

Nokia Lightspan MF-2

The Nokia Lightspan MF-2 is a high-capacity software-defined fiber access node designed to power next-generation massive scale access networks. It supports Gigabit, 10 Gigabit and 25 Gigabit services over multiple Passive Optical (PON) technologies. The Lightspan MF-2 is based on the Nokia Quillion chipset and combines market-leading density, throughput and low latency. It enables fiber access to be a single infrastructure for the delivery of all services across all technologies: residential, business, 5G transport and pre-aggregation.

The Nokia Lightspan MF-2 is a small modular 2RU fiber access node (optical line terminal, OLT) suitable for use in a variety of deployment scenarios: mobile transport; small-scale residential services in multidwelling units (apartment buildings); pre-aggregation of remote access nodes; and delivery of business services to hotels, stadiums, office buildings, etc. It has TSN-grade (time-sensitive networking) capabilities enabling operators to use existing fiber assets for efficient 5G transport.

Service providers have maximum flexibility for deploying Lightspan MF-2 in the central office, building basements, outside plant cabinet or data center.

Lightspan MF-2 enables a simpler and more cost-efficient network evolution today and in the future. It supports Multi-PON mode to deliver GPON and XGS-PON services from a single port and 25G PON.

As a member of the Lightspan product family, it fully supports SDAN (Software Defined Access Networks) for network slicing,



Key benefits

- Secure investment in high-capacity node and next-generation fiber technologies
- Multi-Gigabit connectivity to homes, businesses and small cells
- Enhanced operations with SDAN
- Efficient 5G transport over fiber access
- Simple PON evolution with Multi-PON

Key features

- 2-slot modular shelf for small scale deployments
- High-density GPON, XGS-PON, Multi-PON and 25G PON
- Unmatched low latency for 5G transport
- Managed by Nokia Altiplano

Technical specifications

Full service platform

- Multiservice access support
 - IPTV services
 - Multimedia service
 - High-speed Internet access
 - Business access
 - Cell-site backhaul
- LT support
 - 16-port Multi-PON card supporting GPON, XGS-PON, Multi-PON and 25G PON
- Network Termination (NT) support:
 - Lightspan MF-2 LMNT-A
 - 240 Gb/s switching matrix (bidirectional)
 - Active/Active redundancy
 - 4 Small Form Factor Pluggable SFP+ cages for 10 GigE or 1 GigE optics

- Lightspan MF-2 LMNT-B
 - 800 Gb/s switching matrix (bidirectional)
 - Active/Active redundancy
 - 2 QSFP cages supporting 100 GigE, 40 GigE, 4 x 25 GigE or 4 x 10 GigE optics

Management

- Fully managed by the Nokia Altiplano Access Controller

Eco-sustainability

- Complies with the EU Directive 2011/65/EU as amended including by Directive 2015/863/EU concerning the Restriction on Hazardous Substances (RoHS)
- Complies with the EU Directive 2021/19/EU concerning product collection and treatment for Wastes from Electrical and Electronic Equipment (WEEE).
- Product packaging materials are free from hydrochlorofluorocarbon (HCFC)
- Plastic product packaging material is marked according to ISO 11469, referring to ISO 1043 (97/129/EEC)

Standards compliance

- Environmental
 - ETS EN 300 019-1-1 storage – Class 1.1 weather-protected, partly temperature controlled locations
 - ETS EN 300 019-1-2 transport – Class 2.3 public transportation
 - ETS EN 300 019-1-3 stationary use –Class 3.1E and Class 3.3 (assuming no condensation and icing)
 - GR-63-CORE
 - TP76200MP
 - GR-3108-CORE



- Powering
 - ETS EN 300 132-2
- Protection
 - ITU-T K.20 enhanced and K.45 basic
 - GR1089 for Lightning and AC power fault.
- Safety
 - IEC 62 368-1 / EN 62 368-1
 - AS/NZS 62368-1
 - UL62368-1
 - CAN/CSA-C22.2 No. 60950-1-07
 - GR-63- CORE for Fire Spread and Surface Temperature
 - GR-1089-CORE for Electrical Safety, Bonding and Grounding
- EMC
 - ETS EN 300 386 for telecommunications center installation environment
 - ETS ES 201 468
 - GR-1089-CORE – for Radiated Emission, Conducted Emission- FCC part 15 Class
- Acoustic noise
 - ETS 300 753

Operating conditions

- Operating temperature range: -40°C to +65°C (-40°F to +149°F)
- Relative humidity: 5% to 93% (non-condensing)
- Over-temperature sensors and over-temperature shutdown
- Replaceable low noise Fan Module & Filter

Power

- Input
- DC-powered:
 - 48/60V DC nominal
 - Fully redundant power feeding (branch A and B)
- AC-powered:
 - 90V-264V AC - Input frequency 50Hz-60Hz
 - Separate battery backup connector

Dimensions

- Height: 88.8 mm (2 RU)
- Width: 448 mm; can be used in 19-inch racks
- Depth: 246.5 mm

