

Nokia Lightspan SF-8M

Sealed Fiber Access Node



The Nokia Lightspan SF-8M is a high-capacity, sealed, passively cooled fiber access node suitable for standalone outdoor deployment. It supports a variety of Passive Optical Network (PON) technologies, including GPON, XGS-PON, Multi-PON, and 25GS-PON. Powered by the Nokia Quillion chipset, the high-throughput, power-efficient, low-latency fiber node is ideally suited to support today's and tomorrow's residential, business, and mobile transport services.

The Nokia Lightspan SF-8M is a high-performance compact, sealed optical line terminal (OLT) suitable for any distributed optical distribution network (ODN) architecture and deployable anywhere in the outside plant. It supports non-blocking, full-duplex throughput of 100 Gb/s with eight access ports supporting any mix of GPON (Gigabit Passive Optical Network), XGS-PON (10 Gigabit symmetrical PON) or Multi-PON (GPON and XGS-PON) pluggable optical modules or four ports of 25GS-PON modules.

The Nokia Lightspan SF-8M supports Software-Defined Access capabilities with Nokia Altiplano, enabling service disaggregation and automation while simplifying integration and operations.

It offers tremendous deployment flexibility with options for mounting on a strand, inside or outside a cabinet, or on a pole or wall. Installation versatility extends to pluggable powering options including redundant coax, or triple power (AC, DC, and RFT-V).

The Lightspan SF-8M can be deployed in a network edge aggregation architecture or as a remote OLT at any point of service. This gives network operators the scale, performance, reliability, and flexibility to meet their growing network demands.



Features

- Compact, environmentally sealed, passively cooled node suitable for standalone deployment anywhere in the outside plant
- Eight PON downlink ports: GPON/XGS-PON/Multi-PON or four 25GS-PON
- Eight 10/25 GigE or two 100 GigE network uplinks
- 100 Gb/s non-blocking, full-duplex throughput
- Can be installed on a strand, inside or outside a cabinet, pole, or wall.
- Redundant, field-replaceable, hot-swappable power supply options including coax-fed 60-90VAC square wave or local 120VAC, 48VDC, or RFT-V span power
- All ports support full-rate Ethernet forwarding with traffic management and evolution to IP/MPLS networking

Benefits

- Sealed access node operates as a high-capacity, stand-alone, mini-OLT
- Single product gives operators the flexibility to support any combination of GPON, XGS-PON, and Multi-PON modules or 25GS-PON
- Powering and mounting options allow fast deployment anywhere in the outside plant
- SDAN functionality enables adaptable architectures, streamlines operations, and reduces OPEX
- One product suitable for network edge aggregation or distributed remote OLT role
- Light enough for single installer deployment
- Passive cooling saves power and eliminates potential failure mode, contributing to significant TCO reductions

Technical specifications

Full-service platform

- Multiservice access support
 - High-speed internet access
 - IPTV services
 - Business access
 - Cell site backhaul support
- Downlink support
 - 8 x GPON / XGS-PON / MPM (GPON + XGS-PON) or 4 x 25GS-PON
- Uplink support
 - 8 x 10/25 GigE (SFP+/SFP28), or
 - 2 x 100 GigE (QSFP28)
 - LR, ER, ZR (10, 40, 80 km) optics
 - CWDM / DWDM optics
 - 100 Gb/s forwarding engine

Management

- Fully managed by the Nokia Altiplano Access Controller

Eco-sustainability

- REACH, WEEE, RoHS2

Standards compliance

- Environmental
 - GR-3108-CORE Class 4
- Protection
 - GR-1089-CORE
- Safety
 - IEC/UL62368-1
 - IEC/UL 60950-22
- Electromagnetic compatibility (EMC)
 - FCC Clause 47 Part 15 Class A
 - ICES-003 Class A
 - GR-1089-CORE



Operating conditions

- Operating temperature range: -40°C to +46°C (-40°F to +115°F) with direct solar load
- Operating temperature range: -40°C to +65°C (-40°F to +149°F) without direct solar load
- Operates over an altitude of 0 m (0 ft) to 1800 m (5905 ft)
- Sealed enclosure
 - IP67 rated
 - Passively cooled, enclosure used as a heatsink
 - Weather- and corrosion-proof

Power

- Field-replaceable coax AC power supply module (3FE78004AA variant)
- Hot-swappable, redundant coax AC quasi-square wave 44 to 110V, nominal 60V and 90V
- Field-replaceable triple-power supply module (3FE78004CA variant)
- Local AC (110V nominal)

- Local DC (48V nominal)
- ±190VDC RFT-V span power
- Simultaneous local AC & DC failover
- Simultaneous RFT-V span power & local DC failover

Dimensions

- Height: 508 mm (20.0 in)
- Width: 297 mm (11.7 in)
- Depth: 266 mm (10.5 in)
- Height below strand: 282 mm (11.1 in)
- Weight with dual coax power supplies: ~21.1 kg (46.5 lbs.)

Installation

- Outdoor non-flood prone environments
- Strand mount
- Inside or outside a cabinet
- Pole or wall using brackets

