



## GPON OLT STANDALONE OPTICAL CONCENTRATOR 3516

Description	<p>The OLT (Optical Line Terminal) 3516 is an equipment used in Passive Optical Local Area Networks (PON LAN), as an optical switch with GPON ports, provides 4 optical uplink interfaces with speed up to 10 Gbps.</p> <p>This platform enables aggregate switch functionality with Layer 2 and Layer 3 switching and routing functionality on the same platform, thus simplifying the network architecture, allowing greater reliability in data delivery.</p> <p>Combining with the economic benefits of passive Gigabit Ethernet Passive Optical Network (GPON) networks, the OLT 3516 is an excellent and optimized solution for high bandwidth.</p>
Main Features	<ul style="list-style-type: none"> <li>• Supports up to 2048 ONUs;</li> <li>• Transparency of the main network protocols;</li> <li>• Self Provisioning of ONUs;</li> <li>• Consumption statistics;</li> <li>• Allows integration with management software;</li> <li>• Switching capacity: 176 Gbps;</li> <li>• Throughput capacity: 101 Mpps;</li> <li>• Layer 2 Features;</li> <li>• Support for GPON Class B+, C+ and C++ SFPs;</li> <li>• Authentication of users via RADIUS and TACACS;</li> <li>• Adhering to BNDES financing;</li> <li>• Supports NTP.</li> </ul>
General Characteristics	<p>The OLT 3516 support up to 16 GPON ports, each port provides a maximum bandwidth of 2.5 Gbps Downstream and 1.25 Gbps Upstream shared by 128 ONUs. The total is 2048 ONUs concentrated on an OLT of 1 U Rack.</p>

## GPON

- Downstream: 2.5 Gbps;
- Upstream: 1.25 Gbps;
- Downstream wavelength: 1490 nm;
- Upstream wavelength: 1310 nm;
- Capacity up to 128 ONUs per GPON port;
- Support of 20km of logical distance and up to 60 km of physical distance;
- ITU-T G.984.4 support for the management and control of ont interfaces (OMCI);
- Support for NSR and SR DBA upstream band control (G.984.3);
- 8 T-CONTs per ONT, plus ip-host;
- T-CONT alloc-ID: 1K per PON port;
- GEM port-ID: 4K per PON port;
- Remote ONT management;
- Automatic discovery and ONT range;
- ONT UNI/ONT ANI port statistics;
- GPON channel encryption (AES-128);
- Support for FEC (Forward error correction);
- Communication between ONTs on the same port;
- Global and default profile by ONT model;
- Remote update of the firmware of the ONTs through OMCI;
- Automatic update functionality;
- ONT power check remotely, via OLT;
- File transfer to ONT;
- VoIP-Profile for UNU VoIP configurations;
- MAC throttling and querying by ONT's PORT UNI Eth (ONU max-hosts);
- ONU Mac-Filter;
- ONU Restore Default;
- ONU Block;
- Loop-Detect;
- Type B Redundancy - Single Homing (same OLT):

Switching to the standby PON port will occur in the following cases:

- Fiber breakage of the active GPON interface;
- Great attenuation in the fiber of the active GPON interface;

- Type B Redundancy - Dual Homing (between OLTs):

Switching to the standby OLT will occur in the following cases:

- Fiber breakage of the active OLT GPON interface;
- Great attenuation in the fiber of the active OLT GPON interface;
- Active OLT uplink interface down.

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**Management**

- Access via Serial, Secure Shell - SSH (v1/v2) and Telnet (CLI);
- Authentication, Authorization and Accounting (AAA);
- In-band and out-of-band management;
- SNMP v1/v2/v3;
- Management through IPv4 or IPv6;
- Local and remote logging system;
- NTP and Timezone;
- DNS;
- OLT configuration files for local and remote storage (text format);
- Port Mirroring (SPAN and RPSAN);
- Port Counters (GE/XE/GPON);
- RMON;
- LLDP and LLDP-MED.

