



TG473 Series

SFP PoE Gateway with I/O

Introduction

The TG473 is a gigabit IoT gateway optimized for smart pole and smart city applications. It combines data acquisition, network switching, routing, lighting control and edge-computing functions, supporting VPN, Modbus RTU/TCP and MQTT protocols.

It provides 2 × SFP fiber ports, 1 × WAN, 7 × LAN (4 × PoE+ PSE, Optional), 2 × RS485, 3 × DI, 3 × Relays and a TF-card slot. Optional features include 12 V/24V dual DC power outputs, Wi-Fi, 4G LTE and 5G connectivity. Rich interfaces and protocols allow seamless integration of smart-pole peripherals such as smart lighting, IP cameras, environmental sensors, Wi-Fi APs, LED displays, IP speakers, emergency intercom units and charging stations, greatly simplifying system deployment.

Powered by Bivocom OS, the TG473 supports custom application development with Python (Optional) and C/C++. It offers high-speed, secure and stable data transmission for smart-city scenarios: municipal roads, parks, highways, tunnels, scenic spots, industrial parks and characteristic towns.

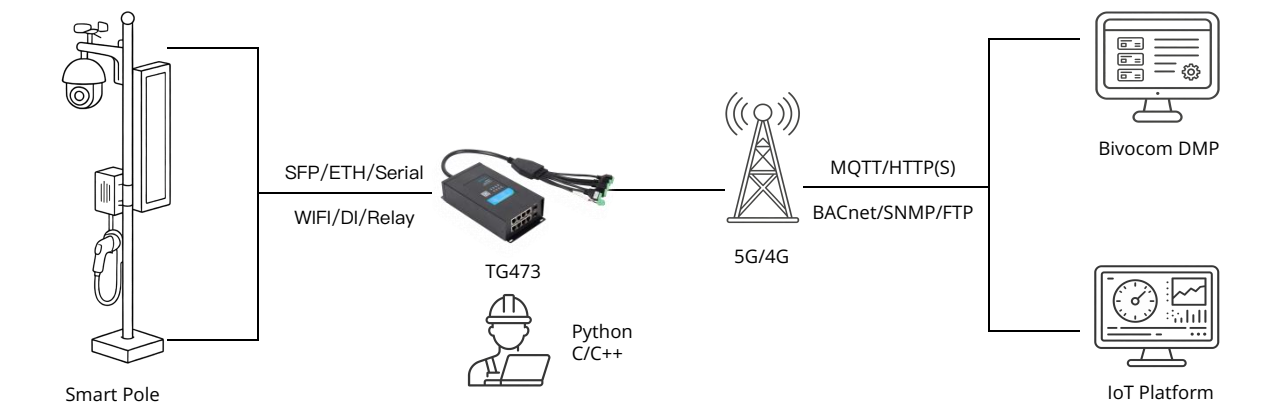
Key Features

- 5G RedCap, or 4G LTE (Optional)
- 2-SFP, 8-RJ45 (GbE, 4-PoE PSE, Optional), 2-RS485, 3-DI, 3-Relay, WIFI(Optional), 2-DC power output (24V, 12V)
- Programmable Bivocom OS: C/C++, Python (Optional)
- Modbus RTU/TCP, JSON, BACnet*, OPC UA*, IEC 101/104/61850* and customized industrial protocols
- MQTT, FTP*, HTTP(S), VPN, SNMP*, BGP, Telnet, SSH, CLI, Firewall

Applications

- Smart Pole
- Road & Tunnel
- Industrial & Campus Park
- High-way Transportation
- Water & Pump Stations
- Utility Tunnel
- Access Control

Diagram



Specifications

Systems

CPU	32-bit, dual core, 880MHz, MIPS
Flash	32MB
RAM	256MB

Fiber Port

Ports	2*100/1000Base-X SFP
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Ethernet

Ports	8 x 10/100/1000 Mbps 1 x WAN, 7 x LAN, or 8 x LAN Configurable
PoE+ (Optional)	4-PoE+, PSE (802.3at)

Serial

Ports	2 x RS485
Baud Rate	1200bps to 230400bps

I/O

Digital Input	3-DI (Isolation, Dry contact), Optional Wet contact (Status "1": 0-3V, Status "0": 5-30V)
Relay Output	3-Relay (Up to 5A and 30VDC/250VAC switch)
Power Output	1 x 12VDC, 1 x 24VDC

Cellular (Optional)

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

Wi-Fi (Optional)

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

Power

Input	5-60VDC, or 48-60 VDC (PoE+ Optional)
Standard Power	12VDC/1.5A, or 48V/2A (PoE+ Optional)

Physical Characteristics

IP Rating	IP30
Housing & Weight	Metal
Dimensions	200x113x50mm (7.87 x 5.12 x 1.97in)
Mounting	Wall mount

Environmental

Operating Temp.	-35° C to +75° C (-31°F to +167°F)
Storage Temp.	-40° C to +80° C (-40°F to +176°F)
Relative Humidity	5% to 95% (non-condensing)

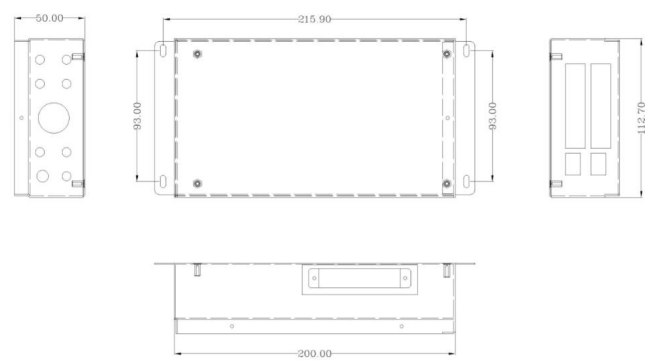
Others

Reset Button	1
LED Indicators	SFP, System, Power, GPS*, WIFI*, 5G/4G*, Alarm
Built-in	Watchdog, RTC, Timer
Approvals	CE*, RCM*, FCC*
Warranty Period ⁶	Standard: 2-Year limited warranty Extended: 3-5 Years

Software

Programming	Bivocom OS (OpenWrt based Linux OS) C/C++, Python* and SDK
Data Protocols	Modbus RTU/TCP, SMS, SNMP*, IEC101/104*, IEC61850*, 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
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
TG473-NM	TG473 - NM<1> - <2>	N/A	N/A	1. TG473 Unit x 1 2. Ethernet Cable x 1 3. Power Adapter x 1 (Optional EU/UK/AU/US/CN Type)
TG473-RC	TG473 - 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	1. TG473 x 1 2. Cellular Antenna x 2 3. Ethernet Cable x 1 4. Power Adapter x 1 (Optional EU/UK/AU/US/CN Type)
TG473-LF	TG473 - 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	

Part Number:

<1>: 5G or 4G module for different countries and regions, or no module.

<2>: W=2.4G WIFI

Note:

1.

Region-specific cellular modules are available; consult Bivocom sales for details.
2.

Compiler & SDK are provided for secondary development. Python require dedicated hardware&firmware.
3.

Bivocom DMP (Device Management Platform) requires a license fee.
4.

*Optional functions rely on matching hardware/firmware versions; not all features supported on one device.
5.

Power consumption is measured under laboratory conditions and is for reference only.
6.

*Listed certifications are pending.
7.

Extended warranty pricing varies.
8.

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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