

OPCOM600 18-Channel CWDM System

OPCOM600 product family is a cost-efficient and exceptionally flexibly solution for optimizing the utilization of existing fiber optics. This family is capable of operating on both dual-strand fiber and single-strand fiber to organize point-to-point, hub-and-spoke and ring topologies for various applications. OPCOM600 also can be equipped with channel or path/line protection, allowing the automatic switching of the operations to secondary line in case the primary line is interrupted. This enables the most uptime for critical data transmission. Other enhanced features include 3R function, remote

management, fault propagation, line-in/line-out loop back, fault pass through, rate-limiting and etc. on the CWDM wavelength cards.

OPCOM600 family basically consists of three parts: CWDM wavelength converter for the media conversion of normally used optical/ electrical signal to CWDM colored wavelength, MUX/DEMUX for the multiplexing/de-multiplexing of CWDM specific wavelengths and protection modules for channel, path/line protection.



OPCOM600 series
18-Channel CWDM System

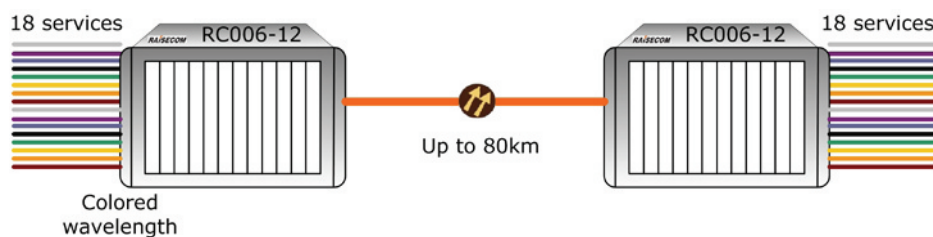
Feature

Construction	RC006-12 chassis; 6U-high 19"-inch enclosure
Service channel	Transport 2, 3, 4, 7, 8, 9, to 18 channels on dual-strand fiber; or 2, 3, 4, 5 channels on single strand fiber
Data Rate	0-2.5Gbps per channel on wavelength converting cards; 0-10Gbps per channel on wavelength MUX/DEMUX cards
Working wavelength	1271~1611nm with a spacing of 20nm between each
High density	Mux and DeMux up to 18 service channels over one fiber pair
Standard	ITU-T G.694.2 CWDM wavelength grid
Flexibility	By applying different combinations of wavelength converter cards and MUX/DEMUX cards, OPCOM600 system is able to provide from 2 to 18 channels transparent transportation on a pair of normal fiber optic, or up to 9 channels on a single-strand fiber according to customers' requirement
Transmission mode	Service/protocol transparent transmission
Network management	Manageable when installed in Raisecom RC006-12 or RC006-1M chassis network management agent through Raisecom NView NMS
Topology	Point-to-point, hub-and-spoke, and ring topology

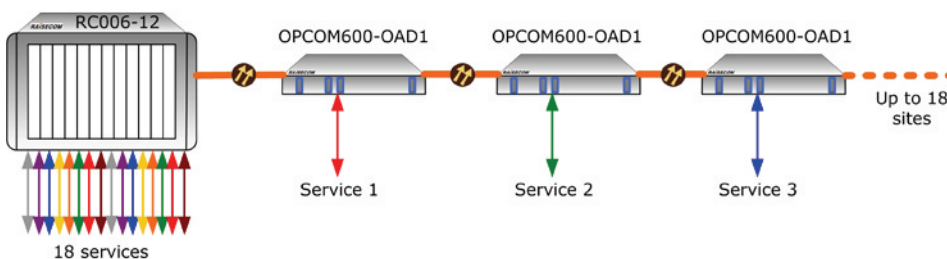
Specification

Number of slots	15 in total 12 for service cards 1 (Slot 0) for NMS agent card 2 for power supply modules
Power supply	Hot-swappable redundant AC or DC power
Input voltage	AC: 85~265V, 50/60Hz DC: -36~-72V
Dimensions	442(W)*248*(H)*267(D)mm
Net weight	4.6kg (include power supply)
Power consumption	< 300 W (at max load)
Working ambience	Temp: -5~50 centigrade RH: 5~95% non-condensing
Storage ambience	Temp: -10~70 centigrade RH: 5~95% non-condensing
Safety	CE, UL
Compliance	

Typical Application



Point-to-point transmit 18 independent services over a dual-strand fiber



Transmit and drop service at any location along the LINE fiber



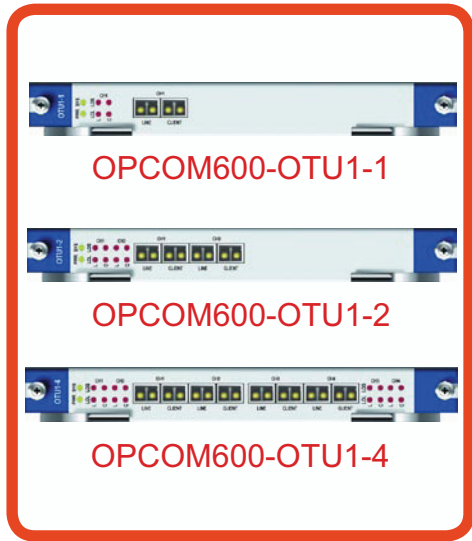
Wavelength converting cards

OPCOM600-OTU1 series cards provide 1/2/4 channels of wavelength conversion from client wavelengths such as 850, 1310 and 1550nm to CWDM color wavelengths from 1271 to 1611nm. They provide reshaping and reamplification for all speed services from 4M to 2.5Gbps and 3R (reshaping, reamplification

and retiming) for standard speed services such as STM-16, GE, STM-4 and STM-1 and so on.

