

MO1202RPD 1x2 SEGMENTABLE MODULAR R-PHY OPTICAL NODE



- Node for Distributed Access Architecture networks
- Downstream frequency range up to 1218 MHz
- Upstream frequency range up to 204 MHz
- Optional connection to Monitoring System
- GaN output stage
- Ingress management by the RSW module

GENERAL DESCRIPTION

The MO1202RPD optical node involves the DAA technology while keeping the compatibility with the COMTECH shell system. Based on the type of the chosen RPD the device is able to handle one forward path and one or two reverse path segments. The fully electronic alignment in both signal directions ensures an easy installation and provides the possibility of remote controlling via the CCAP core or via a monitoring transponder. Thanks to the independently configurable currents of each output stage, the power consumption can be optimized for the environment and application. This node type can be ordered with wide range of options - such as uninterruptible power supply, HMS management, ingress control switch or OptiTap optical cable entry

TECHNICAL SPECIFICATIONS

R-PHY parameters ⁽¹⁾	MO1202RPD-xxx-S	MO1202RPD-xxx-D
DS DOCSIS 3.0 (SC-QAM) channel number		158
DS DOCSIS 3.1 (192 MHz OFDM) channel number		6
US DOCSIS 3.0 (SC-QAM) channel number	1 x 12	2 x 12
US DOCSIS 3.0 (96 MHz OFDM) channel number	1 x 2	2 x 2
OOB		SCTE 55-1, SCTE 55-2
CCAP port		10 GbE SFP transceiver
Forward path RF parameters		
Frequency range [MHz]		85...1218
Equalizer breakpoint frequency [MHz]		1218
RF attenuator range [dB]		0...20 ⁽²⁾
RF equaliser range [dB]		6...22 ⁽²⁾
Flatness [dB]		±0.75
Output return loss (40MHz -1.5dB/octave) [dB]		>18
Total composite power (full current / decreased current) [dBmV]		73 / 70 ⁽³⁾
Output RF testpoint attenuation [dB]		20±1
Output splitter, directional coupler [dB]		Plug-in 0, 4, 8, 12, 16, 20

Specifications are subject to change without notice!

Reverse path RF parameters

Frequency range [MHz]	5...204
Diplex filter [MHz]	65/85, 85/105, 204/258
RF input level [dB μ V]	60...80 ⁽⁴⁾
RF attenuator range [dB]	0...20 ⁽²⁾
Flatness [dB]	± 0.5
Input return loss (40MHz -1.5dB/octave) [dB]	>18
Reverse path RF testpoint attenuation referred to the RPD input [dB]	0
Ingress control switch (RSW) states	0dB / -6dB / -50dB / HPF 20 MHz

General parameters

MO1202RPD-xxx-S MO1202RPD-xxx-D

RF connector	5/8"
Testpoint connector	G-type
Power supply voltage [VAC]	\sim 30...65; \square 35...90
Maximum power consumption [W]	60 ⁽⁵⁾ 62.5 ⁽⁵⁾
Resilience to AC power interruption (full function / only RPD) [s]	5 / 15 ⁽⁶⁾
Maximum current feed-through [A]	10
Hum modulation [dB]	70
Screening factor [dB]	80
Degree of protection	IP68
Temperature range [°C]	-20...+60
Dimensions [mm]	275x194x172
Weight [kg]	6.8

