



TYPE: Sepitam-OTN-1620

OTN-1620 20G Optical Transport Solution



Advanced multi-protocol multi-rate Muxponder with flexible uplink aggregation, capacity of up to 20G

Sub-10G Multi-protocol Multi-rate ADM/Muxponder

The Sepitam-OTN-1620 provides an efficient and flexible aggregation layer and cross-connect of multi-protocol multi-rate sub-10G services into dual 10G OTU2 uplink trunk, reducing the number of wavelengths needed for a sub-10G solution by a factor of 8 on average. The Sepitam-OTN-1620 increases the spectral efficiency of WDM networks.

Main Benefits

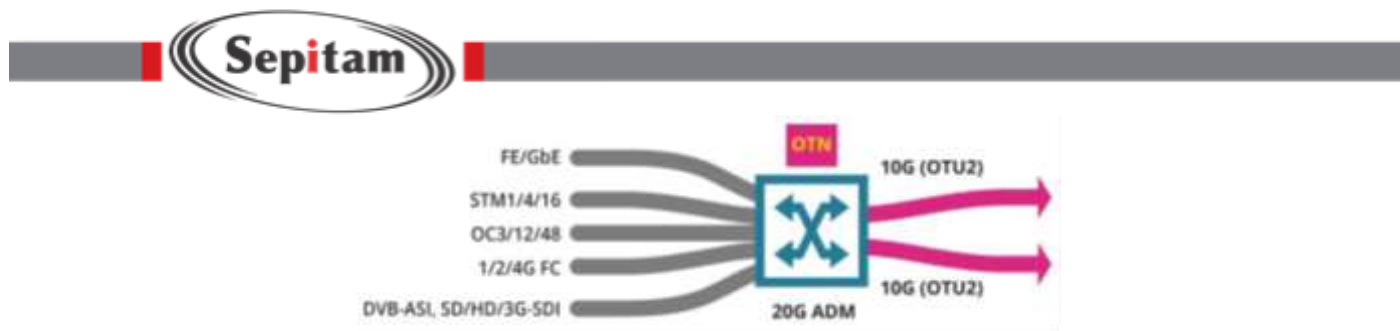
- **Provides a sub-10G gateway for 10/100G OTN networks supporting LR and tunable DWDM uplink modules**
- **Transparently multiplexes up to 16 client services into single or dual independent 10G OTU2 wavelengths**
- **Simultaneously aggregates SDH/SONET, Ethernet, Fiber Channel and video services**
- **Forward Error Correction suitable for long distance amplified DWDM network.**
- **Reduces the solution cost and operation complexity by increasing fiber utilization and spectral efficiency.**
- **provides A-to-Z provisioning by NMS.**
- **Powerful Feature Set**

In a point-to-point network, the Sepitam-OTN-1620 can aggregate up to 16 multi-rate/multi-protocol services into a single 10G OTU2 uplink pipe with a second 10G OTU2 uplink pipe providing full uplink and fiber protection.

In a ring application, the device can aggregate up to 16 multi-rate/multi-protocol services into two dual 10G OTU2 while bypassing the pass-through services between the two uplink pipes.

The Sepitam-OTN-1620 supports several FEC codes suitable for extremely long haul amplified DWDM networks, eliminating the need for costly regenerator sites for Sub-10G clients.

The solution forms a common transport layer for all sub-10G client protocols regardless of the service type with high spectral efficiency.



Features:

- Single or dual configurable 10G muxponders
- Up to 16 multi-protocol and multi-rate services aggregation over single or dual OTU2 uplinks
- Service types supported: Fast Ethernet, GbE, 1/2/4G FC/FICON, STM-1/OC-3, STM-4/OC-12, STM-16/OC-48, and video protocols such as DVB-ASI, SD-SDI, HD-SDI, 3G-SDI
- Dual standard-based optical transport network (OTN) OTU2 uplinks supporting multiple forward error correction (GFEC/L.4/L.7) types
- 1+1 facility protection
- ODU1 OTN cross-connect and can be used in ring and point-to-point applications. It also supports facility protection per each service.
- Low latency
- standard MSA SFP (client), SFP+ (uplink), and C-band tunable SFP+
- line and service performance monitoring
- Remote management in band (GCCs)
- Optional integrated EDFA, mux/demux, DCM and optical switch
- Dual AC or DC pluggable power supply and pluggable fan unit
- Web-based GUI and SNMP EMS management
- 1U footprint with low power consumption

