

# IBOX3588 Edge AI Embedded Industrial Computer



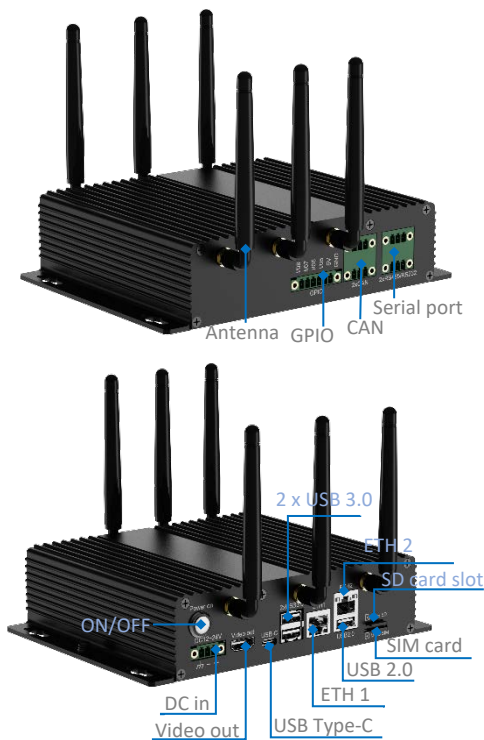
## Product Brief Introduction

Vantron IBOX3588 Edge AI Embedded Industrial Computer is powered by Rockchip latest flagship RK3588 AIoT chipset that is equipped with an 8-core 64-bit CPU, an ARM Mali-G610 MP4 quad-core GPU, and a built-in AI acceleration NPU, capable of providing 6 TOPS computing power and supporting mainstream deep learning frameworks. With the development of the technology, there definitely will be a rising demand for AI-based products from the industrial control market, including but not limited to industrial robots, automated control, drones, etc.

The industrial computer offers two Gigabit Ethernet ports, supports 2.4GHz/5GHz Wi-Fi 6 and Bluetooth 5.0, and provides an M.2 slot for 4G/5G expansion to keep communication uninterrupted. It also supports 8K video decoding and encoding to deliver optimized display performance.

Since the industrial computer provides rich interfaces, a wide range of peripherals can be connected for extended applications like ARM PC, edge computing, cloud server, smart NVR, and other fields. Moreover, the different operating systems provide a stable and secure system environment for users.

## Exterior and Features



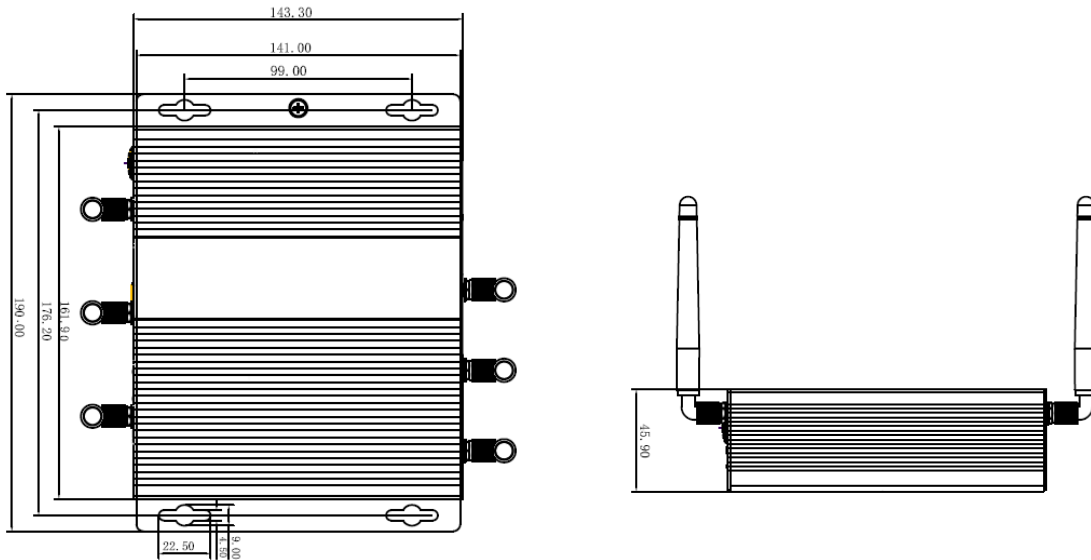
### IBOX3588

- RK3588 Quad-core Cortex-A76 + Quad-core Cortex-A55 processor
- High-quality video output
- Rich interface for expansion
- Wi-Fi (6)/BT/4G/5G/ETH for communication
- Industrial-grade wide temperature design
- High computing power
- Deep learning acceleration
- Industrial longevity

