

STRATUM LinX RF-R1 MULTIDIODE INVERSE NODE FOR SINGLE-FIBER NETWORKS



(product look may differ in case of given configurations)

- Provides OBI-free operation for RFoG networks
- Built-in 1.2 GHz DWDM downstream transmitter
- Single fiber, single RF port
- Fully-electronic local user interface

GENERAL DESCRIPTION

The STRATUM LinX RF-R1 multidiode inverse node allows OBI-free operation in RFoG networks. 16 bi-directional ports accept the reverse path signals of 16 nodes in case of normal RFoG operation or of maximum 64 nodes (4/port) in case of FTTB operation. In order to provide the most compact construction, the device contains a built-in DWDM forward path transmitter, it's output optical signal is forwarded to all the bi-directional ports. In case of need 2 transmitters can be built-in for serving 2 segments, each with 8 ports. So that all the needed functionalities completed with powering and local alignment interface are integrated within a standard 1U 19" rack housing.

TECHNICAL SPECIFICATIONS

Forward path optical parameters	LX-RF-R1-1-16	LX-RF-R1-2-08
Wavelength [ITU channel]		34
Output optical power [mW]	16x0,5 (16x-3 dBm)	2x8x1 (2x8x0 dBm)
Relative intensity noise (RIN) [dB/Hz]		<-145
Laser type		DFB cooled
Forward path RF parameters		
Frequency range [MHz]		258...1218
Return loss [dB]		>16
Flatness [dB]		±0.5
Nominal RF input level [dBmV]		20 ⁽¹⁾
RF offset range [dB]		-6...+3
RF equaliser range [dB]		0...6
CTB [dBc]		-62 ⁽²⁾
CSO [dBc]		-55 ⁽²⁾
CNR [dB]		>47 ⁽²⁾
Noise-to-power ratio (NPR) maximum / Dynamic range of NPR > 42 [dB]		45 / 7 ⁽³⁾

Specifications are subject to change without notice!

Reverse path optical parameters

Input wavelength range [nm]	1270...1610 (except 1550±10)
Input optical power range [dBm]	-10...3
Equivalent input noise current [pA/√Hz]	4

Reverse path RF parameters

Frequency range [MHz]	5...204
Return loss [dB]	>16
Output level target value (10% OMI) [dBmV]	30
Flatness [dB]	±0.5
Slope [dB]	±1
Noise-to-power ratio (NPR) maximum / Dynamic range of NPR > 36 [dB]	44 / 14

General parameters

LX-RF-R1-1-16 LX-RF-R1-2-08

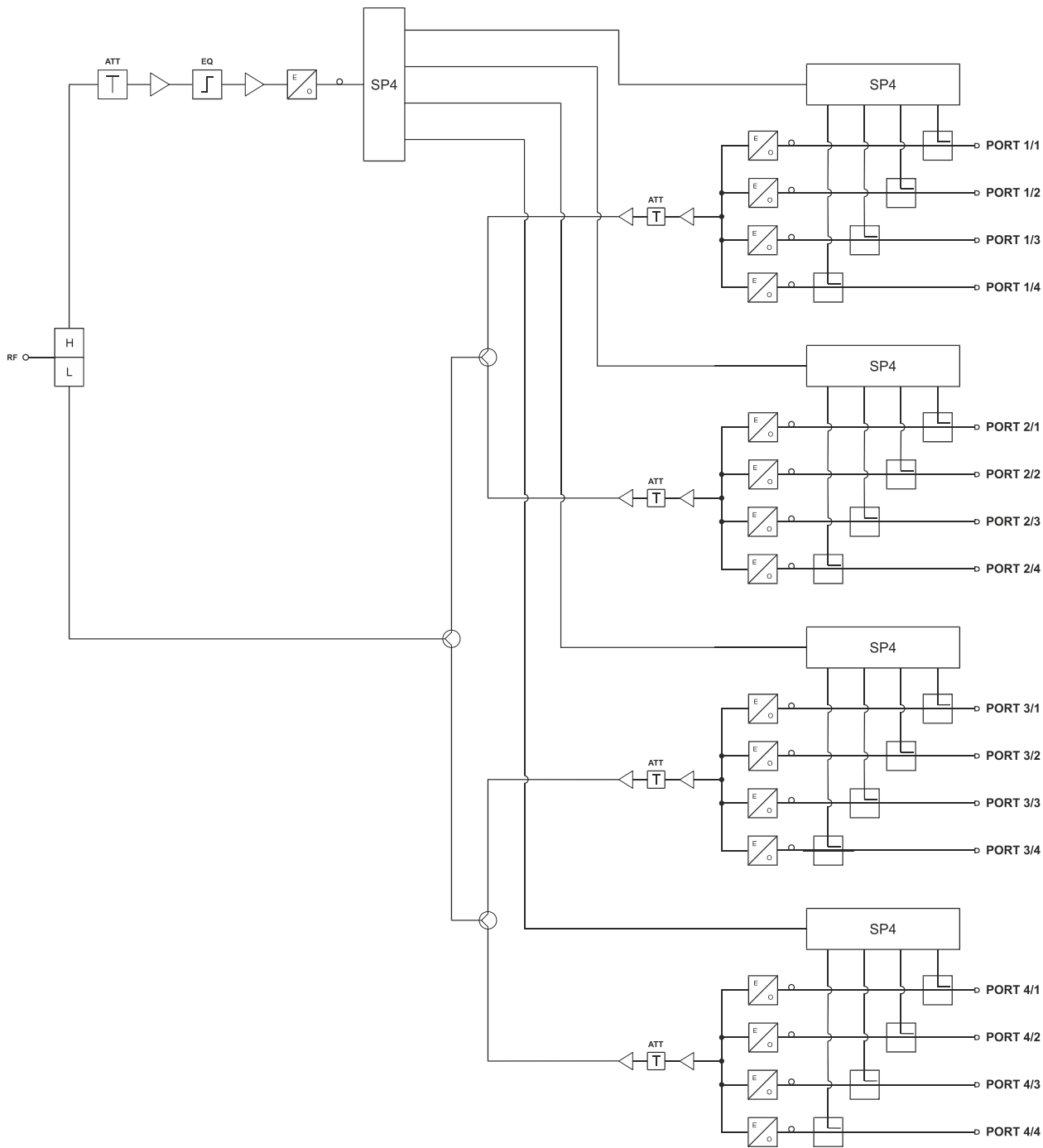
Optical connector	LC/APC	
RF connector	F-type	
Power supply voltage	230±20% VAC or -48 VDC	
Power consumption (typical / maximum) [W]	20 / 23	27 / 33
Temperature range [°C]	0...+50	
Dimensions [mm]	483x450x43.5	
Weight [kg]	4	

