

# FIBERLINK 2101

## GPON ONU



### DESCRIPTION

Fiberlink 2101 is a third generation GPON ONU designed by Parks. Flexibility is one of its main features, since the device operates both on GPON networks and on Metro Ethernet networks.

The auto-detection mechanism of fiber optic technology enables the ONU's automatic adaptation to the network to which it is connected, without requiring intervention by the user or the service provider.

Fiberlink 2101 has an integrated analog telephone adapter (ATA) with two independent voice ports. The VoIP solution included in this product is fully compliant with SIP and RTP protocols.

Support for IPv6 addressing, Wirespeed performance (1Gbit / s @ 64B) and the Green Ethernet technology are some examples that make Fiberlink 2101 the ultimate solution for your network, not just for today but for the future as well.

Specially designed for the FTTH and Metro Ethernet services market, Fiberlink 2101 is the best solution for both residential and business deployment

### HIGHLIGHTS

- ✓ ITU G.984 GPON ONU
- ✓ IPv6 and IPv4
- ✓ Advanced QoS, ensuring triple-play services quality
- ✓ Operates in GPON and Active Ethernet modes with autodetection
- ✓ Allows Point to Multipoint (GPON) and Point to Point (Active Ethernet) services provision
- ✓ Maximum routing performance: up to 1Gbit/s with 64 Bytes packets
- ✓ Green Ethernet - Energy-Efficient Ethernet
- ✓ IPTV Multicast, unicast, and Video on Demand
- ✓ Easy installation and provision
- ✓ Operates simultaneously in router and bridge modes
- ✓ Low latency and ultra-broadband: ideal solution for interactive and multiplayer games
- ✓ Integrated VoIP analog telephone adapter (ATA), with 2 or 4 FXS ports

## TECHNICAL SPECIFICATIONS

### INTERFACES

#### *OPTICAL INTERFACE*

GPON mode in compliance with ITU-T G.984

Operates in GPON and Active Ethernet modes, with automatic mode of operation detection

1490nm (Downstream) and 1310nm (Upstream) wavelengths

TX Power: 0.5 to +5 dBm

RX sensibility: -8 dBm to -28dBm ( $\pm 3$ dBm)

Maximum reach of 20 km

#### *ETHERNET INTERFACE*

2x 10/100/1000 T Base (RJ45) ports

IEEE 802.3/802.3u/802.3ab compliant interfaces

Supports IEEE 802.3az (Energy-Efficient Ethernet)

Auto negotiation and auto MDI/MDI-X

Half-duplex (back pressure) and full-duplex in compliance with 802.3x (PAUSE frames)

#### *FXS INTERFACES (TELEPHONE)*

2 voice ports with RJ11 connectors

In compliance with ANATEL regulation #512

Caller ID support

### CONFIGURATION, PROVISION, AND MONITORING

GPON provision via OMCI

Configuration via Parks NMS, CLI, and WEB (local)

Remote monitoring via SNMPv2 and SNMPv3

Remote (OMCI and FTP) or local (FTP) firmware update

Syslog (RFC3164) for event registration, error messages and notification

Status and activity LED indicators

Host IP, maintenance IP, and Loopback

Reset button for factory settings recovery

### FUNCIONALITIES

#### *GPON*

2.488 Gbit/s Downlink/1.244 Gbit/s Uplink data rate

Forward Error Correction (FEC) in upstream (US) and downstream (DS)

Supports static and dynamic bandwidth allocation (SBA/DBA)

128 bits AES cryptography in downstream

Up to 256 GEM (GPON Encapsulation Method) ports per ONU

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ONU activation via Serial Number (SN) or password

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Supports up to 7 simultaneous T-CONTs (Transmission Containers)

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Flexible mapping between GEM Ports and T-CONT

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Separate GEM Port for multicast

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Traffic Management (priority Queue and Traffic Shaping)

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### *ACTIVE ETHERNET*

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1000BASE-BX10 compliant Active Ethernet

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Data rate: 1Gbit/s full duplex

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Supports Transparent Lan Services (TLS)

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### *OPERATION MODES*

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Router

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Bridge

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Hybrid mode (Router and bridge simultaneously)

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### *ROUTER (IPV6 E IPV4)*

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IPv6 and IPv4 static routing

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RIPv1 (RFC1058), RIPv2 (RFC2453), RIPv3 (RFC2080)

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OSPF (RFC2328) and OSPFv3 (RFC5340)

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Dynamic routes authentication using MD5 (RFC1321)

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Fluctuating route based on priority or object track

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Internet connection: DHCP client, static IP, or PPPoE

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NAT/NAPT

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DHCP Server (RFC2131, RFC2132), Relay (RFC1542), and Client (IPv4 and IPv6)

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Stateful Firewall

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DNS Relay and Proxy

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NTP (RFC1305) with pair authentication

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PPPoE client (RFC2516)

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### *BRIDGE (SWITCHING)*

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Integrated Ethernet Switch with GbE ports

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MAC table with up to 1024 entries

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LAN ports isolation based on VLANs

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### *VLAN*

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Supports IEEE 802.1d and 802.1q

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VLAN ID 802.1q processing via port (Port-based VLAN)

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VLAN tagging/untagging

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VLAN Stacking (QinQ)

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QoS and Traffic Shaping bases on VLAN

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*IPTV*

Supports up to 128 simultaneous multicast channels and interactive TV services (VoD)

Allows IPTV traffic prioritizing (QoS) based on IEEE 802.1p

Supports Multicasting IGMP v2/v3 protocols

IGMP Proxy & Snooping

IGMP processing per VLAN ID of channels

*VoIP*

SIPv1 (RFC2543) and SIPv2 (RFC3261) control protocols

Supports G.711 (u-law and A-law), G.729A/B/AB and G.726 CODECs

Adaptive 300ms jitter buffer

FAX transmission via G.711 (fallback) or T.30/T.38

V.21/V.25 fax/modem tone detection

Echo cancelation in compliance with ITU-T G.165 and G.168

In-band, out-of-band (RFC 2833), and SIP Info/Notify dialing

Voice Activity Detection (VAD)

Comfort Noise Generation (CNG)

Multiple dial plans configuration

Configurable Flash key

High priority queue (low latency) for voice services

**SECURITY**

SPI (Stateful Packet Inspection) type firewall

128 bits AES cryptography for GPON traffic (downstream)

Login with several permission levels

AAA authentication: TACACS (RFC1492), TACACS+, RADIUS (RFC2138, RFC2139)

**QoS**

Traffic prioritization by port, VLAN, VLAN + CoS (802.1p), or CoS only;

Up to 7 different services provided per ONU

Each provided service may be divided into up to 8 fluxes

Prioritization between fluxes may be based on WRR (Weighted Round Robin) or Rate Control

Downstream (Rate Limit) and upstream (Traffic Shaping) bandwidth limitation

**MECHANICAL, ELECTRICAL AND ENVIRONMENTAL FEATURES***POWER SUPPLY*

External power source

Input: 93 to 253VAC (Full Range)

Output: 12V

Consumption: 8W (maximum)

*ENVIRONMENT*

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Operating temperature: 0 °C a 50 °C

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Relative humidity: 0 to 95% (non-condensing)

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*WEIGHT AND DIMENSIONS*

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W x H x D (mm): 181 x 34 x 128

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Weight: 0,288 kg

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For more information, visit [www.parks.com.br](http://www.parks.com.br).

*The information presented in this document is subject to change without previous notice.*