEEE 802.11 a/b/g/n/ac/ax + Bluetooth 5.4	
Media	Video	1 × DP1.4, up to 3840 x 2160@60Hz	
I/O	Serial Port	2 × RS232	2 × RS485
	USB	1 × USB 3.0 Type-A	4 × USB 2.0 Type-A
		1 × USB 2.0 Type-C (OTG)	
	CAN	1 × CAN FD	
	GPIO	4 × GPIO, with 3.3V power supply	
	SD	1 × Micro SD slot	
	Antenna	1 × Wi-Fi & Bluetooth SMA connector	
Miscellaneous	RTC	1 × Discrete RTC	
System Control	LED Indicator	1 × Power LED (lit at power-up)	1 × User-defined LED
	Button	1 × Power button	1 × Reset pinhole button
Power	Input	12~24V 3A DC	1 × Power jack
	Consumption	Max: 10W (full load)	
Software	OS	Android 16, Yocto 5.0	
Mechanical	Dimensions	213mm × 139.3mm × 50mm (with mounting brackets)	
	Installation	Wall mount, DIN rail mount	
Environmental Condition	Temperature	Operating: -20°C ~ +70°C (Optional: -40°C~+85°C) Storage: -30°C ~ +80°C (Optional: -55°C~+85°C)	
	Humidity	Operating: 5%~85% RH (Non-condensing)	
	Certification	FCC & CE (in progress)	

Mechanical Dimensions



Ordering Information

Ordering No.	Chipset	Memory	Storage	Description
IBOXG720	MT8391	8GB LPDDR5	64GB UFS2.2	DP, RS232/485, USB, CAN, GPIO

Packing List	
IBOXG720 edge AI embedded industrial computer	1
12V=3A power adapter	1
Wi-Fi & Bluetooth antenna	1
Wall mount (attached before shipment)	1
DIN rail mount (attached before shipment)	1

Optional Accessory	
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 several Fortune 500 companies. Its product lines cover edge intelligent hardware, IoT communication devices, industrial displays and BlueSphere cloud device management platforms.

With over 20 years of experience in R&D of embedded edge intelligent hardware, Vantron has provided users with diverse embedded solutions featuring ARM and X86 architectures. Its offerings range from Linux to Windows, from embedded to desktop level, and from gateway to server. In addition, it provides users with system clipping, driver transplantation and other related services.