



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.

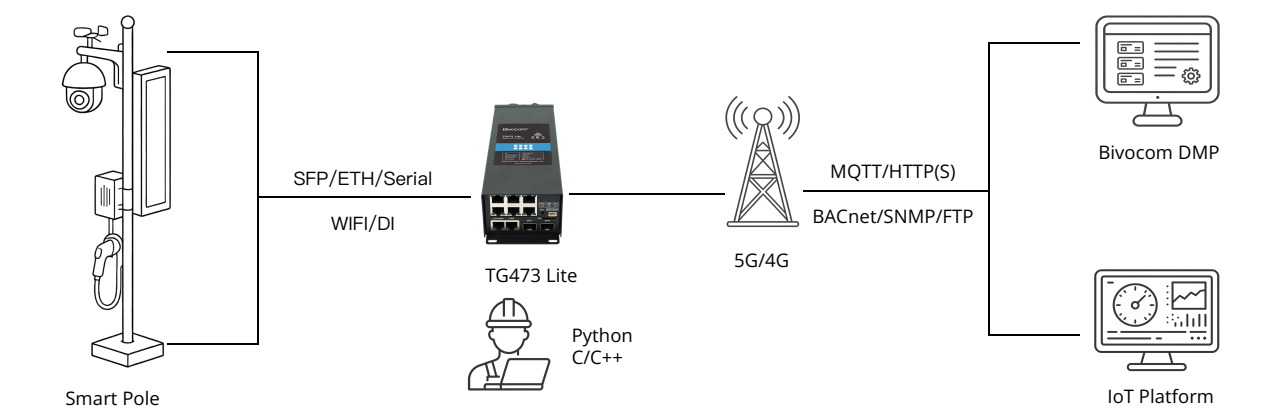
Key Features

- 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 |
|-------|----------------------|

Ethernet

|                 |                                                                   |
|-----------------|-------------------------------------------------------------------|
| Ports           | 8 x 10/100/1000 Mbps<br>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/100-300VDC, ≤ 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)         |

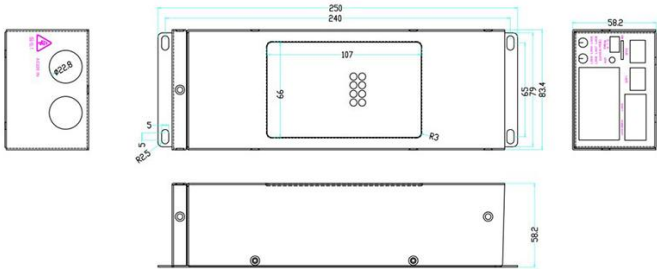
Others

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

Software

|                   |                                                                                                                        |
|-------------------|------------------------------------------------------------------------------------------------------------------------|
| Programming       | Bivocom OS (OpenWrt based Linux OS)<br>C/C++, Python* and SDK                                                          |
| Data Protocols    | Modbus RTU/TCP, SMS, SNMP*,<br>IEC101/104*, IEC61850*, BACnet IP/MSTP*,<br>OPC UA*, etc.                               |
| Network Protocols | VXLAN, GNSS, IPV6*, DDNS, DNS, ARP,<br>Static Routing, NAT, Firewall, Telnet/SSH,<br>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<br>Management Platform)*                                                            |
| Reliability       | Dual SIM*, WWAN and WAN Failover,<br>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<br>2. Ethernet Cable x 1                       |
| TG473L-RC                                                                                                   | TG473L- RC <1>- <2>  | 5G RedCap | <b>5G NR Sub-6 SA*<br/>(Optional Global or Regional Version)</b> <ul style="list-style-type: none"><li>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</li><li>LTE FDD<br/>B1/2/3/4/5/7/8/12/13/14/17/18/19/20/25/26/28/30/66/70/71</li><li>LTE TDD B34/38/39/40/41/42/43/48</li></ul> | 1. TG473 Lite x 1<br>2. Cellular Antenna x 2<br>3. Ethernet Cable x 1 |
| TG473L-LF                                                                                                   | TG473L - L <1> - <2> | 4G LTE    | <b>4G LTE CAT 4*<br/>(Optional Global or Regional Version)</b> <ul style="list-style-type: none"><li>EMEA/Asia:<br/>B1/B3/B5/B7/B8/B20/B38/B40/B41</li><li>ANZ/LATAM: B1/B3/B5/B7/B8/B28</li><li>NA: B2/B4/B5/B12/B13/B14</li></ul>                                                                          |                                                                       |
| Part Number:<br><1>: 5G or 4G module for different countries and regions, or no module.<br><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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