



TG462S Series
Touch Screen Edge Gateways

Introduction

TG462S (Touch Screen) and TG462 are rugged 4G LTE/3G industrial edge gateways connecting industrial sensors and controllers to the cloud. Suitable for harsh-condition IIoT/M2M projects like water & wastewater, pump, oil & gas, Industry 4.0, smart cities and environmental monitoring.

They come with rich interfaces: Ethernet, RS232/RS485, DI, AI, relays, I2C, power output, USB, GNSS and Wi-Fi, linking legacy devices and modern sensors smoothly. A high-performance 32-bit ARM CPU supports Modbus RTU/TCP, MQTT, JSON and custom protocols such as OPC UA*, IEC101/104/61850*, DNP3*, and BACnet IP/MSTP*, with up to 8GB flash and 32GB micro SD card for edge data collection and processing. TG462S features an embedded 7-inch HD TFT touchscreen for on-site check and maintenance. 4G LTE and full VPN ensure secure data upload to remote servers.

Powered by Bivocom OS (Ubuntu optional), the gateways support flexible secondary development. Developers deploy custom programs in Node-RED, C/C++, Python and Lua* via Bivocom SDK & APIs to fast build customized IoT applications.

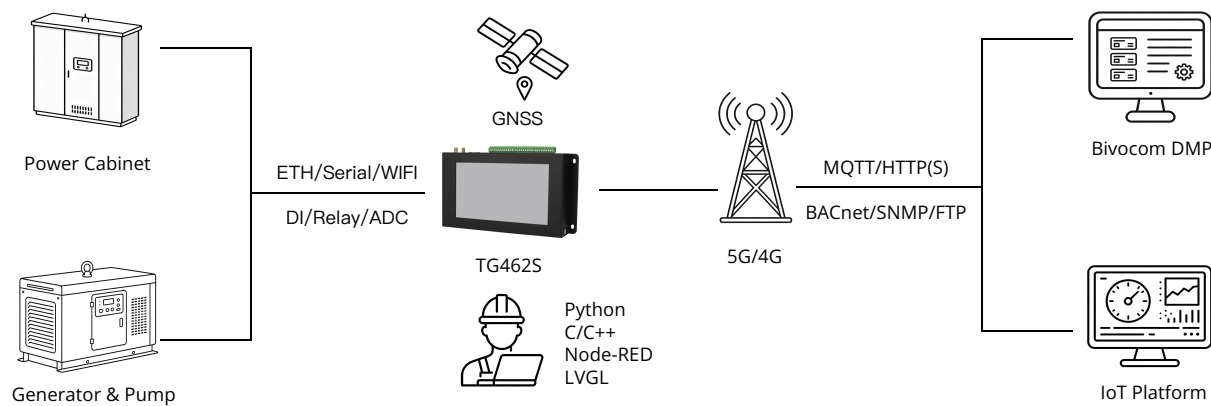
Key Features

- 4G LTE, or 5G RedCap (Optional)
- 2-ETH, 4-RS232(1 Debug), 4-RS485, 4-DI, 8-ADC, 4-Relay, 1-I2C, 1-TF Slot, 5-DC Power Output, 1-USB, 2.4G WIFI (Optional), GNSS (Optional)
- Programming Bivocom OS: C/C++, Python, Node-RED, QT, LVGL, Docker(Ubuntu OS)*
- Modbus RTU/TCP, JSON, BACnet IP/MSTP*, OPC UA*, IEC 101/104/61850*, DNP3* and customized industrial protocols
- MQTT, FTP*, HTTP(S), Wireguard, Tailscale*, SNMP*, Telnet, SSH

Applications

- HVAC
- Pump
- BESS
- Industry 4.0
- Water & Waste Water
- Oil & Gas
- Power
- Weather Station

Diagram



Specifications

Systems

CPU	32-bit ARM Cortex A7
Flash	1GB (8GB Optional)
RAM	256MB (512MB Optional)

Screen

TG462S	800*480, 7" TFT Touch Screen
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Cellular

Antenna	2 x 50 Ω SMA-K
SIM Slot	1 Mini SIM (2FF)

Ethernet

Ports	2 x 10/100 Mbps 1 x WAN, 1 x LAN, or 2 x LAN Configurable
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Serial

Ports	4 x RS232 (1 Debug), 4 x RS485
Baud Rate	1200bps to 230400bps

I/O

Digital Input	4-DI (Isolation, Dry contact), Optional Wet contact (Status "1": 0-3V, Status "0": 5-30V)
Relay Output	4-Relay (Up to 5A, 30VDC/250VAC switch)
Analog Input	8 x 16-bit (4-20mA, or 0-5/15/24V Optional)
I2C	1, for temperature, humidity sensors
Power Output	3 x 12VDC/1A, 1 x 9VDC/1A, 1 x 5VDC/1A, for powering field sensors & devices

Wi-Fi (Optional)

Antenna	1 x 50 Ω RP-SMA-J
Standard	IEEE 802.11b/g/n, AP/Client modes
Bands	2.4GHz
Security	Open, WPA, WPA2, Radius

GNSS / GPS (Optional)

Module	GNSS from cellular module, or independent GPS Module
Antenna	1 x 50 Ω SMA-J

