

Nimbra OT 100

100 GBPS networking

There is an increasing demand of ever higher transport capacity, both for service providers in general as well as for broadcasters and media service operators. This demand is driven by the need for higher bandwidth networking of media services, due to a higher degree of networked video content, new higher resolution formats and more remote production.

The Nimbra OT 100 Muxponder enables high capacity networking without a complex DWDM system.

With the Nimbra OT 100 there is no need for cumbersome forklift upgrades to achieve higher transport capacity. 100G is made available in existing networks through an easy migration.

Nimbra OT 100 is a dense 100G Multiprotocol Multirate Muxponder/Transponder for high capacity transport, both in the regional area and over long haul. It is based on ITU-T OIF standards for providing a unified optical transport layer supporting various client services including 40G/100G LAN, 10G LAN/WAN, STM64, OTU2/3/4 and 8G/10G FC over a single coherent and tunable 100G OTU4 wavelength.

The Nimbra OT 100 is designed to provide a 100G transport solution in a modular and cost-effective package, supporting multiple network topologies (p-t-p, ring, bus, mesh) and redundancy options. It uses pluggable optics and standard based protocols on both client and line side.

APPLICATIONS

- High bandwidth connectivity for media services such as HD/3G-SDI and 4K/8K video
- Cost effective live OTT content acquisition
- Aggregation and grooming of services such as 10/40 GbE or STM-64 / OC-192
- Fully integrated Nimbra MSR multi-service media networks with Nimbra Vision NMS for managing both services and infrastructure
- Long-haul spans, up to 1,500 km
- Easy-to use high capacity system without the need for the DWDM complexity



Nimbra OT 100 brings 100G networking capabilities to existing 10G solutions through seamless scaling of capacity.

The 100G transport solution is tailored for meeting the market demands for low power consumption, rack space savings and reduction of CAPEX and OPEX.

Since the Nimbra OT 100 supports client rates of 10/40/100 Gbps it allows migration from current to future service requirements seamlessly.

The Nimbra OT 100 integrates with other Nimbra products to deliver carrier-grade, high-end network solutions capable of serving multiple applications and protocols for Video/Audio/Data/Telco as well as other mission critical services.

KEY FEATURES

Highest 100G

Density feature set in the market. Compact 1RU platform with low power consumption, ideal for both event and metro applications as well as for long-haul applications (up to 1.500 km spans).

Various Muxponder configurations

For aggregation of services into a single Coherent OIF standard base 100G OTU4 Uplink:

- 10x 10G
- 1x 40G + 6x 10G
- 2x 40G + 2x 10G
- 1x 100G (transponder mode)

100G Coherent Uplink

OIF compliant, tunable single wavelength, long-reach for robust performance when using coherent CFP.

Supported clients

10G LAN/WAN, 8G/10G Fiber Channel, STM64/OC192, OTU2, OTU2e, 40GBase-SR4/LR4, OTU3, OTU3e, 100GBase-SR10, LR10, LR4, ER4.

Standard based

ITU-T G.709 100G Forward Error Correction (FEC) GFEC.

Supports Full C-Bank

Tunable DWDM Line sides.

Performance Monitoring

Comprehensive Line and Service.

Nimbra Vision

Integration for centralized monitoring.

EDFA

Integrated on long haul and medium haul product variants.

Remote management

In-band or Out-band Optical Supervisory Channel.

Dual AC and DC

Feeding and pluggable Fan Unit.

