Features

- 5G NR Sub-6 bands with SA and NSA dual modes, supports up to DL: 3.4Gbps, UL: 250Mbps, ideal for IoT, M2M and eMBB applications

- Global 5G and LTE-A coverage, back support 3G

- Dual SIM, WWAN and WAN failover

- 2.4G/5G WIFI (802.11b/n/g/ac)

- 5x Gigabit Ethernet port (4 PoE PSE, 802.3af)

- 1-RS232, 1-RS485, 2-DI, 3-ADC, 3-DO(Relay)

- Support Modbus RTU/TCP, MQTT, SNMP, VPN

- Linux OS based openwrt platform for secondary development

5G Brings Evolutionary Changes To The IoT

The TG463 series is a 5G NR IoT gateway designed for IoT, M2M, and eMBB applications requiring higher speed, lower latency data transmission, and capacity of edge computing. It's Linux OS based openWrt platform allows developers and engineers to program and do secondary development on the hardware themselves. In addition, its rich I/O is ideal for connecting with diverse field equipment and sensors and transferring the data to the cloud server.
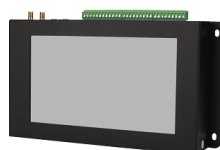
The TG463 series IoT gateway can be used for a wide variety of applications, such as smart pole, smart cities, smart office, smart buildings, smart traffic light, digital signage advertising, vending machines, ATM, etc.
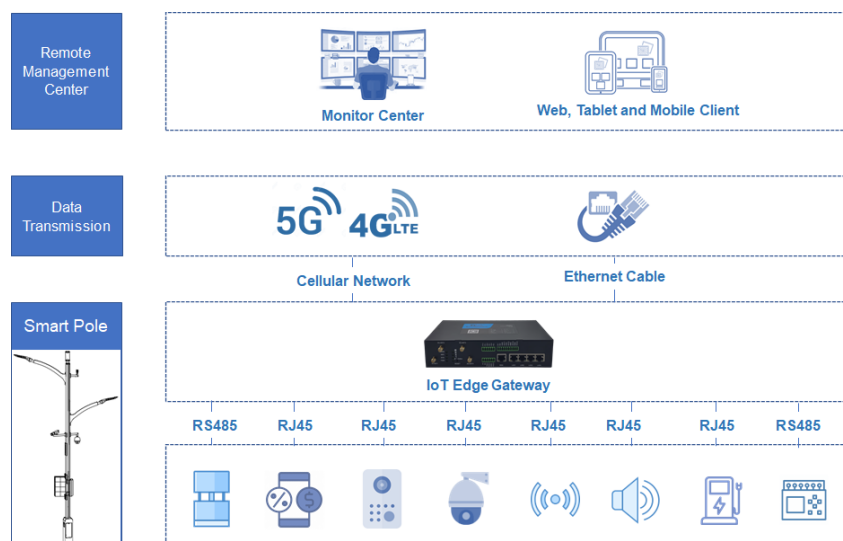
Related Products

4G IoT Edge Gateway TG452

4G Touch Screen IoT Edge Gateway TG462S

5G SFP Gigabit IoT Edge Gateway TG464

Smart Pole Diagram

Remote Management Center

Monitor Center

Web, Tablet and Mobile Client

Data Transmission

5G 4G LTE

Cellular Network

Ethernet Cable

Smart Pole

IoT Edge Gateway

RS485   RJ45   RJ45   RJ45   RJ45   RJ45   RJ45   RS485

Rev. No.: 2.1.1
Updated: 06-24-2020

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Specifications

System

CPU	32-bit, 880MHz, dual core
Flash	32MB (Extendable to 128MB, Option)
RAM	256MB DDR3

Cellular Interfaces

Antenna Connector	4 × 50 Ω SMA Female(5G Version TG463-NR) 2 × 50 Ω SMA Female(4G Version TG463-LF)
SIM Slot	1 or 2(Option), Standard SIM, 2FF

Ethernet Port

Ports	5 x RJ45 (1-WAN, 4-LAN or 5-LAN, configurable via Web UI)
Data Rate	10/100/1000Mbps (Auto-Sensing), Auto MDI/MDIX,
PoE	4 PoE PSE, 802.3af(Option)