External Storage

TF Slot	1 x Micro SD slot, Up to 32GB
USB	1 x USB2.0
Usage	User Program and Data Storage

Power

Input	9-35VDC (Primary + Backup)
Standard Power	12VDC/1.5A
Idle Mode	251 ~ 357mA@12VDC
Working Mode	305 ~ 412mA@12VDC

Physical Characteristics

IP Rating	IP30
Housing & Weight	Metal, TG462: 850g (1.87lbs), TG462S: 900g (1.98lbs), without accessories
Dimensions	228 × 122.5 × 38.2mm (8.97x4.82x1.50in)
Mounting	Desktop, DIN-Rail

Environmental

Operating Temp.	-30° C to +75° C (-22°F to +167°F)
Storage Temp.	-30° C to +80° C (-22°F to +176°F)
Relative Humidity	5% to 95% (non-condensing)

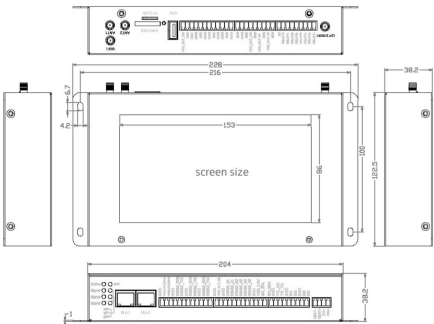
Others

Reset Button	1
LED Indicators	Signal, WIFI, System, Online, Power, GPS*
Built-in	Watchdog, RTC, Timer
Approvals	CE*, RCM*, FCC*
Warranty Period	Standard: 2-Year limited warranty Extended: 3-5 Years

Software

Programming	Bivocom OS (OpenWrt based Linux OS, Or Optional Ubuntu OS) C/C++, Python, Node-RED, QT, LVGL, Docker*, LUA* and SDK
Data Protocols	Modbus RTU/TCP, SMS, SNMP*, IEC101/104*, IEC61850*, DNP3*, BACnet IP/MSTP*, OPC UA*, etc.
Network Protocols	VXLAN, GNSS, IPV6*, DDNS, DNS, ARP, Static Routing, NAT, Firewall, Telnet/SSH, PPP, PPPoE, DHCP, ICMP, NTP, etc.
Server Supported	MQTT, HTTP(S), Transparent TCP/UDP, FTP*
VPN	Wireguard/OpenVPN/IPsec/PPTP/L2TP/Tailscale*
Firewall	ACL/DMZ/Port Mapping/MAC Binding
Management	Web, CLI, SMS, Bivocom DMP (Device Management Platform)*
Reliability	Dual SIM*, WWAN and WAN Failover, Hardware & Software Watchdog

Dimensions



Ordering Information

Model	Part Number	Cellular	Frequency Bands	Package Contents
TG462-LF	TG462 - L <1> - <2>	4G LTE	4G LTE CAT 4* (Optional Global or Regional Version) • EMEA/Asia: B1/B3/B5/B7/B8/B20/B38/B40/B41 • ANZ/LATAM: B1/B3/B5/B7/B8/B28 • NA: B2/B4/B5/B12/B13/B14	1. TG462/TG462S x 1 2. Cellular Antenna x 2 3. Ethernet Cable x 1 4. 4-Pin Terminal Block x 1 5. 12-Pin Terminal Block x 3 6. 9-Pin Terminal Block x 3 7. Power Adapter x 1 (Optional EU/UK/AU/US/CN Type)
TG462S-LF (Screen)	TG462S - L <1> - <2>			
TG462-RC	TG462 - RC <1> - <2>	5G RedCap	5G NR Sub-6 SA* (Optional Global or Regional Version) • n1/2/3/5/7/8/12/13/14/18/20/25/26/28/30/38/40/41/48/66/70/71/77/78/79 • LTE FDD B1/2/3/4/5/7/8/12/13/14/17/18/19/20/25/26/28/30/66/70/71 • LTE TDD B34/38/39/40/41/42/43/48	
TG462S-RC (Screen)	TG462S - RC <1> - <2>			
Part Number: <1>: 5G or 4G module for different countries and regions <2>: W=2.4G WIFI G=GPS (Standalone GPS) GN=GNSS from cellular module				

- Note:**
1. Region-specific cellular modules are available; consult Bivocom sales for details.
 2. Compiler & SDK are provided for secondary development. Ubuntu require dedicated hardware&firmware(8GB Flash version)
 3. Touch screen is only available on TG462S.
 4. Bivocom DMP (Device Management Platform) requires a license fee.
 5. *Optional functions rely on matching hardware/firmware versions; not all features supported on one device.
 6. Power consumption is measured under laboratory conditions and is for reference only.
 7. *Listed certifications are pending.
 8. Extended warranty pricing varies.
 9. Digital user manuals are free to download from [Bivocom](#) official website for environmental protection.

About Bivocom

Founded in 2014, Bivocom specializes in industrial IoT communication technology. Our comprehensive product portfolio covers IoT sensors, cellular gateways, industrial routers, RTUs, modems, as well as self-developed IoT cloud management platforms. We deliver ruggedized industrial wireless hardware, full-lifecycle OEM/ODM customization services and end-to-end IoT connectivity one-stop solutions to industrial partners worldwide.

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