Optelian

Transponders and Regenerators
Multi-protocol packet optical services transport cards

Optelian's suite of transponder/regenerator cards provides service demarcation, wavelength translation and signal regeneration for reach extension of client services over dedicated fiber, CWDM or DWDM facilities. Standard SFP, SFP+ and XFP tunable client optics are supported at data rates ranging from 100 Mb/s to 11.3 Gb/s.

The cards are NEBS qualified and support extended temperature range operations. With low power consumption, and industry-leading port density and footprint, they are ideal for multiple market applications in any environment.

Comprehensive applications

- Data center/storage, TDM, video, mobile backhaul, wholesale and business services
- Service termination or transparent any-rate private line
- Inter- and intra-operator handoff

Deployment flexibility

- Up to 4 independent transponders or 8 regenerators per single-width card
- SFP, SFP+, XFP and integrated tunable optics
- Software configurable multi-protocol independent client services

High performance services

- Low-latency connectivity for financial trading or CPRI mobile fronthaul

Regeneration

- 2R and 3R options

The portfolio supports a comprehensive range of networking protocols including SONET/SDH, OTN, Ethernet, Fibre Channel, FICON, ESCON, SDI, CPRI and OBSAI. All services are supported over CWDM and DWDM 2.5G and 10G wavelength plans.

In regenerator mode, transponders can perform regeneration with 2R (reshaping to improve signal noise) and 3R (retiming to correct jitter) options.

RGN-8040 supports four 8G/10G client services with OTN (OTU2/OTU2e) line encapsulation and Forward Error Correction (GFEC, UFEC or No FEC). Client signal overhead termination with performance monitoring parameters, including statistics generation and user-defined TCAs, provides full service awareness.

RGN-8010 provides an ideal platform for true private line service with support for fully transparent transport of client signals with ultra-low latency.

Transponders and Regenerators

Specifications

Parameter	RGN-8040	RGN-8010	RGN-10GXF	RGN-3GSF
Transponder characteristics				
Client overhead monitoring	Yes	No	No	No
OTU2 line encapsulation	Yes	No	No	No
Interfaces (client)	4 SFP+	4 SFP/SFP+	1 XFP	2 SFP
Interfaces (line)	4 SFP+	4 SFP/SFP+	1 XFP	2 SFP
Data rate	8.5 to 11.3 Gb/s	100 Mb/s to 11.3 Gb/s	9.95 to 11.3 Gb/s	100 Mb/s to 2.70 Gb/s
Regeneration modes	3R	2R / 3R	3R	2R / 3R
Protocols				
OC-3/12/48 (STM-1/4/16)		✓		✓
OC-192 (STM-64)	✓	✓	✓	
OTN (OTU1)		✓		✓
OTN (OTU2 with FEC options)	✓	✓	✓	
OTN (OTU2e with FEC options)	✓	✓		
Fast Ethernet / Gigabit Ethernet		✓		✓
10G Ethernet	✓	✓	✓	
1G/2G Fibre channel		✓		✓
4G Fibre channel		✓		
8G Fibre channel	✓	✓	✓	
10G Fibre channel	✓	✓	✓	
1G/2G/4G FICON		✓		✓
ESCON		✓		✓
SDI (SD, HD, 3G)		✓		
CPRI, OBSAI		✓		
Common parameters				
Operating temperature	-5°C to 55°C (23°F to 131°F)			
Extended operating temperature	-40°C to 65°C (-40°F to 149°F)			
Operating humidity	5% to 85% (relative, non-condensing)			

Ordering Information

Model number	Part number	Description
RGN-8040	1024-1200	8-port SFP+ 10 Gb/s multi-service OTN transponder
RGN-8010	1015-4900	High density 8 port multi-protocol multi-rate SFP/SFP+ transponder
RGN-3GSF	1004-2100	2.7 Gb/s multi-protocol dual transponder, 2 SFP client, 2 SFP line
RGN-10GXF	1002-6200	10 Gb/s multi-protocol dual transponder, 1 XFP client, 1 XFP line

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