

## *Reverse Path CWDM – Transport Platform*

# *RP CWDM - TP*



### *Product Information*

## *Reverse Path CWDM – Transport Platform*

### *Features*

- *Compact Design 5U Rack Mount*
- *Integrated Fan Tray*
- *Up to 8 RP Optical transceivers (opt.OT)*
- *Up to 8 RP Optical receivers (opt.OR)*

### *General Specifications*

Supply voltage	230 VAC
Power consumption with fan tray	57 W
Ambient temperature range	0 ÷ +50°C
Dimensions (W x H x D)	430 x 220 x 230 mm
Weight	8.5 kg
Rack Units	5U

### *Reverse Path CWDM – Transport Platform consists of the following modules:*

- RP CWDM Chassis
- RP CWDM Transceiver Modules
- RP Receiver Modules
- Power Supply Module

## RP CWDM Transceiver Module:



### Description:

Integrated wide-band reverse path receiver with extended AGC range  $-12\text{dBm}$  to  $+3\text{dBm}$  provides optical power independence for easy adjustment procedure.

Additional CWDM transmitter section allowing changing the wavelength and regenerating the reverse path stream.

## Technical Specification:

### Receiver Section

Wavelength	1290 ÷ 1600 nm
Fiber	single mode 9/125 $\mu\text{m}$
Optical return loss	> 40 dB
Optical connector	SC/APC or E2000 (opt. E2)
Frequency range	5 ÷ 70 MHz (opt. 18 ÷ 70 MHz)
Optical input level	$-15$ to $+3$ dBm
Optic AGC lock-range	$-12$ to $+3$ dBm
Equivalent noise @ input	$\leq 8$ pA / $\sqrt{\text{Hz}}$
Amplitude response (flatness)	$\pm 0.5\text{dB}$
Optical Power Monitor & LED Alarms:	
➤ Analog optic power test	100 mV/dBm
➤ LED indicator	
○ > +3dBm	too high      Red
○ +3 to $-12$ dBm @ AGC Locked	normal        Green
○ $-12$ to $-15$ dBm	low            Green & Red
○ < $-15$ dBm	too low        Red

### CWDM Transmitter Section

Laser Type	un-cooled isolated CWDM DFB Laser
Wavelength	47ch, 49ch, 51ch up to 61ch, with 20nm step
Optical output power	4.0 dBm ( 2.5mW )
Frequency range	5 ÷ 70 MHz (opt. 18 ÷ 65MHz)
Monitoring & LED alarms:	
➤ Laser Bias Current	
○ +20% change	high            Red
○ Nominal	nominal        Green
○ $-20\%$ change	low             Red
➤ OMI Adjust RF test port:	
○ RF Test Out (note 1)	$-20$ dB $\pm$ 0.5dB

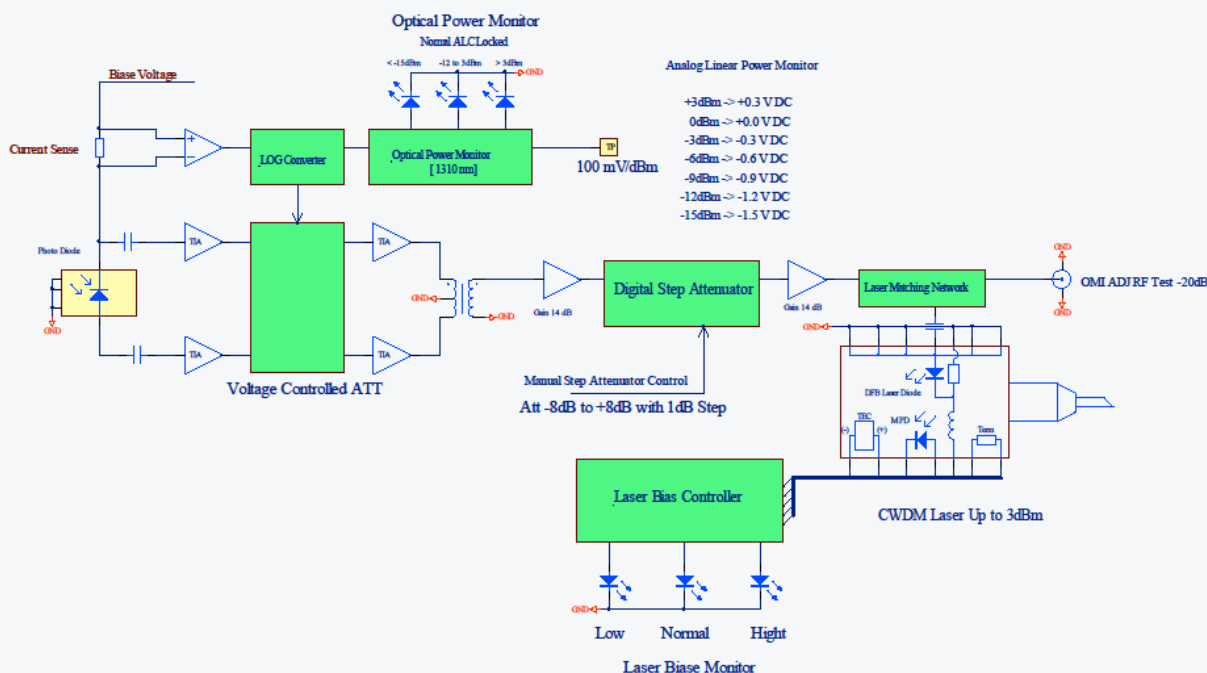
Note1: Level of 76,5dBuV measured on test port correspond at OMI 10%

