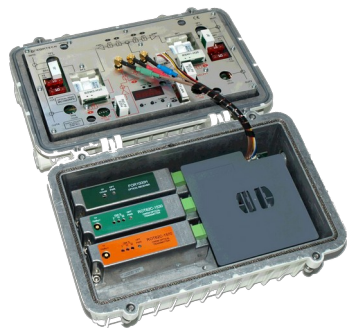


MO-E 1x2 SEGMENTABLE R-PHY READY OPTICAL NODE



- Downstream frequency range up to 1218 MHz
- Upstream frequency range up to 204 MHz
- Fully electronic alignment
- Optional connection to Monitoring System
- GaN output stage
- Optional CWDM return path
- Automatic optical gain control
- Ingress management by the RSW module
- Remote PHY ready construction

GENERAL DESCRIPTION

The MO-E is a 1.2 GHz optical node built-up using the Comtech shell system. The device provides 2 splittable high-level outputs as well as the possibility for using 2 upstream transmitters. Thanks to the fully electronic alignment based on the display and keyboard integrated in each node, installation is very quick and easy. The reverse path RF signal ways are selected automatically depending on whether 1 or 2 transmitter modules are installed. Cost efficiency and flexibility were important aspects of the design, so the options are implemented as independent modules, accordingly the ingress control switches don't require the presence of a monitoring transponder. Futureproofness is guaranteed by the design: by changing the shell cover containing the analog optics to a cover containing an RPD, the device is upgraded to Remote-PHY with moderate expenses.

TECHNICAL SPECIFICATIONS

Forward path parameters

Wavelength [nm]	1100...1650
Input optical power [dBm]	-7...+2
Equivalent input noise current [pA/√Hz]	4.5
Frequency range [MHz]	47...1218
Equalizer breakpoint frequency [MHz]	1218
Gain limited output RF level at 4% OMI/channel [dBμV]	113±1 @ 47 MHz 119±1 @ 1218 MHz
Nominal slope [dB]	6
Flatness [dB]	±0.75
Output return loss (40MHz -1.5dB/octave) [dB]	>18
Input RF testpoint level at 4% OMI/channel [dBμV]	86±1
Output RF testpoint attenuation [dB]	20±1
CTB [dB]	-70 ⁽¹⁾
CSO [dB]	-68 ⁽¹⁾
Noise-to-power ratio (NPR) maximum / Dynamic range of NPR > 42 [dB]	>46 / 36 ^{(2) (3)}

Specifications are subject to change without notice!

Reverse path parameters

Output optical power [mW]	2, 4 (3, 6 dBm) ⁽⁴⁾
Wavelength [nm]	1310 DFB, 1270...1610 CWDM
Frequency range [MHz]	5...204
Diplex filter [MHz]	65/85, 85/105, 204/258
RF input level (10% OMI/channel) [dBμV]	75±1
Flatness [dB]	±0.5
Input return loss (40MHz -1.5dB/octave) [dB]	>18
Reverse path RF testpoint level [dBμV]	75+1/-2 ⁽⁵⁾
Ingress control switch (RSW) states	0dB/-6dB/-50dB/HPF20
Noise-to-power ratio (NPR) maximum / Dynamic range of NPR > 36 [dB]	45 / 9 ⁽⁶⁾
Isolation between segments [dB]	>65

General parameters

RF connector	5/8"
Optical connector	SC/APC, EURO2000
Power supply voltage [VAC]	~ 30...65; □ 35...90
Maximum power consumption [W]	44 ⁽⁷⁾
Maximum current feed-through [A]	10
Hum modulation [dB]	70
Screening factor [dB]	80
Degree of protection	IP65
Temperature range [°C]	-20...+50
Dimensions [mm]	275x200x175
Weight [kg]	5.2

(1) 60 dBmV at 1218 MHz, 22 dB extrapolated tilt, 79 analog + 111 digital channels (-6 dB offset)

(2) Measured with flat full spectrum load between 85 and 1218 MHz, 1.8% OMI/ch, received power -2 dBm

