# GB400 Edge Computing Gateway

## Product Brief Introduction

The GB400 edge computing gateway is equipped with NVIDIA Jetson AGX Xavier core module, containing 512 CUDA cores, Volta architecture GPU and NVDLA engine. It boasts 32 Tops real-time reasoning capability with 30W module power consumption so as to be compatible with all current neural network models. The whole machine features fanless and strong embedded design. It has strong adaptability to harsh industrial environments thanks to the wide temperature working environment and high seismic protection level.

The GB400 edge computing gateway integrates a variety of expansion interfaces, and supports 4G/5G/Wi-Fi communication. The standard PCIex8 reserved design fully interprets its high scalability that allows the access of a variety of special sensors. It is widely used for smart city vehicle-road collaboration, assisted driving, unmanned delivery vehicles, intelligent inspections and other scenarios.

Its application in vehicle-road synergy and assisted driving enables massive terminal access management to improve operation and maintenance efficiency, reduces the difficulty of integration with the open and compatible platform, and facilitates the processing of computing tasks. For the auxiliary computing platform in high-speed autonomous vehicles, customers can carry out secondary development. By processing image data, combined with the capabilities of cameras and radars, it can complete the perception and detection of road events such as lane line recognition, traffic light recognition, pedestrian detection, and driver fatigue detection and analysis.

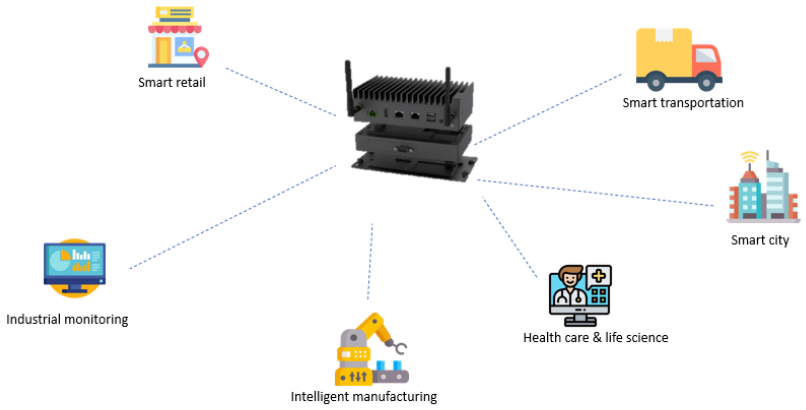
## Features and Highlights

| GB400 |
|---|
| NVIDIA Jetson AGX Xavier |
| Efficient fanless heat dissipation without frequency reduction |
| IP50 protection |
| Flexible expansion, multi-sensor access |
| Video storage, AI analysis |
| 10G high seismic resistance, stable system |
| Deep learning acceleration |
| Easy to maintain |
| Quick upgrade |

# GB400 Edge Computing Gateway Datasheet

| | | GB400 |
|---|---|---|
| **System** | CPU | NVIDIA Jetson AGX Xavier, 8-Core Carmel ARM V8.2 64-bit, 8MB L2 + 4MB L3 |
| | AI performance | 32 TOPS/11 TFLOPS |
| | GPU | 512-Core NVIDIA Volta GPU with 64 Tensor Cores |
| | Memory | 32GB 256-bit LPDDR4x |
| | Storage | 32GB eMMC 5.1 |
| **Communication** | Ethernet | 2 x Gigabit Ethernet |
| | Wi-Fi | Supported |
| | 4G LTE/5G | Supported |
| **Media** | Video encode | 4 x 4K @ 60 (HEVC)<br>16 x 1080p @ 60 (HEVC)<br>32 x 1080p @ 30 (HEVC) |
| | Video decode | 2 x 8K @ 30 (HEVC)<br>6 x 4K @ 60 (HEVC)<br>52 x 1080p @ 30 (HEVC)<br>26 x 1080p @ 60 (HEVC) |
| **I/Os** | USB | 2 x USB 3.1<br>1 x USB Type C |
| | Display | 1 x HDMI |
| | Audio | Headset Mic-in, headphone out |
| | Button | 1 x Power button<br>1 x Recovery button |
| | Serial | 2 x RS232/RS485 (DB9) |
| | CAN | 2 x CAN (DB9) |
| | User expansion | 1 x Mini-PCIe or 1 x M.2 E-Key 2230 for Wi-Fi<br>1 x M.2 M-key 2280 NVME (PCIE)<br>1 x M.2 B-Key for 4G LTE/5G<br>1 x TF slot<br>2 X SATA<br>1 x Nano SIM Socket<br>2 x GMSL<br>1 x PClex8 expansion slot |
| **DLA accelerator** | DLA accelerator | 2 x NVDLA Engine |
| **Mechanical** | Dimensions | 256mm x 174mm x 87 mm |
| | IP rating | IP50 |
| | Net weight | 1.2 kg |
| **Power** | Input | 12-36V DC |
| **Environment Condition** | Temperature | Operating: -20°C ~ 60°C CPU/GPU full loaded operation<br>- 20°C ~ 75°C frequency reduction operation<br>Storage: -40°C ~ 70°C |
| | Humidity | RH 5%~95% @ 40°C (Non-condensing) |
| | Operation vibration | 3 Grms, 5~500Hz |
| | Certification | CCC, RoHS, SRRC, CE, FCC |

## Application Scenarios




## Order Information

| Order Info | GB400 |
|---|---|
| -x | - E1: Mini-PCIe for Wi-Fi<br>- E2: M.2 E-Key 2230 for Wi-F |
| Example | GB400-E1: Mini-PCIe for Wi-Fi |

## 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.