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**Layer 2**

- Non-blocking Switching and Throughput Capability;
- Standard Ethernet Bridging;
- 64k MACs addresses;
- 4062 VLANs, 802.1q;
- Port-based VLAN;
- MAC-Based VLAN;
- Subnet-Based VLAN;
- VLAN Stacking (QinQ);
- VLAN Translation;
- Spanning Tree (STP) - IEEE 802.1D;
- Rapid Spanning Tree Protocol (RSTP) - IEEE 802.1w;
- Multiple Spanning Tree Protocol (MSTP) - IEEE 802.1s;
- Jumbo Frame (12,270 bytes);
- Flow control;
- Static and dynamic LAG (LACP).

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**Layer 3**

- DHCP Server;
  - DHCP Client;
  - DHCP Relay;
  - DHCP Proxy;
  - DHCP Snooping;
  - DHCP Verify Source;
  - DHCP Option 121;
  - DHCP Option 82;
  - Protocol by-pass (DHCP, STP,L3,LLDP);
  - Static routing IPv4 and IPv6;
  - Open Shortest Path First (OSPF) v2/v3;
  - Routing Information Protocol (RIP) v1/v2 and RIPng.
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- Qos**
- Traffic scheduling (SP, WRR and DRR);
  - 8 rows per port;
  - Bandwidth management per port;
  - COS, DSCP / TOS marking / remarking.

- Multicast**
- IGMP v2/v3;
  - IGMP Snooping;
  - IGMP Static Join;
  - 1024 multicast groups.

- Security**
- Authentication control via 802.1x;
  - Authentication via 802.1x with VLAN assignment;
  - Storm Control: Broadcast, Multicast and DLF;
  - DoS Protection;
  - ACLs;
  - Radius and TACACS for user authentication;
  - RADIUS for ONT authentication.

- Dimensional Characteristics**
- 483,6 mm (19") x 370 mm x 44 mm (1 U's) (W x L x H).

- Supply**
- Full Range 36 ~ 60 VDC / 90 ~ 250 VAC ("Hot Swap");
  - Operates on 1 + 0 and 1 + 1;
  - Maximum Consumption: 100 W.

MTBF	°C	Hours	Days	Years
	25	227554,0	9481,4	26,0
30	201695,0	8404,0	23,0	
35	162089,0	6753,7	18,5	
40	130247,0	5427,0	14,9	
45	104731,0	4363,8	12,0	
50	84320,0	3513,3	9,6	

- Interfaces**
- GPON interfaces: 16;
  - 8 (eight) Optical interfaces 1 Gbps (Slot SFP) can be optical or electric according to the SFP used;
  - 4 (four) 1G / 10 Gbps optical interfaces (SFP +);
  - Up to 128 ONUs per PON port;
  - RS-232 Console Port - RJ-45 connector.

**Environmental specification**

- Operating Temperature: 0 ° C to 50 ° C;
- Storage Temperature: -5 ° C to 50 ° C;
- Transport Temperature: -40 ° C to 70 ° C;
- Relative Humidity: Up to 95%, non-condensing.

**Related Products**

- Product 3516 eligible for Furukawa Support and Service (FSS).

**Contact us for more information.**

**Compatibility**

- GPON OPTICAL MODEM LW110-44B
- GPON OPTICAL MODEM LW710-80BP
- GPON OPTICAL MODEM LW510-40RP
- GPON OPTICAL MODEM LW110-20BP
- GPON OPTICAL MODEM G400B/PoE S2
- GPON OPTICAL MODEM LW710-40BP
- INDUSTRIAL OPTICAL MODEM LW510-40BP
- GPON OPTICAL MODEM LD510-20B INDUSTRIAL

**Items Included**

- 1 x AC and DC power supply module<sup>1</sup>;
- Console cable;
- DC connector;
- Rack installation kit;
- Installation guide.

**Note**

1 - The product already comes with 1 power supply, and another unit can be purchased to work in redundancy (code: 37050053). Power cable **not** included.

**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](#)