

MO1201 COMPACT OPTICAL NODE



- Downstream frequency range up to 1218 MHz
- Upstream frequency range up to 204 MHz
- Optional connection to Monitoring System
- Electronic configuration interface
- GaN output stage
- Optional CWDM return path
- Automatic optical gain control
- Automatic ingress management by the RSW module

GENERAL DESCRIPTION

The MO1201 node has full electronic setup interface with remote controlling option. The wide input optical power range and the high output RF level make the device an ideal element of FiberDeep and FTTB networks. The MO1201 is available with local or remote powering and with normal or CWDM return path - all these in compact style.

TECHNICAL SPECIFICATIONS

Forward path parameters

Wavelength [nm]	1100...1650
Input optical power [dBm]	-8...+3
Equivalent input noise current [pA/√Hz]	6
Frequency range [MHz]	47...1218
Equalizer breakpoint frequency [MHz]	1218
Gain limited output RF level at 2.1% OMI/channel [dBμV]	126±1 @ 1218 MHz ⁽¹⁾
RF attenuator range [dB]	-8...20 ⁽²⁾
RF equaliser range [dB]	10...25 ⁽²⁾
Flatness [dB]	±0.75
Output return loss (40MHz -1.5dB/octave) [dB]	>18
Output RF testpoint attenuation [dB]	30±1
CTB [dB]	-80 ⁽³⁾
CSO [dB]	-80 ⁽³⁾
Noise-to-power ratio (NPR) maximum / Dynamic range of NPR > 42 [dB]	>45 / >10 ^{(4) (5)}

Specifications are subject to change without notice!

Reverse path parameters

	DFB	CWDM
Output optical power [mW]	2 (3 dBm)	2, 4 (3, 6 dBm)
Wavelength [nm]	1310	1270...1610
Spectral width [nm]		<1
Relative intensity noise (RIN) [dB/Hz]		<-145
Frequency range [MHz]		5...204
Diplex filter [MHz]	65/85, 85/105, 204/258	
RF input level (10% OMI/channel) [dBμV]		70±1
RF attenuator range [dB]		0...15
Flatness [dB]		±0.5
Input return loss (40MHz -1.5dB/octave) [dB]		>18
Reverse path RF testpoint level [dBμV]		60+1/-2 ⁽⁶⁾
Ingress control switch (RSW) states		0dB/-6dB/-50dB
Noise-to-power ratio (NPR) maximum / Dynamic range of NPR > 36 [dB]		45 / 9 ⁽⁷⁾

General parameters

	MO1201DL	MO1201DR
RF connector		5/8"
Optical connector		SC/APC, EURO2000
Power supply voltage [VAC]	230±20%	~ 24...65, □ 30...90
Maximum power consumption [W]		21
Maximum current feed-through [A]		10
Hum modulation [dB]		70
Screening factor [dB]		80
Degree of protection		IP65
Temperature range [°C]		-20...+55
Dimensions [mm]		212x191x80
Weight [kg]		2

(1) Input optical level is -2 dBm

(2) Adjustable in 0.5 dB steps; attenuator can be set to negative values in order to handle low OMI signals

(3) 60 dBmV at 1218 MHz, 22 dB extrapolated tilt, 79 analog + 111 digital channels (-6 dB offset)

