OPTICAL GPON INDUSTRIAL MODEM LW510-40BP

Description

The ONU Industrial GPON LW510-40BP is equipment for PON networks used as an access terminal in industrial facilities and/or critical environments, being responsible for converting the optical signal from the GPON network (ITU-G.984x standard) into an electrical signal (Ethernet).

It is equipment that supports rates of up to 1.25Gbps in the Upstream and 2.5Gbps in the Downstream direction (limited to 1Gbps of the ETH ports) and has support for Power over Ethernet in the IEEE 802.3at type 2 (PoE+) standard. being able to provide up to 30W of power per ETH port to power devices through RJ45 network interfaces (which are composed of shielded connectors for better performance).

Product installation can be done on DIN rail and the ONU supports extended operating temperature up to 70oC. Its metallic aluminum housing with IP40 degree of protection, associated with a double layer of protection on the printed circuit, offers protection against dust and greater resistance to corrosion and oxidation of the components.

Constructive characteristics

Dimension	ONT (mm): 150 x 37 x 117 (W x H x D)

Electrical Characteristics

Power Input	• Redundant DC (A / B) inputs from 24 VCC to 48 VCC. ****Power supply not included**

Power	• Maximum ONT power consumption without using the PoE function of the GbE ports: 12W;
	• Maximum ONT power consumption with simultaneous use of the PoE function of the 4 GbE ports:
	  • 132W (when powered at 48V);
	  • 72W (when powered at 24V).

Environmental Characteristics

Installation Environment	• Indoor and outdoor environments (when accommodated / installed in appropriate enclosure); • Recommended airtight boxes IP65 or higher; • For outdoor environments (Category C, ANSI/IEEE C62.41) it is essential to install surge protectors (SPD) in accordance with IEC 61643-21 at both ends of the data network (ONU and connected device).
Storage Temperature (°C)	• -40 °C to 75 °C

Operation Temperature (ºC)	• -30 ° C to 70 °C
Operating Humidity	• 5% to 90%, non-condensing

Compatibility

Compatible with Furukawa OLTs:

- 37050052 - OPTICAL CONCENTRATOR STANDALONE OLT GPON 3508
- 37050050 - OPTICAL CONCENTRATOR STANDALONE OLT GPON 3516
- 35510452 - OPTICAL CONCENTRATOR STANDALONE OLT GPON LW3008C
- 35510900 - OPTICAL CONCENTRATOR CHASSI OLT GPON LD3032

Features

Management

- Management support via OMCI protocol according to the G.984.4 standard;
- Local access via Telnet and SSH connection;
- Password change required after first login;
- Remote Access (OLT) via Telnet and SSH connection;
- Update via TFTP;
- MIB manipulation through OMCI (OLT) by Create, Delete, Set, Get, Get Next commands;
- Remote software image download;
- Activation with auto-discovery SN and password, in accordance with ITU-T G.984.3;
- Bandwidth configuration by service or port (fixed, guaranteed and maximum);
- Remote activation and rebooting;
- Alarms and performance monitoring;
- Maintains two sets of software images, for integrity checking and automatic rollback.

GPON

- Transmission speed:
  - 2.48 Gbps downstream;
  - 1.25 Gbps upstream,
- Receival Optical Power (dBm): -8 ~ -27 dBm;
- Transmition Optical Power (dBm): 0.5 ~ +5 dBm;
- Receival Wavelength (nm): 1310 nm;
- Transmission Wavelength (nm): 1490 nm;
- Uplink standard compatible with ITU-T G.984.2, Class B +;
- Multiple T-CONTs per device;
- Multiple GEM Ports per device;
- Flexible mapping between GEM Ports and T-CONTs;
- Forward Error Correction (FEC).

