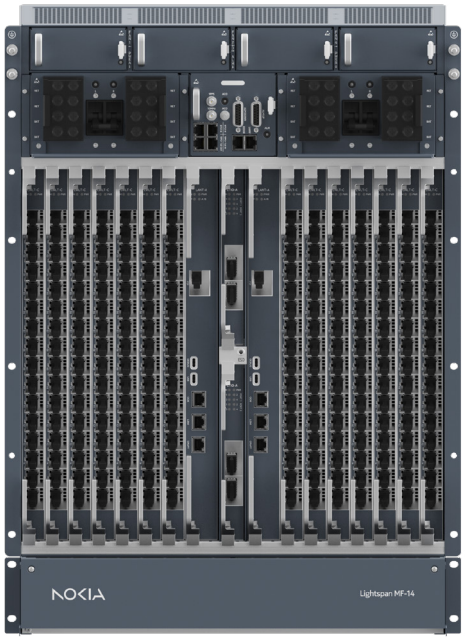
Nokia Lightspan MF-14

The Nokia Lightspan MF-14 is the industry first fiber access node designed to provide non-blocking delivery of massive scale 25G, 50G and 100G PON services. Part of the Nokia next generation fiber portfolio, Lightspan MF-14 is based on the Nokia Quillion chipset and combines market-leading density, throughput, reliability, and low latency. It enables broadband providers to create a fiber network capable of supporting residential and business broadband, mobile backhaul, pre-aggregation, wholesale, and smart city services on a single access infrastructure.

The Nokia Lightspan MF-14 delivers all the features needed for the new fiber era. With the highest capacity in the industry, it enables service providers to gain a competitive advantage today with a solution that will serve for decades. With no single point of failure and enhanced reliability, it delivers true mission critical broadband while the state-of-the-art Quillion chipset brings enhanced power efficiency and the low latency needed in Industry 4.0 and mobile transport applications. Lightspan MF-14 is fully programmable, with open and standardized control & management interfaces, for premium operational efficiency in multi-service, multitechnology, multi-vendor networks, supporting network automation, AI/ML, interoperability, network slicing, etc.



Key benefits

- Secure investment in high-capacity fiber access node
- Capable of massive non-blocking connectivity with 25G/50G/100G
- High revenue generating opportunities (IND4.0, 5G transport, wholesale etc)
- Operational efficiency through in-service operations, AI/ML, automation
- Agility to onboard new applications and support new business models

Key features

- Highest capacity platform in the industry
- 19 inch 15 RU shelf
- Highly modular software and hardware architecture for in-service operations
- Zero single point of failure to ensure reliability needed for mission critical broadband
- Quillion based hardware for high port density, power efficiency and low latency
- Fully programmable platform with open and standardized management & control interfaces

Technical specifications

Full service platform

- Multiservice access support
  - IPTV services
  - Multimedia service
  - High-speed Internet access
  - Business access
  - Mobile traffic transport
  - Wholesale
- LT support
  - 16-port cards supporting GPON, XGS-PON, 25GS-PON and 50G PON interfaces, with single PON, dual PON and triple PON modules
- Network Termination (NT) support:
  - Lightspan MF LBNT-A
    - 2 Tb/s switching matrix (bidirectional)
    - Active/Active redundancy
    - 200 Gb/s uplink capacity
  - Lightspan MF-14 LTIO-B
    - 4x 100GE uplink capacity
    - Quad Small Form Factor Pluggable (QSFP) cages

Management

- Fully managed by the Nokia Altiplano Access Controller

Eco-sustainability

- Product complies with the EU Directive 2011/65/EU as amended including by Directive 2015/863/EU concerning the Restriction on Hazardous Substances (RoHS) for lead, cadmium, mercury, hexavalent chromium, polybrominated biphenyl (PBB), polybrominated diphenyl ether (PBDE), Bis(2-Ethylhexyl) phthalate (DEHP), Benzyl butyl phthalate (BBP), Dibutyl phthalate (DBP), Diisobutyl phthalate (DIBP)
- Product collection and treatment under Nokia responsibility complies with the national laws on product treatment applied at the end of life for Wastes from Electrical and Electronic Equipment (WEEE) implementing the European Directive (2012/19/EU)
- 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
  - GR-63-CORE for Temperature and Humidity
  - TP76200MP
- Powering
  - ETS EN 300 132-2
- Protection
  - ITU-T K.20 enhanced and K.45 basic
  - GR-1089-CORE for Lightning and power fault.
- Safety
  - IEC 62 368-1 / EN 62 368-1
  - AS/NZS 62368-1
  - UL62368-1
  - CAN/CSA-C22.2 No. 62368-1-14
  - GR-63- CORE for Fire Spread and Surface Temperature
  - GR-1089-CORE for Electrical Safety, Bonding and Grounding
- EMC
  - ETS EN 300 386 for telecommunication network equipment
  - ETS ES 201 468
  - GR-1089-CORE – for Radiated Emission, Conducted Emission- FCC part 15 Class
  - ICES-003 issue 7 (2020)
  - CAN/CSA CISPR 22-10
  - ANSI C63.4 (2014)
  - VCCI-CISPR32: 2016
- Acoustic noise
  - ETS 300 753

Operating conditions

- Operating temperature range (at the air inlet of the shelf): -5°C to +55°C(23°F to +131°F)
- Relative humidity: 5% to 93% (non-condensing)
- Over-temperature sensors and over-temperature shutdown
- Replaceable low noise Fan Module & Filter

Power

- DC-powered:
  - 48/60 V DC nominal
  - Fully redundant power feeding (branch A and B)

Dimensions

- Height (w/o bottom dust filter assembly): 562.4 mm (22.1 in.)
- Width (mounting center distance): 465 mm (18.3 in.) - can be mounted in 19-inch racks
- Depth (overall): 287.7 mm (11.3 in.)

About Nokia

At Nokia, we create technology that helps the world act together.

As a B2B technology innovation leader, we are pioneering networks that sense, think and act by leveraging our work across mobile, fixed and cloud networks. In addition, we create value with intellectual property and long-term research, led by the award-winning Nokia Bell Labs.

Service providers, enterprises and partners worldwide trust Nokia to deliver secure, reliable and sustainable networks today – and work with us to create the digital services and applications of the future.

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