**General Specifications (Both sections)**

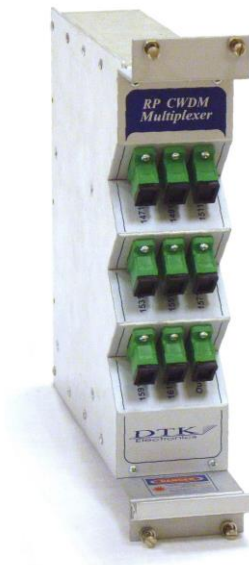
Input Optical Power	+3 to -12dBm @ OMI 10%
Output Optical Power	4.0 dBm @ OMI 10%
Optical connectors	SC/APC or E2000 (opt. E2)
Supply voltage	35 ÷ 70 VAC
Power consumption	7.25 W
Ambient temperature range	0 ÷ +50°C
Dimensions (W x H x D)	40 x 220 x 230 mm
Weight	0.85 kg
Rack Units	5U

**Block diagram:** [RP CWDM Block Diagrames.pdf](#)

RP CWDM Transceiver Modul - Block Diagram



## *RP CWDM Mux / Demux Module:*



### Description:

Eight-channel passive optical device for combining or separating eight different wavelengths at a single fiber.

### Technical Specification:

#### Multiplexer / Demultiplexer:

Optical connector	SC/APC or E2000 (opt. E2)
Fiber	single mode 9/125 $\mu\text{m}$
Insertion loss	$\leq 3.5\text{dB}$
Central wavelength	1470 $\div$ 1610 nm
Channel space	20 nm
Channel bandwidth	$\lambda_c \pm 6.5\text{ nm}$
Channel Flatness	$\leq 0,4\text{ dB}$
Isolation:	
- Demux adjacent channel	$\geq 30\text{ dB}$
- Demux non-adjacent channel	$\geq 40\text{ dB}$
- Mux channel	$\geq 15\text{ dB}$
Directivity	$\geq 55\text{ dB}$
Optical return loss	$\geq 50\text{ dB}$
Wavelength thermal stability	$\leq 0.003\text{ nm}/^\circ\text{C}$
Ambient temperature range	0 $\div$ +50 $^\circ\text{C}$
Dimensions (W x H x D)	50 x 220 x 230 mm
Weight	0.85 kg
Rack Units	5U

## ***RP CWDM PSU Module:***



### **Description:**

75 watts hybrid power supply module.

Two available versions:

- AC version (opt. AC)
- DC version (opt. DC) designed to allow a fully redundant system with 48 V DC battery pack

## **Technical Specification:**

### **RP CWDM PSU AC- Module:**

Mains Supply	230 AC +5% / -10% /50Hz
Output Voltage	60 AC /50Hz
Output Fan Tray Voltage	12 DC / 500mA

### **RP CWDM PSU DC- Module:**

Mains Supply	230 AC +5% / -10% /50Hz
Output Voltage	48 DC
Output Fan Tray Voltage	12 DC / 500mA
Battery Pack Voltage	48 DC
Redundancy switching time	1.5 ms

### **General Specifications:**

Ambient temperature range	0 ÷ +50°C
Dimensions (W x H x D)	50 x 220 x 230 mm
Weight	2.85 kg
Rack Units	5U