Supports standard MSA

Client pluggable SFP+ (8G/10G), QSFP+ (40G) and CFP (100G)

TECHNICAL SPECIFICATIONS

Dimensions: 45mm (1.77") x 440mm (17.32") x 230mm (9.05") (HxWxD) IEC 60297 (19"), ETSI EN 300 119 & 23" compatible

Weight: maximum 8kg (17.64 lb)

Product Configurations:

10x 10G Muxponder Up to 10x Multiservice & rate 10G clients mapped each to ODU2 and aggregated to OTU4 100G Uplink

1x 40G & 6x 10G Muxponder Up to 6x Multiservice & rate 10G clients mapped each to ODU2 and 40G LAN mapped to ODU3 and all aggregated to OTU4 100G Uplink

2x 40G & 2x 10G Muxponder Up to 2x Multiservice & rate 10G clients mapped each to ODU2 and 2x 40G LAN mapped to ODU3 and all aggregated to OTU4 100G Uplink

100G Amplifier 100GbE LAN to OTU4 100G Uplink (Transponder) EDFA module incl in NPQ0033-XW08 and -04

Mux/DeMux 4 ch mux/demux incl in NPQ0033-XW08 and -04

Uplink interface:

Bit Rate 127.157Gbps (OTU4 with 20% SD FEC)

Optical Interface CFP 4x28Gbps or CFP Coherent

Tuneability range ITU-T G.694.1 Channels 15-60, with 50GHz spacing

FEC Type Support Standard ITU-T G.709 GFEC or enhanced HG-FEC

OTN Overhead OTU4/ODU4 OH monitoring

Fiber type ITU-T G.652D/G.655/G.656

Client interface:

Service type 10GbE LAN/WAN, 40GbE LAN, 100GbE LAN, 8G/10G FC, STM-64/OC-192, OTU2, OTU2e, OTU2f

Optical interface SFP+ (10Gbps)
QSFP+ (40Gbps)
CXP (100Gbps)

Amplifier:

Applications: Booster (B), Pre-Amp (PA)

Output Power: B: +4dBm, +14dBm, PA: +5dBm

Input Power: B: 0dBm to +10dBm, PA: -25dBm to -9dBm

Gain: B: +10dB to +22dB, PA: +18dB

Operating modes AGC (Aut. Gain Contr.), APC (Aut. Power Contr.)

Eye Safety Automatic laser power reduction upon fiber cut or disconnection

Performance Management:

Bins: 15min/24h bins (when with Nimbra Vision)

Parameters: ES/SES/UAS/BBE/SS

Monitoring: Layer 1 PM for all services, OTN PM for Uplink, Optical Power Rx levels for all optical ports

SNMP: v1/v2c/v3

Element Manager: Web GUI

Management ports: 1xRJ45 LAN (10/100Mbase-T), 2x SFP MNG (100/1000Mbase-X), RS232 Serial port, DB9 External Alarm Port, OTN GCC Inband channel

Visual Indicators: LED status indicators

Software upgrades: Dual image - Traffic Hitless

Environmental conditions:

Operating temp: -5 to 40 °C (+23 to 104 °F)

Relative humid: 5% to 85% RH

Regulatory compliance:

Type CE, FCC, RoHS, REACH

Power:

Voltage: Dual feeding 2 x -48 VDC (-60 to -40 VDC) (115/230VAC with external converter)

Dissipation: <300W (max 6A) fully equipped

Cooling Unit: Hot Swappable Fan Unit

Ordering Information:

NPQ0033-XW08 Nimbra OT 100 long haul, Booster + Pre-amp

NPQ0033-XW04 Nimbra OT 100 medium haul, Booster

NPQ0033-XW01 Nimbra OT 100 standard

NPA0112-OT20 PSU 100-240VAC/200W

NPA0113-OT05 PCU 48VDC/5A

NPA0116-MRS1 SFP+ module DR STM64/OC192 DDM pair with NPA0038-SR11 for STM 64

NPA0121-T024 CFP module, 100GBASE, 25km, 4 fiber DWDM

NPA0115-LC04 Ribbon cable, MPO to 4xLC duplex, SMF, L=0.4m

NPA0118-LR04 CFP module, 100GBASE-LR4/OTU4, 10km, 1 fiber

NPA0118-ER01 CFP module, 100GBASE-ER4/OTU4, 40km, 1 fiber

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