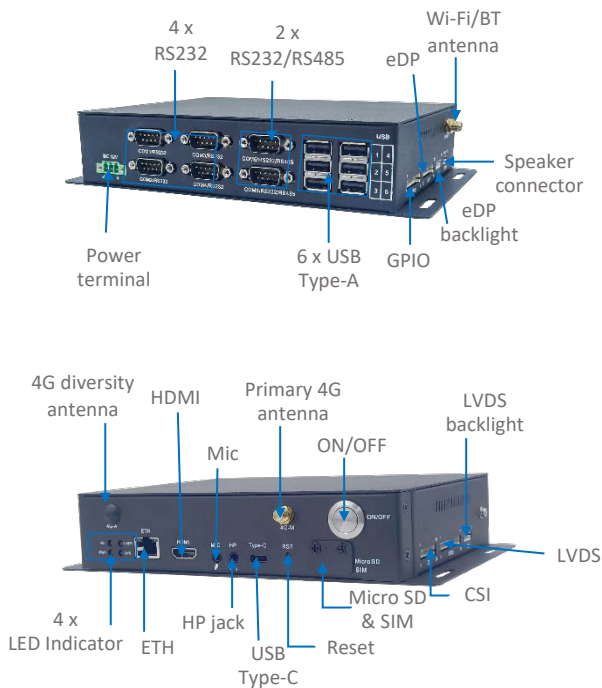# IBOX88 Embedded Industrial Computer



## Product Brief Introduction

Vantron IBOX88 is a low-consumption embedded industrial computer launched to respond to the challenges of today's IIoT application scenarios. While combining wireless cellular network, routing technology and industrial computer technology, the industrial computer is powered by Rockchip RK3288 ARM-A17 high-performance processor to ensure high computing power for various applications including intelligent retailing, new retailing, financial self-service terminals, and other scenarios. It also supports ultra-high-definition video outputs as it offers a high-performance video engine coupled with hardware decoding of H.265 (HEVC) and 1080p video resolution.

As it provides rich peripheral interfaces, a wide range of peripheral devices can be connected for extended applications, including barcode scanners, cameras, barcode printers and keyboard plates. Above all, its rich and strong performance, ultra-low power consumption, reliable and stable quality and excellent cost performance are second to none for smart business applications. When teaming IBOX88 with Vantron BlueSphere, a self-developed device management platform, users will have better experience in remote upgrade, real-time data monitoring, reporting and analysis, remote operation and maintenance of field devices.
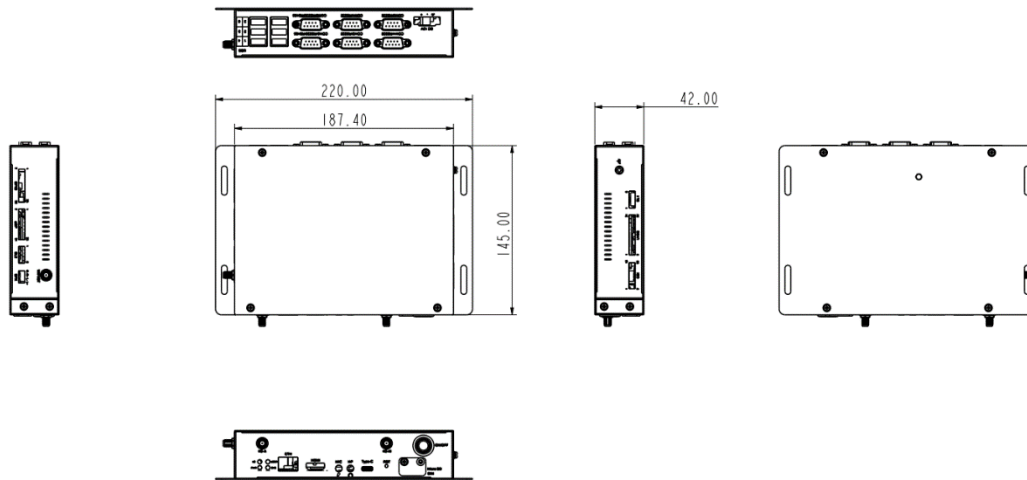
## Exterior and Features