(3) NPR_{max} at output level of 40 dBmV/ch

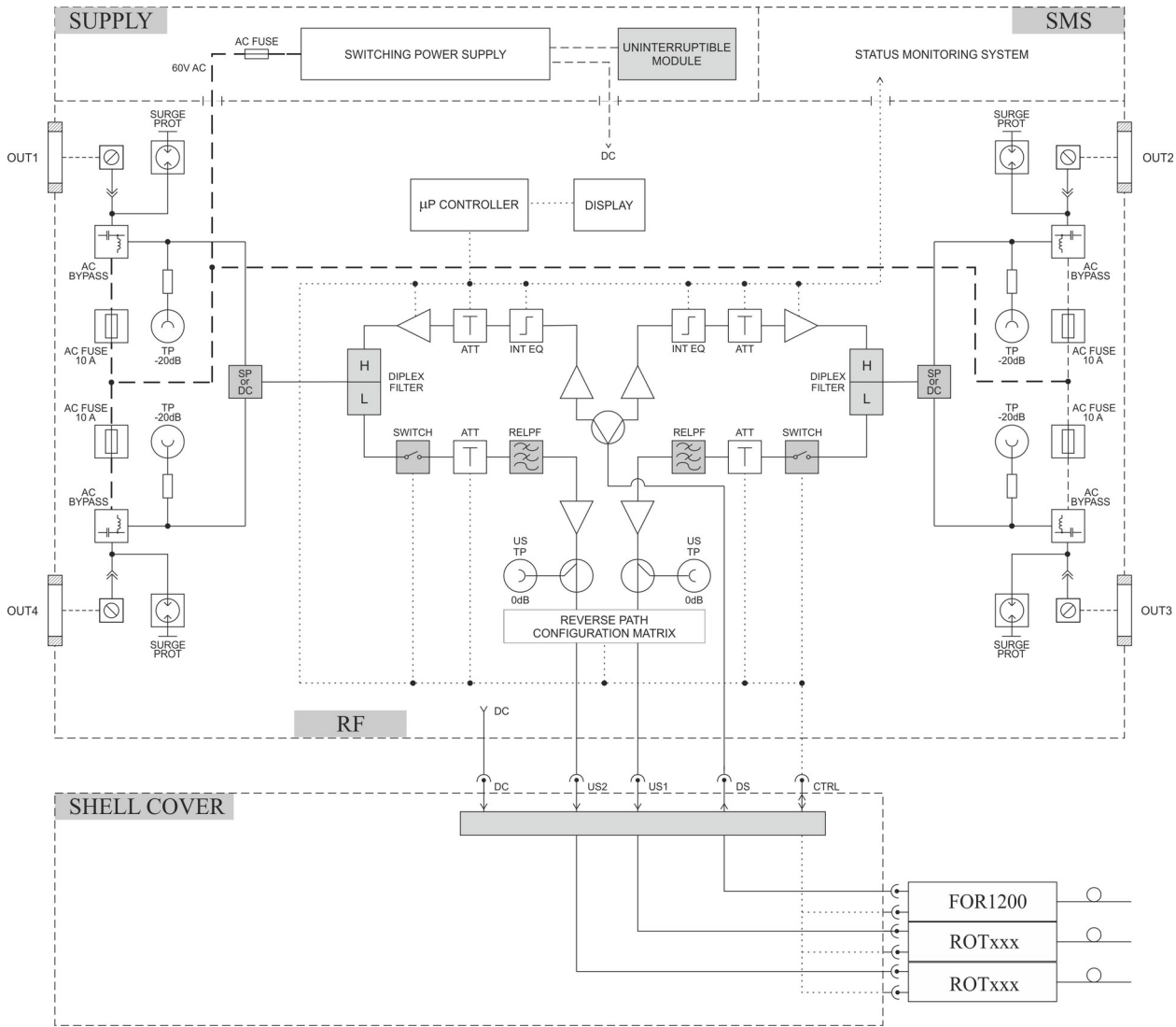
(4) 4 mW (6 dBm) output optical power is available only in case of CWDM reverse path lasers

(5) Value measured at 10% OMI/ch

(6) Measured with flat full spectrum load between 5 and 204 MHz, received power -6 dBm

(7) In case of using 2 reverse path optical transmitters

BLOCK DIAGRAM



Specifications are subject to change without notice!

ORDERING INFORMATION _____

M	O	-	E	-	1	2	-	X	X	-	X	X
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Type of the diplex filter	
65	Pluggable 65/85MHz diplex filter
85	Pluggable 85/105MHz diplex filter
204	Pluggable 204/258MHz diplex filter

Optical connector	
SA	SC/APC (Recommended type)
EU	EURO-2000

Option	Required modules	Ordering codes
Reverse path transmitter	1 or 2 pcs ROT	ROTxxx
Monitoring options	1pc NMT-EL, 2pcs RSW3-H20	NMT-EL, RSW3-H20
Wall mount kit	1pc WMK-1 (double)	WMK-1
ONU manhole assembly	1pc ONU-M	ONU-M

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