OPCOM600-OTU1 cards are also capable of converting between different wavelengths, from single strand to dual-strand fiber, and from multimode to single mode.

Features	All speed services from 4Mbps - 2.5Gbp Support 3R reshaping, retiming, and reamplification Support fault pass through function Support SFP with Digital Diagnostic Function Support ALS (Auto Laser Shutdown)
Dimensions	240(H)*24.9(W)*225(D) mm
Optical connector	SFP LC
Transmission media	Single mode or multimode fiber
Working temperature	0 ~ 45 Celsius
Storage temperature	-40 ~ 80 Celsius
Power consumption	< 10W
Relative humidity	5 ~ 90% noncondensing



2GE sub-rate multiplexing card

OPCOM600-2GEMP card assemblies 2 wire-speed GE services into a single 2.5Gbps color wavelength with 1+1 protection on fiber line. It helps the customer to make full use of his fiber resources and expand capacity at the maximum. Besides, 2GEMP card provides 2

auxilliary data channels sharing 10M throughput on the same transmission line. The AUX data channels can be used to transmit low-speed control signals or NMS information.

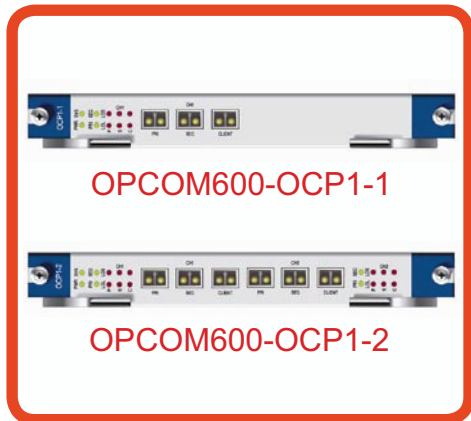
Features	2 GE wire-speed multiplexing Support Jumbo Frame to 9600 Bytes, AUX port to 1536 Bytes GE interfaces support fiber or copper SFP LINE interfaces support normal or color SFP 2 AUX channel for low speed services or remote NMS information Support remote in-band management Support fault pass through function Support SFP with Digital Diagnostic Function Support ALS (Auto Laser Shutdown) 1+1 protection with 0-255s configuration switchover time Configurable auto/manual/non restore mode
Dimensions	240(H)*24.9(W)*225(D) mm
Optical connector	SFP LC
Transmission media	LINE interface: single mode or multimode fiber GE interface: single mode or multimode fiber or copper
Working temperature	0 ~ 45 Celsius
Storage temperature	-40 ~ 80 Celsius
Power consumption	< 10W
Relative humidity	5 ~ 90% noncondensing



Optical channel protection card

OPCOM600-OCP1 provides the protection of a specific service channel. It has two protection modes: converts the normal wavelength service into two same color wavelength and feed into two MUX/DEMUX; or into two different color wavelengths and one MUX/DEMUX. In automatic switchover mode, it immediately switchover to secondary fiber if failure is detected in primary fiber in less than 30ms.

Features	Transparent to services, working at any signal speed ADM works without power supply Monitor and manage through NView
Operating wavelength	(1271 and 1291), (1311 and 1331), (1351 and 1371), (1391 and 1411), (1431 and 1451), (1471 and 1491), (1511 and 1531), (1551 and 1571), (1591 and 1611)nm
Dimensions	240(H)*24.9(W)*225(D) mm
Optical connector	SFP, LC
Transmission media	9/125um single mode fiber
Working temperature	0 ~ 45 Celsius
Storage temperature	-40 ~ 80 Celsius
Power consumption	< 10 W
Relative humidity	5 ~ 90% noncondensing



Optical line protection card

The transmit end of OPCOM100-OLP-A splits the signal into two identical copies with 50% optical power of each, and the data will be transmitted in two paths. The receiving end of OPCOM100-OLP-A will compare the two receiving signals and select the better one according to their quality. In this case, if failure is detected in primary line, OPCOM100-OLP-A will immediately switchover to secondary line within 50ms.

OPCOM600-OLP-B provides 1:1 optical line protection for the transmission line. At the transmit end, OPCOM600-OLP-B transmits the optical signal on primary line at 100% optical power and the other OPCOM600-OLP-B also receives the signal on primary line at the receiving end. In case of primary line problem, both the transmit and receiving ends will switchover the transmission signal on to secondary line with in 50ms with 100% optical power.

Features	Transparent to services, working at any signal speed ADM works without power supply Monitor and manage through NView
Operating wavelength	1270 ~ 1620 nm
Dimensions	240(H)*24.9(W)*225(D) mm
Optical connector	SC/PC
Insertion loss	RX end < 2.5 dB; TX end < 4 dB
Transmission media	9/125um single mode fiber
Working temperature	0 ~ 45 Celsius
Storage temperature	-40 ~ 80 Celsius
Power consumption	< 10 W
Relative humidity	5 ~ 90% noncondensing

