

COMMUNICATION EQUIPMENT

XPON ONU, 1GE

Model **PSK-ONU-001** · Bridge-mode CPE; router functions are provided by the customer gateway.

Palm-sized subscriber terminal that closes the PON: a dual-mode xPON optical port that auto-detects GPON or EPON head ends, and one gigabit Ethernet port toward the home router. Plug-and-play OMCI/OAM provisioning makes mass rollouts a scan-and-connect operation.

Overview

The 1GE xPON ONU converts the optical signal arriving on the subscriber drop into standard gigabit Ethernet. Its single SC/APC (or SC/UPC) port receives the 1490 nm downstream and bursts its 1310 nm upstream into the shared tree; the RJ45 port hands a clean 10/100/1000Base-T link to whatever CPE the customer uses. Dual-mode firmware detects whether the OLT speaks GPON (ITU-T G.984) or EPON (IEEE 802.3ah) and registers accordingly - one SKU covers both network types.

Provisioning is zero-touch: on power-up the ONU announces itself, the OLT authenticates it by serial number and pushes the service profile over OMCI (GPON) or OAM (EPON) - VLANs, rate limits and multicast permissions land without a truck roll. Four LEDs (power, PON, LOS, LAN) give installers and support staff an unambiguous health picture, and firmware upgrades run remotely from the head end.

In the network the ONU is the demarcation point: upstream is operator plant - drop, terminal box, splitter, feeder - and downstream is the subscriber LAN. Bridge mode behind a customer router is the classic deployment; the same hardware serves FTTH apartments, small offices and camera or backhaul niches where a single gigabit handoff is all that is required.

Key features

- Dual-mode GPON/EPON with automatic head-end detection - one unit for both networks
- 1 x 10/100/1000Base-T RJ45 subscriber port, auto-MDIX, wire-speed
- Zero-touch provisioning: OMCI (ITU-T G.988) and OAM (IEEE 802.3ah)
- Serial-number authentication and remote firmware upgrade from the OLT
- 20 km reach with Rx sensitivity of -27 dBm min
- Four status LEDs - PWR, PON, LOS, LAN - for installer-friendly diagnostics
- Compact fanless design drawing 3 W max from a 12 V adapter

Applications

Subscriber premises · FTTH activation · Small offices · Camera and backhaul handoffs · GPON · EPON · FTTH

Technical specifications

All values are typical for this product class.

PON interface	
Optical port	1 x SC/APC (SC/UPC option), single fiber
GPON rate	2.488 Gbit/s down / 1.244 Gbit/s up
EPON rate	1.25 Gbit/s symmetric
Wavelengths	1310 nm up / 1490 nm down
Transmit power	+0.5 to +5 dBm
Receive sensitivity	-27 dBm min
Reach	20 km

Ethernet interface	
Port	1 x RJ45, 10/100/1000Base-T
Negotiation	Auto-negotiation, auto-MDIX
VLAN	802.1Q transparent and tag/untag modes
Multicast	IGMP snooping
Management	
Provisioning	OMCI (ITU-T G.988) / OAM (IEEE 802.3ah)
Authentication	Serial number (LOID option)
Upgrades	Remote firmware from the OLT
Indicators	PWR, PON, LOS, LAN LEDs
Power & physical	
Power	12 V DC, 0.5 A external adapter
Consumption	3 W max
Dimensions	110 x 80 x 28 mm
Weight	120 g approx.
Operating environment	-5 to +45 deg C, 90 % RH max
Cooling	Fanless

Standards alignment

- Designed to align with ITU-T G.984 / G.988 (GPON, OMCI)
- Designed to align with IEEE 802.3ah (EPON, OAM)
- EMC design aligned with EN 55032 Class B

Packaging

Typical export packaging: unit with 12 V adapter in a printed retail box; 40 boxes per export carton (approx. 600 x 400 x 400 mm, 15 kg gross).

Ordering & support: request the certified PROSKY datasheet, project pricing and delivery terms via proskytele.com.