

COMMUNICATION EQUIPMENT

GPON OLT, 8-Port

Model **PSK-OLT-008** · SFP PON optics and SFP+ uplink modules are ordered separately.

Compact 1U optical line terminal that launches eight independent GPON trees - up to 1,024 subscribers at 1:128 - and aggregates them into 10-gigabit uplinks toward the core. Carrier-grade features, redundant hot-swap power and standards-based OMCI management make it the head end of the access network.

Overview

The 8-port GPON OLT is the active heart of a passive optical network: each SFP-based PON port transmits a 2.488 Gbit/s downstream at 1490 nm and receives a 1.244 Gbit/s upstream at 1310 nm, shared across a splitter tree of up to 128 ONUs and reaching 20 km of fiber. Four SFP+ cages provide 10GE uplinks with GE combo options, so a single rack unit terminates the optical access layer of a district and hands it to the IP core.

Internally the OLT is a non-blocking Layer-2 switch wrapped around the PON MACs: downstream traffic is broadcast and encrypted per-ONU with AES-128, while upstream bursts are scheduled by dynamic bandwidth allocation so traffic from hundreds of subscribers interleaves without collision. Provisioning follows ITU-T G.988 OMCI - ONUs are auto-discovered, authenticated by serial number or LOID, and pushed their service profile centrally; VLAN tagging and translation, IGMP snooping for IPTV and per-service QoS complete the triple-play feature set. Management runs over CLI (console/SSH), a web GUI and SNMP.

The unit deploys in central offices, PoP cabinets and campus equipment rooms; Class B+/C+ optics cover typical urban trees, and dual hot-swappable power modules (AC, -48 V DC or mixed) ride through feed failures. Eight ports at a conservative 1:64 split serve around 512 homes, making this chassis a natural entry OLT for district and greenfield builds.

Key features

- 8 x GPON ports (SFP, Class B+/C+): 2.488 Gbit/s down / 1.244 Gbit/s up per tree
- Split ratios to 1:128 per port; 20 km logical reach
- 4 x 10GE SFP+ uplinks with GE combo options
- ITU-T G.988 OMCI provisioning with ONU auto-discovery and SN/LOID authentication
- AES-128 downstream encryption plus rogue-ONU detection and isolation
- DBA upstream scheduling, per-service QoS, VLAN translation and IGMP snooping
- Dual hot-swappable power modules: AC 100-240 V, DC -48 V or mixed
- CLI (console/SSH), web GUI and SNMP management planes

Applications

Central office PON head end · PoP and street-cabinet aggregation · Campus and compound networks · ISP greenfield builds · GPON · FTTH

Technical specifications

All values are typical for this product class.

PON interfaces	
PON ports	8 x SFP (SC/APC pigtail modules), Class B+ / C+
Line rate	2.488 Gbit/s downstream / 1.244 Gbit/s upstream
Wavelengths	1490 nm down / 1310 nm up; 1550 nm overlay passed
Split ratio	1:128 max per port
Logical reach	20 km

Switching & uplinks

Uplinks	4 x 10GE SFP+ (GE combo options)
Switching capacity	88 Gbit/s min, non-blocking
MAC address table	32 K
VLANs	4 K, 802.1Q tagging and translation
Frame size	Jumbo frames to 9 KB

Management & features

ONU provisioning	ITU-T G.988 OMCI, auto-discovery
ONU authentication	Serial number, password or LOID
Bandwidth allocation	SR and NSR DBA
Security	AES-128 downstream, rogue-ONU isolation
Multicast	IGMP v2/v3 snooping
Management planes	Console/SSH CLI, web GUI, SNMP v2c/v3

Power & physical

Power modules	2 x hot-swappable: AC 100-240 V / DC -48 V / mixed
Power draw	60 W max, typical configuration
Form factor	1U 19-inch, 440 x 240 x 44 mm
Weight	3.5 kg approx.
Operating environment	-5 to +45 deg C, 90 % RH max
Cooling	2 field-replaceable fans, speed-controlled

Standards alignment

- Designed to align with ITU-T G.984.1-G.984.4 (GPON)
- Designed to align with ITU-T G.988 (OMCI)
- Designed to align with the IEEE 802.3 Ethernet family
- EMC design aligned with EN 55032 / EN 55035

Packaging

Typical export packaging: unit boxed with rack ears, console cable and power cords in die-cut foam (approx. 560 x 360 x 130 mm, 5 kg gross); 4 boxes per master carton.

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