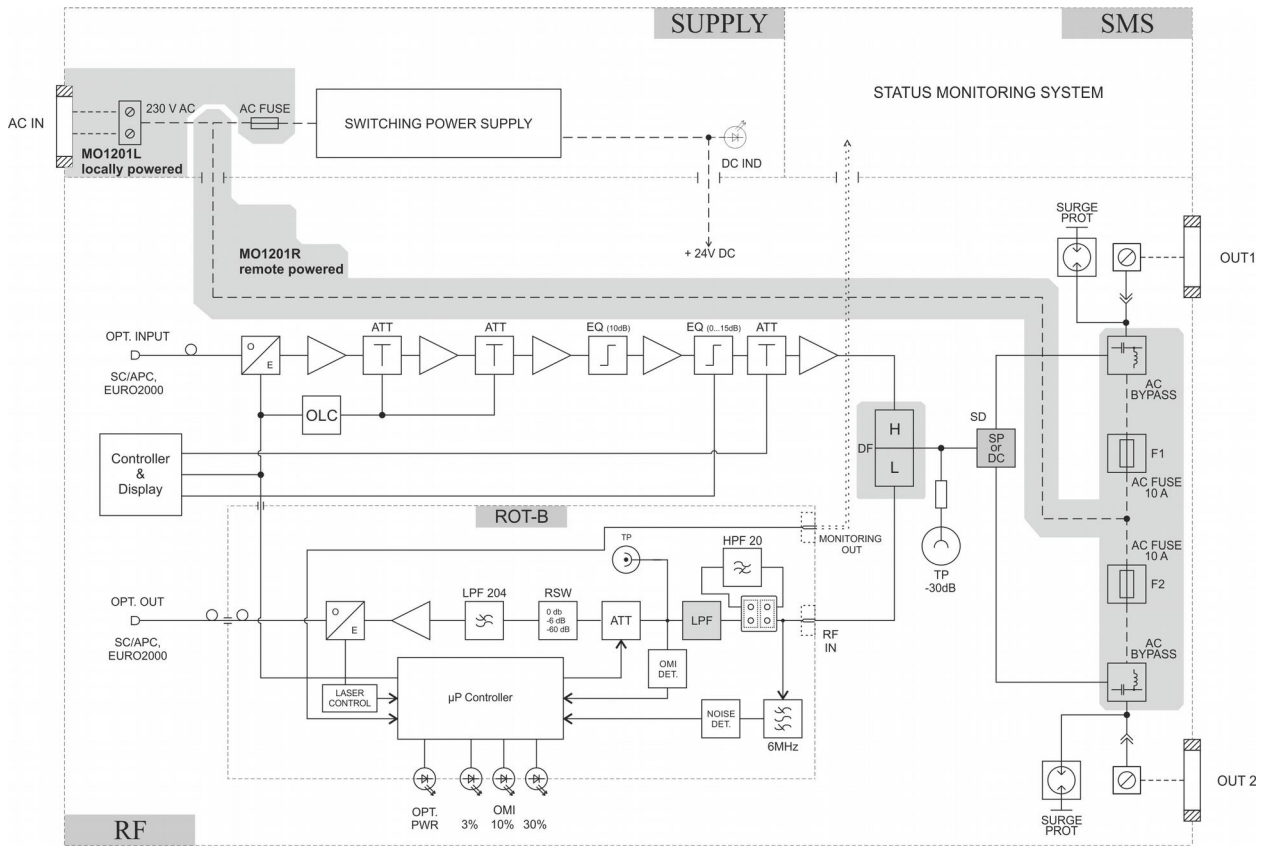
(4) Measured with flat full spectrum load between 47 and 1218 MHz, 1.8% OMI/ch, received power -2 dBm, EQ = 10 dB

(5) NPR_{max} at output level of 45 dBmV/ch @ 1218 MHz, dynamic range lower limit is defined by the adjustment limit of AT = 20 dB

(6) Value measured at 10% OMI/ch

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

BLOCK DIAGRAM



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ORDERING INFORMATION

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Amplifier-module type

D	GaN
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Power supply type

L	Local powering
R	Remote powering

Type of the diplex filter

65	Pluggable 65/85MHz diplex filter
85	Pluggable 85/105MHz diplex filter
204	Pluggable 204/258MHz diplex filter

LASER type

2D	2mW DFB laser (1310nm only)
2C	2mW CWDM laser (1270-1610nm)
4C	4mW CWDM laser (1470-1610nm)

CWDM Wavelengths

1270	1270nm
1290	1290nm
1310	1310nm
1330	1330nm
1350	1350nm
1370	1370nm
1390	1390nm
1410	1410nm
1430	1430nm
1450	1450nm
1470	1470nm
1490	1490nm
1510	1510nm
1530	1530nm
1550	1550nm
1570	1570nm
1590	1590nm
1610	1610nm

Type of the optical connector

SA	SC/APC (Recommended type)
EU	EURO2000

Option	Required modules	Ordering codes
Monitoring option	1pc NMT-COM1C	NMT-COM1C

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