



TG473 Lite Series

SFP PoE Gateway with I/O

Introduction

The TG473 Lite is a compact gigabit IoT gateway optimized for smart pole & smart city applications. It integrates data acquisition, multi-protocol communication and edge-computing functions, supporting abundant industrial protocols including Modbus RTU/TCP, MQTT, etc.

It provides 2×SFP fiber ports and 8 Gigabit Ethernet ports (4×PoE+ PSE, Optional), along with 1×RS232 debug port, 2×RS485 and 3×DI interfaces, optional features include Wi-Fi, 4G LTE and 5G connectivity. Rich interfaces and protocols enable seamless integration of smart-pole peripherals such as environmental sensors, smart lighting, IP cameras and wireless access devices, greatly simplifying overall system deployment.

Powered by Bivocom OS, the TG473 Lite supports custom application development with Python (Optional) and C/C++. With an 85–264V AC wide-voltage design and stable multi-protocol transmission, it delivers high-speed, secure data communication for diverse smart-city scenarios, including municipal roads, parks, highways, tunnels, scenic spots and industrial parks.

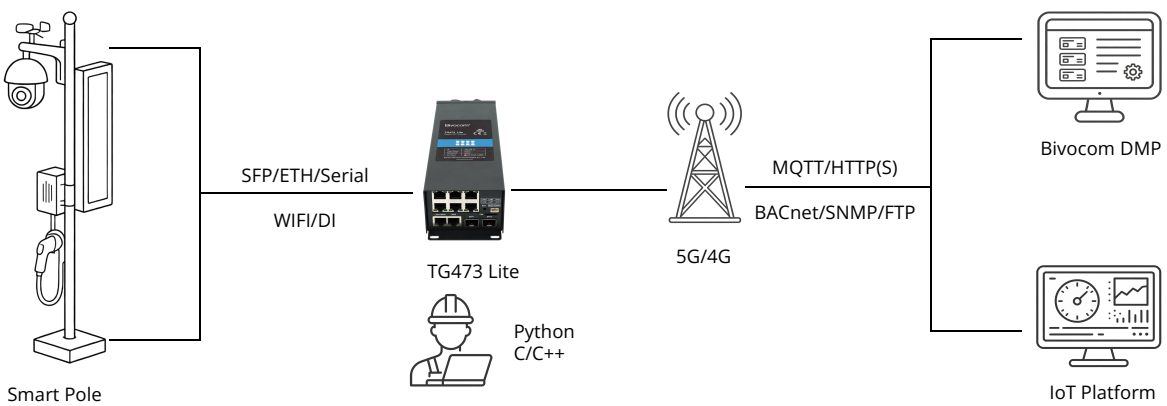
Key Features

- 5G RedCap, or 4G LTE (Optional)
- 2-SFP, 8-GbE (4-PoE+ PSE, Optional), 1-RS232(Debug), 2-RS485, 3-DI, WIFI (Optional), 2-DC power output (24V, 12V)
- Programmable Bivocom OS: C/C++, Python*
- 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	1 x RS232 (Debug), 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)
Power Output	2 x 12VDC (24VDC, Optional)

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

Standard Power	1x 220VAC
Input Voltage	85VAC - 264VAC/100-370VDC, ≤ 65W



WARNING: High- voltage connection.
Installation only by qualified technicians

Physical Characteristics

IP Rating	IP30
Housing & Weight	Metal, 1174g (2.59lb)
Dimensions	250*83.4*58.2mm (9.84 x 3.28 x 2.29in)
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)

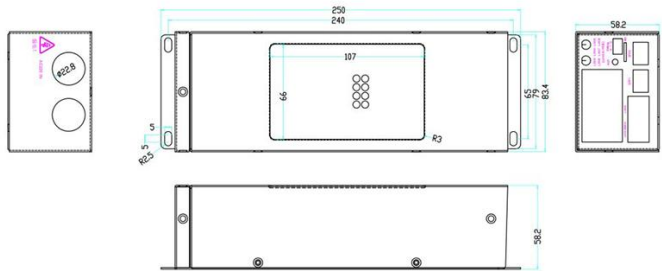
Others

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
TG473L-NM	TG473L - NM<1> - <2>	N/A	N/A	1. TG473 Lite Unit x 1 2. Ethernet Cable x 1
TG473L-RC	TG473L- RC <1>- <2>	5G RedCap	5G NR Sub-6 SA* (Optional Global or Regional Version) <ul style="list-style-type: none">n1/2/3/5/7/8/12/13/14/18/20/25/26/28/30/38/40/41/48/66/70/71/77/78/79LTE FDD B1/2/3/4/5/7/8/12/13/14/17/18/19/20/25/26/28/30/66/70/71LTE TDD B34/38/39/40/41/42/43/48	1. TG473 Lite x 1 2. Cellular Antenna x 2 3. Ethernet Cable x 1
TG473L-LF	TG473L - L <1> - <2>	4G LTE	4G LTE CAT 4* (Optional Global or Regional Version) <ul style="list-style-type: none">EMEA/Asia: B1/B3/B5/B7/B8/B20/B38/B40/B41ANZ/LATAM: B1/B3/B5/B7/B8/B28NA: 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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