



ISKRATEL

Iskratel Lumia T6

The fastest 25GPON / 50GPON / 100GPON / Combo / XGS-PON / GPON / P2P OLT

Iskratel Lumia T6 is a shelf-based, multi-blade Combo OLT with **terabit-capable** backplane. It provides flexible port configuration with XGS-PON, GPON, Combo PON, or 25G/50G/100GPON subscriber blades.

Iskratel Lumia T6 provides data rates up to **800 Gbps per subscriber blade** and up to **1.4 Tbps uplink capacity**, which make it the **world's fastest PON OLT**. The resulting longest lifespan across PON technologies guarantee the return and safety of investment.

Furthermore, the dual nature of Iskratel Lumia T6 supports **conventional and virtualised operation** on the same hardware, allowing operators to avoid an entire investment cycle when transforming towards software-defined, multi-gigabit access network.

Highly scalable, Iskratel Lumia T6 fits **all deployment densities**, from high-density urban to low-density rural areas, while its flexibility and variety of subscriber ports address all use cases in the fibre access.

Iskratel Lumia T6 provides the ideal port density: equipped with **Iskratel Lumia C16T** Combo PON subscriber blades, up to 80 ports can serve **more than 20,000 users** from a single shelf.

Iskratel Lumia T6 is available as a **6-slot shelf**, hosting one or two central Ethernet switches for network (uplink) connectivity, and four or five subscriber blades. Each sub-



scriber blade is connected to each central switch with 400 Gbps, which yields a total of **800 Gbps per subscriber blade**.

When duplicated, the two **Iskratel Lumia P300T** central switches operate in **dual-unit stacking** mode as a single, non-blocking switch with extremely high **switching capacity of 3.4 Tbps**, guaranteeing high availability and resiliency with hot-swap.

The uplink capacity can be boosted with **Iskratel Lumia U800T** uplink extension card, yielding a total uplink capacity of **1.4 Tbps** per shelf.

KEY FEATURES AND BENEFITS

- Up to 800 Gbps per subscriber blade in dual-star backplane topology
- Up to 1.4 Tbps uplink connectivity and dual-unit stacking mode
- Seamless transition to virtualised next-gen fibre access
- Industry-leading temperature range from -40 °C to +65 °C
- Flexible shelf configurations for different capacities
- Made in EU



Next-generation
broadband access



Conventional or
virtualised operation



The longest lifecycle and
lowest five-year TCO



TECHNICAL CHARACTERISTICS

Shelf type	T6		
Shelf description	6 slots, 5U ⁽¹⁾		
Dimensions H × W × D	222.3 mm × 482.6 mm × 330 mm ⁽²⁾		
Rack compliance	ETSI 300		
Port capacities	With one central blade	With two central blades	With two central blades and uplink extension
No. of subscriber blades C16T	5	4	3
No. of central blades P300T	1	2	2
No. of uplink-extension blades U800T	0	0	1
Backplane capacity per subscriber blade	400 Gbps	800 Gbps	800 Gbps
Max. Combo PON ports (supporting XGS-PON, GPON and 10GE P2P)	80	64	48
Max. GPON users (at 1:128 split)	10,240	8,192	6,144
Max. XGS-PON users (at 1:256 split)	20,480	16,384	12,288
Max. 100GE uplink ports	2	4	12
Max. 10GE/25GE uplink ports	4	8	8
Max. GE uplink ports	2	4	4
Total uplink capacity	302 Gbps	604 Gbps	1,404 Gbps
PON interfaces			
XGS-PON split ratio	1:256 ⁽³⁾		
GPON split ratio	1:128 ⁽³⁾		
Combo PON split ratio	1:128 ⁽³⁾		
Shelf connectivity and management			
Central switching blades	One or two central Ethernet switching blades, 6× 25GE inter-switch connectivity		
Backplane interfaces	32× 10GE/25GE or 8× 100GE interfaces per subscriber blade		
IPMI	Service blade identification, Identification of shelf, Blade status information, Blade management, Fan management		
Environmental			
Safety	EN 62368-1:2014 + A11:2017		
EMC	EN 55032:2015 + A11:2020, EN 55035:2017 + A11:2020, EN 61000-3-2:2019 and EN 61000-3-3:2013 + A1:2019		
Storage conditions	ETS 300 019-1-1, class 1.2, temperature –50..+70 °C, relative humidity 10..100%		
Transport conditions	ETS 300 019-1-2, class 2.3		
Operating conditions	ETS 300 019-1-3, class 3.1E, temperature –40..+65 °C, relative humidity 5..90%, non-condensing. Please refer to user manual for details.		
Power supply			
Supply voltage	From –42 V DC to –60 V DC, dual-rail redundancy		
Power consumption	<ul style="list-style-type: none"> Duplicated configuration with a shelf, four blades C16T and two blades P300T: 770 W typ. (with SFPs), CoC compliant, Tier 2023, 78% consumption Single-switch configuration with a shelf, five blades C16T and one blade P300T: 807 W typ. (with SFPs), CoC compliant, Tier 2023, 79% consumption 		

⁽¹⁾ Including 1U space reserved for cooling.

⁽²⁾ Depth given without cables and protrusions.

⁽³⁾ 1:256 split ratio is supported on XGS-PON-only ports, and 1:128 for GPON/Combo ports. Split ratio may depend on optical power budget and ODN topology.

Ordering code	Description
SBB2501AA	Iskratel Lumia T6 terabit shelf, including filter
SBB2500KA/KB	Iskratel Lumia C16T Combo PON (XGS-PON/GPON) blade for Iskratel Lumia terabit shelves
SBB2500BA	Iskratel Lumia P300T central blade for Iskratel Lumia terabit shelves
SBB2501MA	Iskratel Lumia U800T uplink-extension blade, eight 100GE uplinks, without QSFP28 modules

For Iskratel Lumia C16T and Iskratel Lumia P300T, please refer to separate/individual datasheets.

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