**IBOX3588 Edge AI Embedded Industrial Computer Datasheet**

IBOX3588		
<b>System</b>	CPU	RK3588 Quad-core Cortex-A76 + Quad-core Cortex-A55, 2.4GHz (Max.)
	GPU	ARM Mali-G610 MC4, Max. 1GHz
	NPU	6 TOPS
	Memory	LPDDR4 8GB, up to 32GB
	Storage	eMMC 32GB, up to 128GB SSD supported by an M.2 M-Key/M.2 B-Key (256GB ~ 1TB)
<b>Communication</b>	Ethernet	2 x RJ45, 10/100/1000Mbps
	4G/5G	Supported (expansion by an M.2 B-Key)
	Wi-Fi & Bluetooth	Wi-Fi 802.11 a/b/g/n/ac/ax + BT 5.0
<b>Media</b>	Display	1 x HDMI (4096 x 2160 @60Hz)
<b>I/Os</b>	USB	2 x USB 3.0 Host, Type-A
		1 x USB 2.0 Host, Type-A
		1 x USB Type-C OTG
	Serial port	2 x RS232/RS485 on the Phoenix terminal
	Fan	1 x Built-in CPU fan connector
	SIM card slot	1 x SIM card slot
	Micro SD card slot	1 x Micro SD card slot
	RTC	Supported
Watchdog	Supported	
<b>Expansion</b>	M.2 slot	1 x M.2 M-Key 2260/2280, PCIe 3.0 x 4, for SSD
		1 x M.2 B-Key 2242/3052, USB3.0/SATA3.0, for 4G/5G/SSD
	GPIO	4 x GPIO on the Phoenix terminal
<b>System Control</b>	CAN	2 x CAN on the Phoenix terminal
	Button	1 x ON/OFF button (long press to reset)
<b>Software</b>	LED	1 x LED indicator for power and system status
	OS	Debian, Android
	Language	English (default), Chinese
	Device management platform	BlueSphere MDM (Android devices only)
<b>Power</b>	OTA tool	BlueSphere OTA
	Input	1 x Power distribution block (12V/5A, 24V/3A)
<b>Mechanical</b>	Dimensions	161.9mm x 141mm x 45.9mm (enclosure only) 190mm x 141mm x 45.9mm (with brackets)
	Enclosure	Aluminum + metal plate, black
	Weight	750g
	Shock test	IEC 60068-2-27
	Water and dust resistance	IP40
<b>Environment Condition</b>	Temperature	Operating: -20°C ~ +70°C Storage: -40°C ~ +85°C
	Humidity	RH 0~95% (non-condensing)
	Certification	FCC, CCC, UL

## Product Outlines



## Accessories and Order Information

Accessories		
IBOX3588	Power cable	1 pc
	12V Power adapter	1 pc
	Wi-Fi/Bluetooth antenna	2 pcs
	4G/5G antenna (Optional)	4 pcs

Order Info	IBOX3588
-x	-1: 8GB memory / -2: 16GB memory / -3: 32GB memory
-xx	-x1: 32GB eMMC / -x2: 64GB eMMC / -x3: 128GB eMMC
-xxx	-xx1: 4G / -xx2: 5G / -xx3: cellular connectivity not supported
-xxxx	-xxx1: Debian OS / -xxx2: Android OS
Example	IBOX3588-2121: 16GB memory, 32GB eMMC, 5G supported, Debian operating system

## 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 Global 500 companies. Product lines cover edge intelligent hardware, IoT communication devices, industrial displays and BlueSphere cloud platforms.

Vantron has 20 years of experience in R&D of embedded edge intelligent hardware like SOM board and motherboard, and provides 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's 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.