(1) 92 ITU-T J.83 Annex A 256 QAM channels between 258 MHz and 1002 MHz

(2) Test conditions: OMI=3.2%, 110 NTSC channels, received power -1 dBm

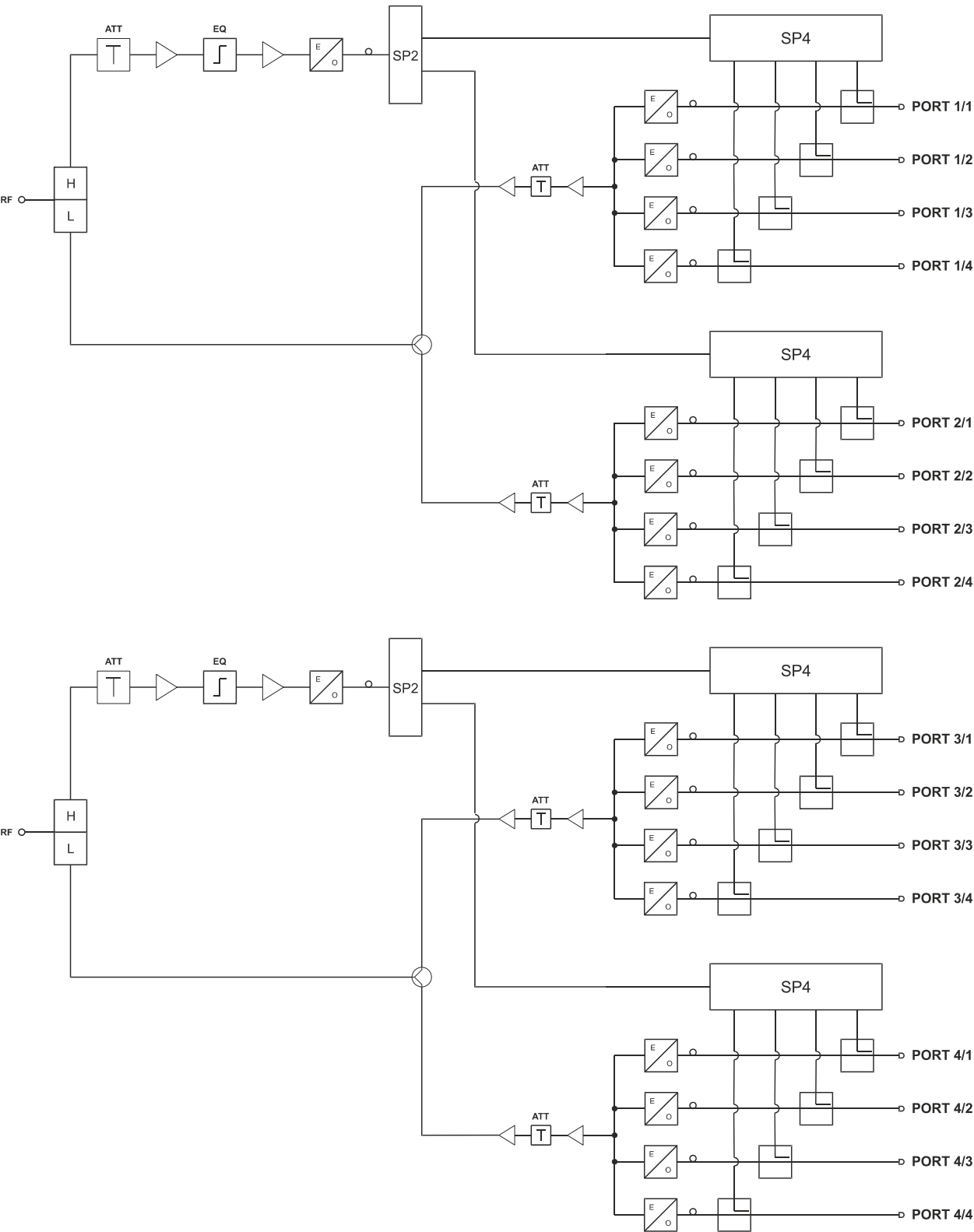
(3) Measured with flat full spectrum load between 47 and 1218 MHz, after an optical link of 15 km, received power -2 dBm