Applications

- Service providers multi-service access platform
- Transporting multi sub-10G services over long distance optical network
- Efficient aggregation of multiple native video streams over DWDM and OTN infrastructure
- Upgrading legacy infrastructure with new services
- Building efficient sub-10G service gateway for 10/100G OTN networks

**Recommended for the following applications:**

10G ring applications

Sub-10G gateway for 10G/100G OTN networks

Multi-service access platform for service providers

Transporting multi-services over long distance optical network

Upgrading legacy infrastructure with new services

Efficient aggregation of multiple native video streams over DWDM and OTN infrastructure

Benefits

- 16:1 muxponder of multi-rate clients over protected 10G OTU2 uplink
- Dual muxponders of multi-rate clients over 10G OTU2 uplink, with total aggregation of 20G
- Full transparency of multiple transport protocols
- Embedded ODU1 cross-connect for ADM applications
- Facility protection with less than 50ms switching time
- Performance monitoring on uplink and service ports
- Remote management and monitoring



Technical Specifications:

System

Topology: Point-to-point, ring or linear add/drop

Transport Network Medium: Access/ metro CWDM/DWDM or dark fiber

Protection: 1+1 facility per service

Network Management

Management Ports:

nn RJ-45 LAN port 10/100MBase-T

nn 2xSFP MNG ports 100/1000MBase-X

nn RS-232 serial port

nn DB9 external alarm port

Product Configurations

Dual 10G OTU2 Muxponder: Up to 16 multi-service & rate clients mapped over two independent OTU2 uplinks

Single protected 10G OTU2 uplink: Up to 16 multi-service & rate clients mapped over protected OTU2 uplink

EDFA: Optional EDFA module

Mux/Demux: Optional mux/demux module

Protocols: SNMP, HTTP, HTTPS, Telnet, SSH, Syslog, RADIUS, SNTP, RSTP, TFTP and FTP

Management: Web browser over HTTP/ HTTPS, PacketLight LightWatch™ NMS/ EMS, or 3rd party NMS/EMS over SNMP, CLI

Amplifier

Output Power: 14, 17, 20 or 23dBm

Input Power: -36dBm up to 16dBm

Gain: 8dB to 22dB

Operating Modes:

nn Automatic gain control (AGC)

nn Automatic power control (APC)

Eye Safety: Automatic laser power reduction upon fiber cut or disconnection

OAM: Facility loopback (client & line interfaces), PRBS, event logger, alarms, ALS

Performance Monitoring: Layer-1 PM for all services, optical power Tx, Rx levels for all optical ports, Layer-2 PM for the data services 1G & 10G LAN

Visual Indicators: LED: client and line ports, Management and LAN ports, amplifier/s, system Critical/Major/Minor and Power Supply

Mux/Demux

Channels: 2/4/8 CWDM or DWDM

Spacing: 50/100GHz (for DWDM)

Approvals & Standards

nn CE, FCC, RoHS, REACH

Muxponder Uplink

Bit Rate: 10.7092G (OTU2)

Optical Interface: Pluggable SFP+ transceiver

OTN support:

nn ODU1 VCAT mapping to OTU2

nn Supported FEC types:

nn G.709 GFEC (RS)

nn G.975.1 I.4

nn G.975.1 I.7

Power Supply

AC/DC: 100 to 240 VAC, 50/60 Hz, -36 to -60 VDC, 68W max

PSU Redundancy: Single/dual feeding, hot swappable

Cooling Unit: Hot swappable fan unit

Muxponder Service

Service Type:

nn Optical or copper GbE

nn FC/FICON 1G, 2G or 4G

nn Optical or copper Fast Ethernet

nn STM-1, STM-4, STM-16

nn OC-3, OC-12, OC-48

Environmental

Operating Temperature: -5°C to 50°C (+23°F to +122°F) operational

Humidity: 5% to 85% RH

Bit Rate: 100Mbps to 4.25Gbps

Optical/copper Interface: Pluggable SFP transceiver

Physical Dimensions

1U:

nn 1.77" (H) x 17.32" (W) x 9.05" (D)

nn 45mm (H) x 440mm (W) x 230mm (D)

Weight: 5.5kg / 12.1lb (max)

Mounting: 19", ETSI and 23"



Technical Specification of

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www.Sepitam.com