(1) For more details check the Harmonic CableOS Pebble-1 datasheet

(2) Adjustable in 0.5 dB steps

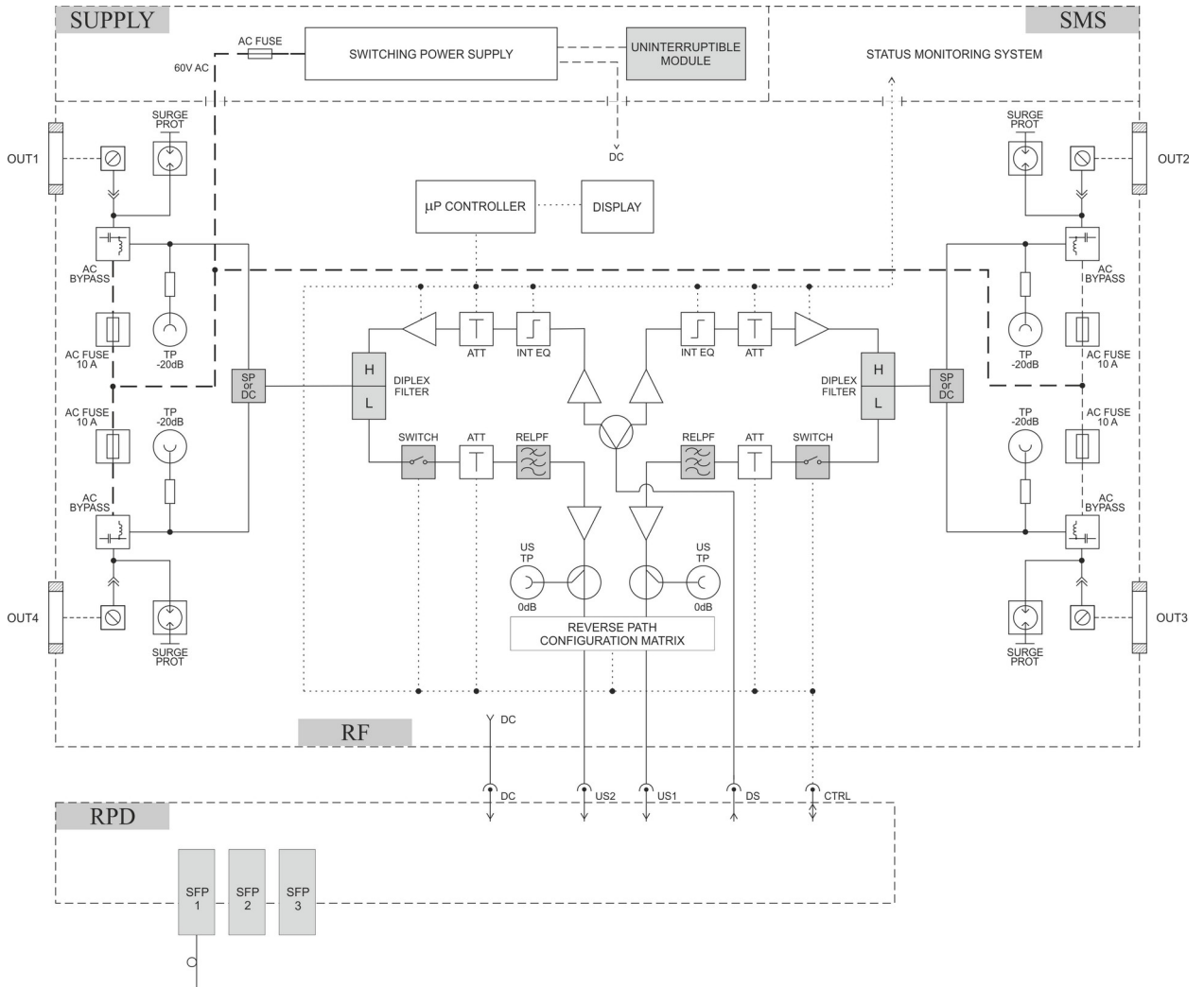
(3) Which value corresponds to a level of 52 / 49 dBmV with a flat spectrum between 258 MHz and 1218 MHz at a PreBER of $<10^{-9}$

(4) The level of a single SC-QAM channel

(5) If both output stages are set to full current. The values don't contain the power consumption of the SFP modules.

(6) In case of mounted MO-UIPS module for uninterruptible powering

BLOCK DIAGRAM



ORDERING INFORMATION

M O 1 2 0 2 R P D - X X X - X - X X

Type of the diplex filter	
65	Pluggable 65/85MHz diplex filter
85	Pluggable 85/105MHz diplex filter
204	Pluggable 204/258MHz diplex filter

Type of the optical cable entry	
blank	Simple stuffing box
OT	OptiTap optical interface

Upstream configuration of the RPD	
S	Single (1 US segment)
D	Dual (2 US segments)

Specifications are subject to change without notice!

Option	Required modules	Ordering codes
Monitoring option	1pc NMT-FE, 2pcs RSW3	NMT-FE, RSW3
Uninterruptible powering	1pc MO-UIPS	MO-UIPS
230 V powering kit	1pc MO-L2R	MO-L2R
Wall mount kit	1pc WMK-1 (double)	WMK-1
ONU manhole assembly	1pc ONU-M	ONU-M

Specifications are subject to change without notice!