Serial Port

Connector	Terminal block, 3.5 mm female socket with lock
Ports	1 x RS232, 1 x RS485 15KV ESD protection
Baud Rate	100bps to 230400bps

I/O

Connector	Terminal block, 3.5 mm female socket with lock
ADC	3 x 16-bit AD, supports 4-20mA current signal input, or 0-5V voltage signal input (Option)
DI	2 Logic 0: Wet contact 0-3VDC, or dry contact close Logic 1: Wet contact DC 5-30V, or dry contact open
DO(Relay)	3 Maximum switch voltage 30VDC/250VAC Maximum switch current: 5A
Power Output	2-channel 12V, current 1A Built-in overcurrent protection, for external devices DC power input

WIFI(Option)

Antenna Connector	4 × 50 Ω SMA Male
Standard	2.4G/5GHz IEEE 802.11b/g/n/ac, supporting AP and Client modes
Transmission Rate	IEEE802.11b/g: Up to 54Mbps, IEEE802.11n: Up to 300Mbps IEEE802.11ac: Up to 1.7Gbps
Security	Open,WPA,WPA2,WPA/WPA2, Enterprise, Radius

GNSS(Option)

Module	Module: Built-in independent module, supports Beidou, GPS, GLONASS, Galileo
Antenna Connector	1 × 50 Ω SMA Female

External Storage Interface

Micro SD	1 x TF card, Up to 32GB
Usage	User program, data storage and firmware upgrade

Power Supply and Consumption

Connector	2-pin with 3.5 mm terminal block
Standard Power	DC 12V/1.5A
Input Voltage	5-35 VDC
Idle Mode	253～360mA@12VDC
Working Mode	318～425mA@12VDC

Software

Network Protocols	PPP, PPPoE, SNMP v1/v2c/v3, TCP, UDP, DHCP, RIPv1/v2, OSPF, DNS, DDNS, HTTP, ARP, QoS, SNTP, Telnet, SSH, etc.
Serial Port	MQTT, Transparent (TCP Client/Server, UDP Client/Server), Modbus Gateway (Modbus RTU to Modbus TCP)
VPN Tunnel	IPsec/PPTP/L2TP/GRE/OpenVPN
Firewall	ACL/DMZ/Port Mapping/MAC Binding
Management	Web, CLI, SMS, Cloud DMP (Device Management Platform)1
Reliability	WAN Failover, Hardware & Software watchdog
Secondary Development	OpenWrt based, support Python, LUA and SDK

Physical Characteristics

IP Rating	IP30
Housing	Metal
Weight	1,000g(2.2lbs) without accessories
Dimensions	207*124*47mm(8.15*4.88*1.85in)
Mounting	Din-rail, Wall mount, Desktop

Environmental

Operating Temperature	-35°C to +75°C (-31℉ to +167℉)
Storage Temperature	-40°C to +80°C (-40℉ to +176℉)
Relative Humidity	93% ± 3% (non-condensing) at 25°C/77℉

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Others

LED Indicators	Signal strength, WIFI, System(SYS), Online, Power (PWR), Alarm
Built-in	Watchdog, RTC, Timer
Certifications2	CE*, RCM*, FCC*
Warranty Period	Standard: 12 Months / Extended: 2-5 Years3

Standard Package Content

1 x TG463 Gateway
1 x Power Adapter (DC 12V/1.5A, EU/US/UK/AU plug option)
4 x Mag-mount Cellular Antenna (SMA Male, 1 meter, 5dBi), 4G version has 2 antennas only
1 x RS232 Cable (DB9 Female, 1 meter)
1 x Ethernet Cable (1 meter)
1 x 10-Pin Terminal Block
2 x 6-Pin Terminal Block
1 x Din-rail mounting kits
1 x Quick Start Guide (Printed)*

Order Information4

Model	Part Number	Cellular Network
TG463-NR	TG463-<...>-<...>	5G NR
TG463-LF	TG463-<...>-<...>	4G LTE