BLOCK DIAGRAM (LX-RF-R1-1-16 - ONLY THE RF PART IS DEPICTED)



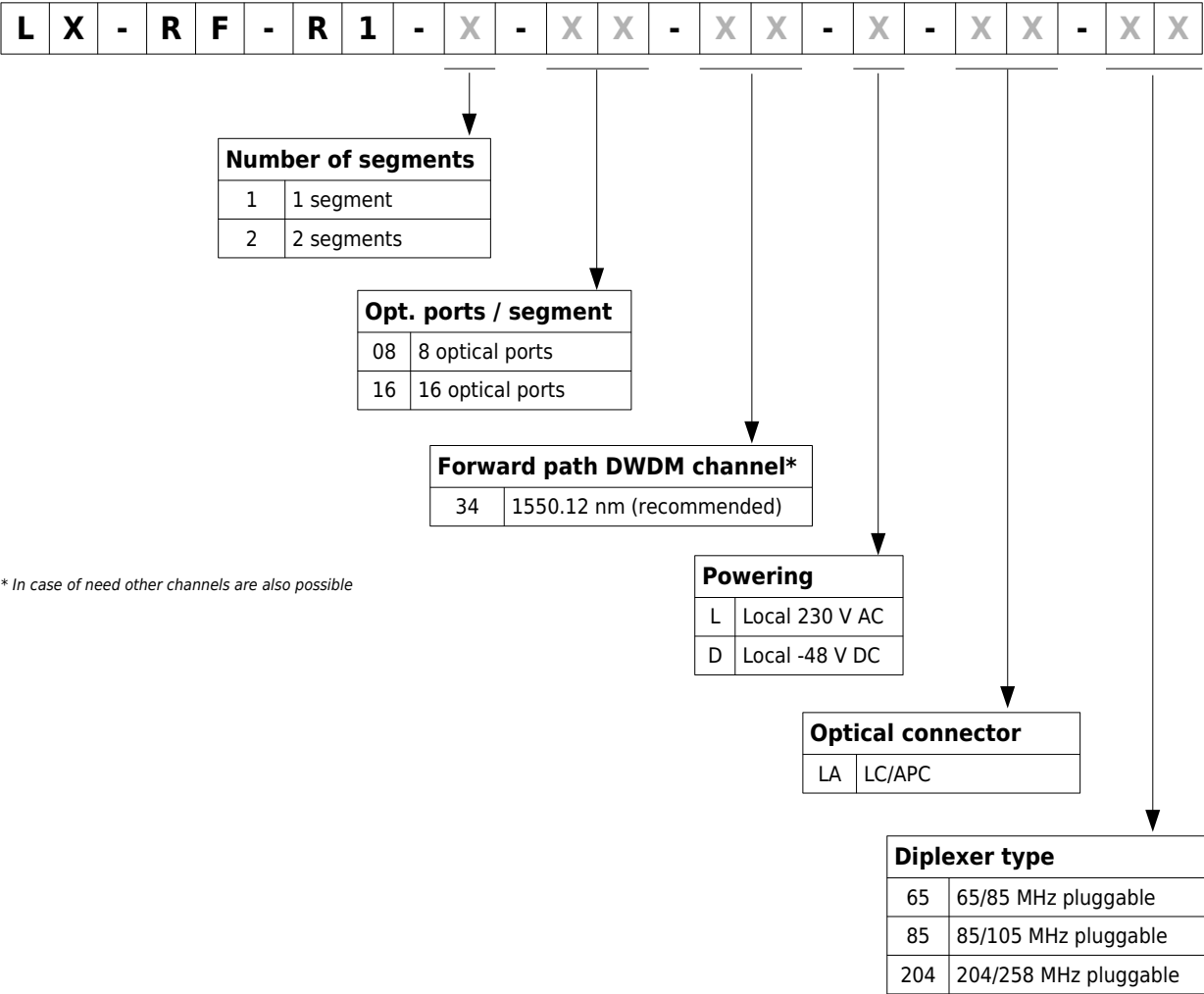
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BLOCK DIAGRAM (LX-RF-R1-2-08 - ONLY THE RF PART IS DEPICTED)



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ORDERING INFORMATION



Option	Required modules	Ordering codes
Monitoring option	1pc NMT-EL	NMT-EL