G43A Edge Computing Gateway

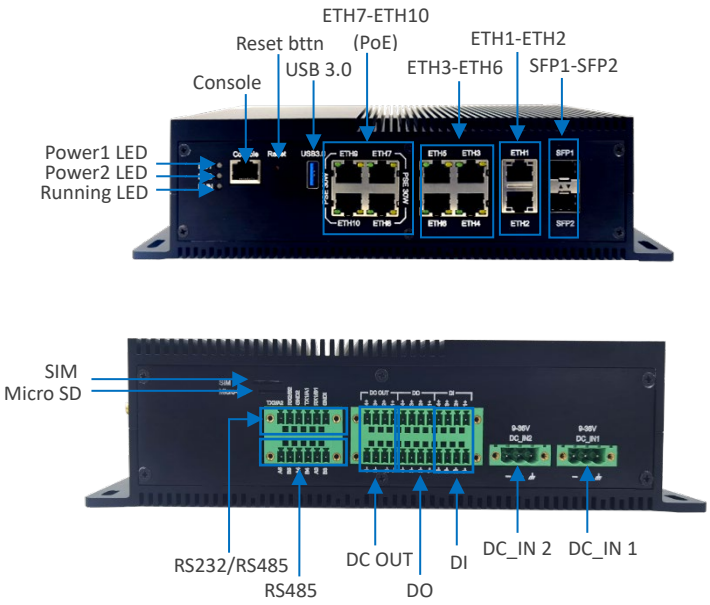
Product Brief Introduction

Vantron G43A industrial edge computing gateway is an industry-specific high-performance gateway designed to meet the needs of intelligent street lighting systems that adapt to movement by pedestrians, cyclists and cars in a smart city. G43A is powered by NXP quad-core processor and equipped with 4GB memory and 32GB storage by default. Users can use an external Micro SD card to expand the storage.

G43A supports 4G/NB-IoT, Ethernet, Wi-Fi, and Bluetooth for diversified networking requirements to enable failover between wired and wireless networks and to ensure uninterrupted devices connectivity. Its edge computing feature optimizes data processing at IoT edge nodes, which reduces the volume of data accumulated in the field and transmitted to the central console.

In addition to its industrial-grade design, G43A implements 10 RJ45 Ethernet jacks with different transmission rates and 2 SFP ports to meet the requirement of multi-device networking. Four of the RJ45 Ethernet jacks conforms to the IEEE802.3 at standard and can optionally support the PoE (PSE) feature, allowing for the delivery of electrical power to devices through an Ethernet cable.

Exterior and Features

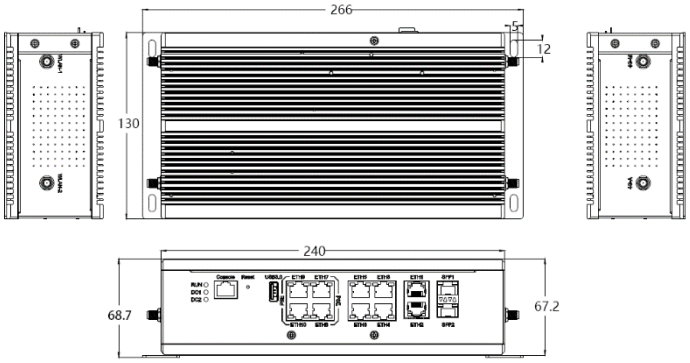


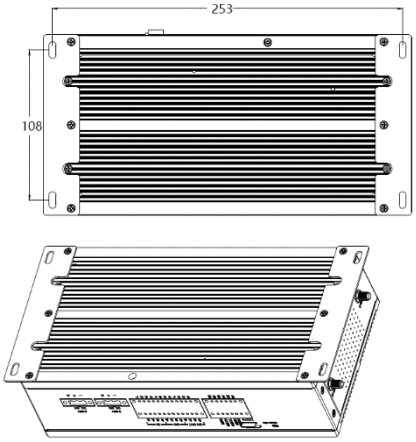
G43A	
	Quad-core ARM Cortex-A53, 1.6GHz
	2 x SFP, 10 x RJ45
	PoE supported
	Sufficient interfaces
	Local edge computing supported
	Wide input voltage range
	Industrial-grade design

G43A Edge Computing Gateway Datasheet

G43A		
System	CPU	Quad-core ARM Cortex-A53, 1.6GHz
	Memory	4GB DDR4 (Optional: 2GB)
	Storage	32GB eMMC 1 x Micro SD slot
Communication	Ethernet	8 x RJ45, 100Mbps (LAN port, including 4 that support PoE) 2 x RJ45, 1000Mbps (WAN port, Ethernet ring protection switching supported) 2 x SFP, 1000Mbps (Ethernet ring protection switching supported)
	Wi-Fi & BT	2.4GHz/5GHz dual-band Wi-Fi + BT5.0
	4G/NB-IoT	Optional
	Antenna	2 x 4G/NB-IoT antenna (Optional) 2 x Wi-Fi & BT/ antenna
I/O	Serial port	3 x RS485 (isolated) 2 x RS232/RS485 (software control, isolated) 1 x Console (RJ45 jack, RS232 debugging supported)
	DI/DO	4 x DI (dry/wet contact input) 4 x DO (relay output)
	USB	1 x USB 3.0 Type-A
	SIM slot	1 x SIM slot
	Grounding	Enclosure & PCB
	RTC	Supported (powered by button cell battery)
	WDT	Hardware watchdog
Expansion	Mini-PCIe	1 x Built-in mini-PCIe, for 4G/NB-IoT
System Control	Button	1 x Reset pin button
	LED	2 x Power indicator 1 x System running indicator
Mechanical	Dimensions	266mm x 130mm x 68.7mm (with brackets)
	Installation	Wall mounting
Power	Input	24V ~ 36V DC 2 x Power terminal (2 x 3 x 5.08mm), redundant power supply
	Output	4 x 5V/12V (Max. current 0.5A)
Software	OS	Linux (CentOS or Debian 10)
Environmental Condition	IP rating	IP40
	EMC level	3.0
	Temperature	Operating: -40℃ ~ +80℃ (Recommended: -40℃ ~ +70℃) Storage: -40℃ ~ +85℃
	Humidity	95% RH @25℃
	Certification	CE

Product Outlines





Ordering Information

Ordering No.	Memory	LTE antenna	NB-IoT antenna	Wi-Fi antenna	Wall mounting bracket
G43A-LTE-4	4GB	Yes	-	Yes	Yes
G43A-LTE-2	2GB	Yes	-	Yes	Yes
G43A -NB-4	4GB	-	Yes	Yes	Yes
G43A -NB-2	2GB	-	Yes	Yes	Yes
G43A	4GB	-	-	Yes	Yes

Packing list	
G43A Edge computing gateway	1
Wall mounting bracket	1
Wi-Fi antenna	2

Optional Accessories	
12V DC Adapter	1
DC power connector	1
4G LTE/NB IoT antenna	2

Since 2002 established by two Silicon Valley entrepreneurs, Vantron Technology has been a pioneer in connected IoT devices and IoT platform solutions. Today, Vantron is serving customers all over the world, including many Global Fortune 500 companies. The product lines cover intelligent edge hardware, IoT communication devices, industrial displays and the cloud-based BlueSphere device management platform.

With more than 20 years of experience in R&D of embedded intelligent edge hardware like SOMs and motherboards, Vantron provides users with various ARM- or X86-based embedded solutions. Such solutions provide users with flexible options, from Linux to Windows, from embedded level to desktop level, from gateways to servers. In the meantime, we also offer system clipping, driver transplantation and other services for custom development.