Cellular Frequency Band5

TG463-NR
5G NR Sub-6
n1/n2/n3/n5/n7/n8/n12/n20/n28/n41/n66/n71/n77/n78/n79
LTE FDD:B1/B2/B3/B4/B5/B7/B8/B9/B12/B13/B14/B17/B18/B19/B20/B21(TBD)/B25/B26/B28/B29/B30/B32/B66/B71
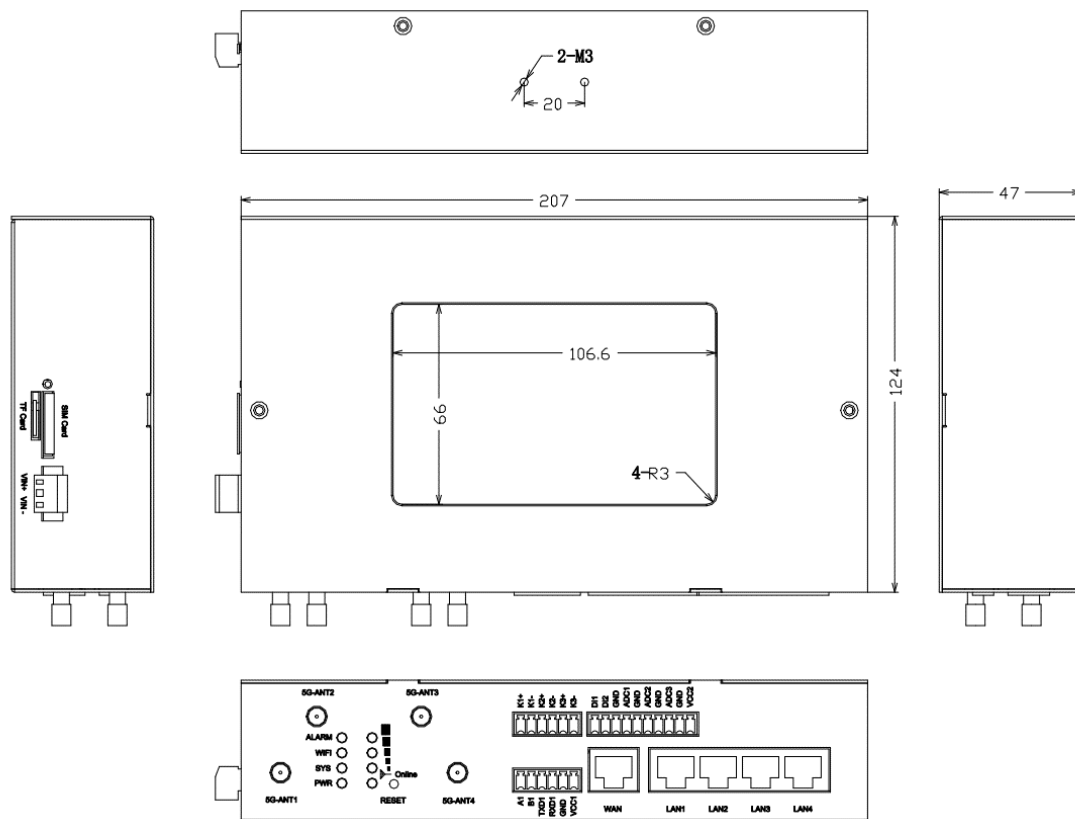LTE TDD: B34/B38/39/B40/B41/B42/B43/B48

TG463-LF
4G LTE CAT 6 Version
EMEA&APAC:B1/B3/B5/B7/B8/B20/B28
NA: B2/B4/B5/B7/B12/B13/B25
4G LTE CAT 4 Version
EMEA: 1/B3/B5/B7/B8/B20/B38/B40/B41
ANZ/LATAM: B1/B3/B5/B7/B8/B28
NA: B2/B4/B5/B12/B13/B14

Dimension

Note:

1. There is license fee for DMP.
2. Under development.
3. Price of extended warranty will be different.
4. <...> in part number means different frequency band for different market, please ask Bivocom sales representatives or your local partner for more information.
5. Frequency band in the table are just part of our models, if you couldn't find the frequency band in your regions, please feel free to contact us.

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