Layer 2	• Authentication control via 802.1x; • Support for sticky port-security mode for network access control; • Bridging / Switching mode support: IEEE 802.1D / 802.1Q; • IEEE 802.3ac - VLAN Tagging; • IEEE 802.1Q - Virtual LANs; • VLAN Tagging / Untagging; • VLAN Trunking; • VLAN Stacking (Q-in-Q); • VLAN Switching; • VLAN Translation; • 802.3n Flow Control; • 802.1Q VLAN-based virtual switch; • MAC Learning and Automatic Aging; • Support for up to 1024 MAC address; • MAC Limit; • VLAN filter per port; • Destination MAC address filter by port; • 802.1p Marking/Remarking; • Broadcast/Multicast Rate Limiter.
Multicast	• Support for IGMP Snooping.

PoE	• Supports up to 30 W per port;
	• Maximum power supply considering the simultaneous use of all 4 GbE port:
	  • 120 W when powered at 48 V;
	  • 60 W when powered at 24 V;
	• 802.3af-2003;
	• 802.3at Type 2 "PoE+";
	• Power Sourcing Equipment (PSE);
	• Standard detection of PD (Powered Device) devices;
	• Compatible pre-designated power classes: 0 ~ 5;
	• Auto-negotiation power mode;
	• Enhanced Power Management.

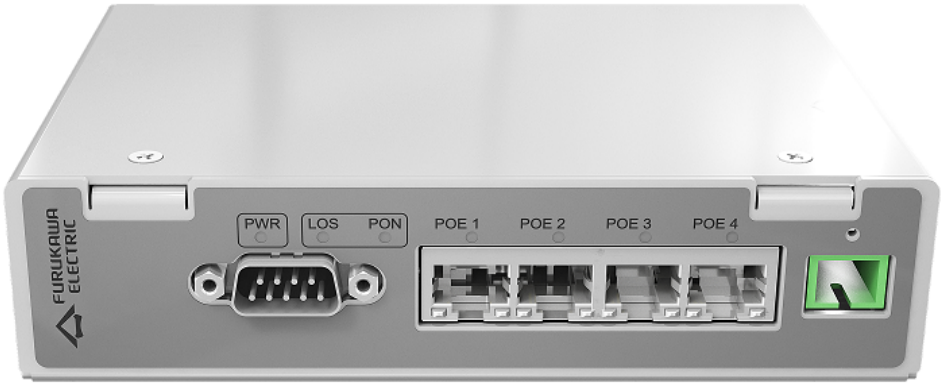
Qos	• Traffic management (priority queuing and traffic shaping); • Classification and marking of traffic; • Service classification based on MAC, port, VLAN-ID, 802.1p bit, ToS / DSCP; • QoS with IEEE 802.1p + DSCP support; • QoS / CoS with IPv4 support; • 8 QoS queues per port; • Hardware-based priority queues supporting IEEE 802.1p (Cos); • Support for SP, WRR, SP + WRR scheduling algorithms; • IP ToS/DSCP mapping to 802.1p; • Priority and Rate Controlled Scheduling.
Interfaces	

- 1 single-mode GPON SC-APC optical interface;
- 4 RJ-45 1000Base-T (GbE) metal interfaces with shielded connectors and Power over Ethernet (PoE +) support;
- 1 RS-232 (DB9) serial interface.

Packaging

Items Included	• Manual; • Guarantee certificate; • DIN Rail Adapter; • Electrical terminals.

Ilustrations



Certificações e Normas

MTBF

Temperature (ºC)	MTBF (Years)
25	104,9
30	95,8
35	78,3
40	63,6
45	51,3
50	41,1
55	32,8
60	26
65	20,5
70	16,1
75	12,6

Notes

The Optical GPON Industrial Modem LW510-40BP does not come with a power supply.
The following power supply is recommended:

- 35510435 - POWER SUPPLY 240W FOR A 4-PORTS INDUSTRIAL ONT.

Warranty

- One-year warranty;
- Software Technical Validity: 365 days.

Warranty coverage and technical support service are conditional on the exclusive use of GPON Furukawa family equipment (OLTs, ONUs, Power Supplies, Transceivers, ...).

Part Numbers