GB100 Edge Computing Gateway

Product Brief Introduction

The GB100 edge computing gateway is equipped with NVIDIA Jetson Nano core module, which contains 128 CUDA cores. It features small size, flexible installation, and low operating power consumption of 10W to be applicable to all kinds of movable equipment, such as drones, smart medical diagnostic terminal equipment, educational robots, etc. Its high-efficiency passive heat dissipation, seismic and lightning protection and other industrial standard designs enables it to adapt harsh environments such as wide temperature, escorting the safety and stability of the overall solution. Typical application of the GB100 gateway includes smart nystagmus and online car-hailing security intelligent monitoring and management.

Application in smart nystagmus: assisting fundus screening, analyzing eye features through visual intelligence, accurately assessing symptoms, establishing the electronic medical records synchronously.

Application in car-hailing security system: integrating ADAS (Advanced Driver Assistance Systems) technology, facial recognition technology, and behavior recognition technology, combining data resource center, command monitoring center, and call service center.

Features and Highlights

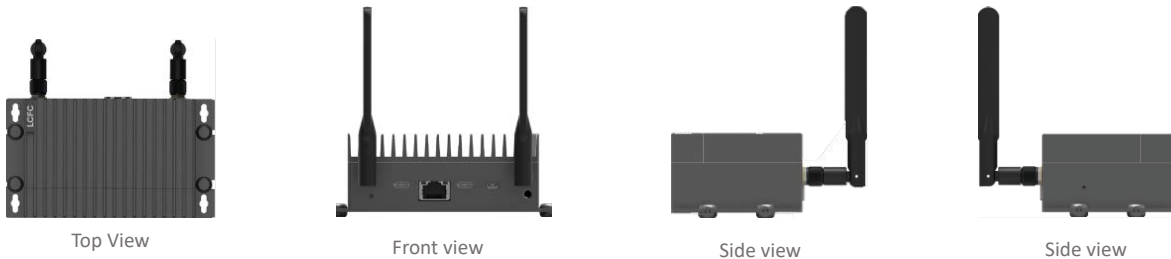| GB100 |
|---|
| NVIDIA Jetson Nano |
| Low consumption, high performance |
| DC battery management module |
| Compact integrated design |
| Small size and flexible deployment |
| IP4X protection, industrial grade lightning and static resistance |
| High-efficiency direct-touch passive cooling design |
| NVIDIA open eco-system and rich SDK |
| Local reasoning, real-time response |
| Real-time video capture, accurate and intelligent recognition |
| High stability |

GB100 Edge Computing Gateway Datasheet

GB100		
System	CPU	NVIDIA Jetson Nano, Quad-core ARM Cortex-A57 MPCore
	AI performance	472 GFLOPS
	GPU	NVIDIA Maxwell GPU with 128 CUDA Cores
	Memory	4GB 64-bit LPDDR4
	Storage	16GB eMMC 5.1 1 x Micro-SD slot
Communication	Ethernet	1 x Gigabit Ethernet
	Wi-Fi	1 x Wi-Fi module (Optional)
Media	Video encode	1 x 4K @ 30 (HEVC) 2 x 1080p @ 60 (HEVC) 4 x 1080p @ 30 (HEVC)
	Video decode	1 x 4K @ 60 (HEVC) 2 x 4K @ 30 (HEVC) 4 x 1080p @ 60 (HEVC) 8 x 1080p @ 30 (HEVC)
I/Os	USB	1 x USB2.0 OTG 1 x USB 3.0 (Type-C P2)
	Display	1 x Micro HDMI
	Button	1 x Power button, 1 x Recovery button
Mechanical	Dimensions	122mm × 65.5mm × 43mm (I/O ports and mounting holes excluded)
	IP rating	IP50
	Cooling mode	Direct-touch passive cooling design
Environment Condition	Temperature	Operating: -20°C ~ 60°C CPU/GPU full loaded operation -20°C ~75°C frequency reduction operation Storage: -40°C ~ 80°C
	Humidity	RH 5%~90% @ 40°C (Non-condensing)
	Operation vibration	3 Grms, 5~500Hz
	Certification	CCC, RoHS, SRRC, CE

Application Topology in Car-hailing Security System

Multi-angle View

Top View

Front view

Side view
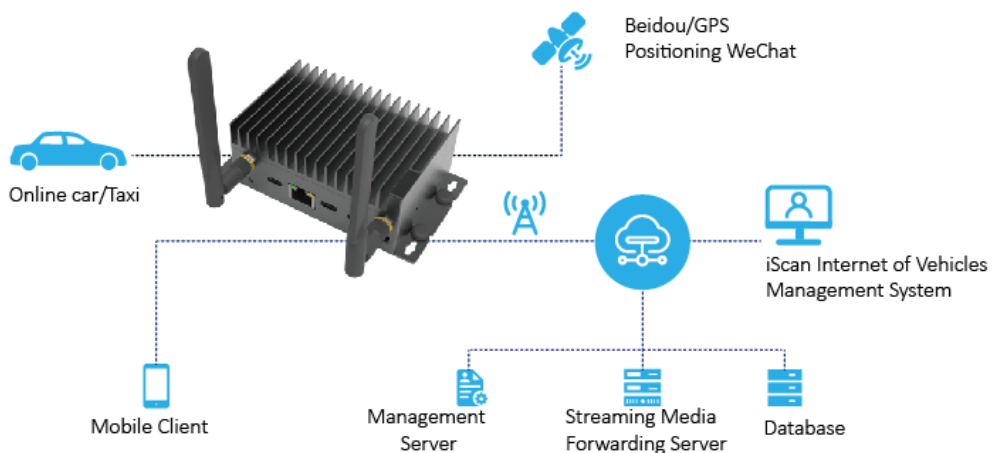
Side view

Order Information

Order Info	GB100
-x	- W0: Without Wi-Fi module - W1: With Wi-Fi module
Example	GB100-W1: Wi-Fi module provided

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.