| IBOX88 |
| --- |
| Quad-core ARM Cortex-A17 processor |
| eDP/LVDS/VDD interface for display |
| 6 x USB, 6 x COM port |
| Wi-Fi/BT/4G/ETH for communication |
| Industrial-grade wide temperature design |
| Ability to withstand harsh environments |
| Industrial longevity |

## IBOX88 Embedded Industrial Computer Datasheet

| IBOX88 | | |
|---|---|---|
| **System** | CPU | RK3288W, Quad-core ARM Cortex-A17, 1.6 GHz (Max.) |
| | Memory | 2GB (Optional: 4 GB) |
| | Storage | 16GB (up to 64GB)<br>1 x Micro SD card slot (up to 128GB) |
| **Communication** | Ethernet | 1 x RJ45, 10M/100M/1000Mbps |
| | 4G LTE (AT&T, Verizon) | Optional |
| | Wi-Fi & Bluetooth | Wi-Fi 802.11 b/g/n + BT 4.0 |
| **Media** | Display | 1 x HDMI, Type-A<br>1 x 4-lane eDP, 4K@30Hz, with LCD backlight connector<br>1 x 8-lane LVDS, 1080P@60Hz, with LCD backlight connector |
| | Audio | 1 x Headphone jack<br>1 x Mic jack<br>1 x Speaker connector |
| | Camera | 1 x MIPI CSI-2, 2 x 10 x 2.0mm |
| **I/Os** | Serial port | 2 x RS485/RS232, DB9 connector<br>4 x RS232, DB9 connector |
| | USB | 6 x USB 2.0 Type-A<br>1 x USB 2.0 Type-C (USB OTG supported) |
| | SIM slot | 1 x SIM card slot |
| | GPIO | 8 x GPIO, 3.3V |
| | RTC | Supported |
| | Watchdog | Supported |
| **Expansion** | Mini-PCIe | 1 x Mini-PCIe, for 4G LTE module |
| **System Control** | Button | 1 x ON/OFF button<br>1 x Reset button |
| | LED indicator | 1 x Power indicator<br>1 x System indicator<br>1 x 4G indicator<br>1 x User defined indicator |
| **Software** | OS | Android 10, Linux + QT |
| | Device management platform | BlueSphere MDM (Android devices only) |
| | OTA tool | BlueSphere OTA |
| **Power** | Input | 12V/24V 3A DC (±5%), 3-pin 3.81mm power connector |
| | Consumption | 15W |
| **Mechanical** | Dimensions | 187.4mm x 145mm x 42mm (Enclosure only)<br>220mm x 145mm x 42mm (With mounting bracket) |
| | Weight | 1kg |
| **Environment Condition** | Temperature | Operating: -20℃~+70℃<br>Storage: -40℃~+85℃ |
| | Humidity | Operating: RH 5%~95%<br>Storage: RH 5%~95% |
| | Certification | FCC<br>ESD: ±4KV (contact) and ±8KV (air) |

## Product Outlines



## Accessories and Order Information

| Accessories | | |
|---|---|---|
| IBOX88 | Power cable | 1 pc |
| | Adapter | 1 pc |
| | Wi-Fi/Bluetooth antenna | 1 pc |
| | 4G LTE antenna (Optional) | 2 pcs |

| Order Info | IBOX88 |
|---|---|
| -x | -1: 2GB memory / -2: 4GB memory |
| -xx | -x1: 16GB eMMC / -x2: 32GB eMMC / -x3: 64GB eMMC |
| -xxx | -xx0: Without 4G / -xx1: With 4G |
| Example | IBOX88-220: 4GB memory, 32GB eMMC, not supporting 4G |

## 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.