204 MHz **1218 MHz** **RIS**

Optical nodes

COMPACT OPTICAL NODE
OX3

OX3 is a compact 1.2 GHz optical node for deep -single- fiber networks. It uses a WDM to separate the down- from the CWDM upstream wavelengths. The downstream has Optical Level Control (OLC) and a high RF output amplifier stage. The power consumption is nevertheless low. The optical receiver/transmitter is integrated on the motherboard. Different split options are possible with the OX3K kit. The OX3R can be remotely powered either via a dedicated F-connector at the side, or via an unused RF Out port. This allows the use of the existing coaxial network for remote powering when migrating to a fiber network. The node can also be used for remote powering of the network connected to the RF Out ports. The OX3 includes an FSK slot for optional remote control of the ingress switches.

OX3 features

- Built-in WDM, 2 wavelengths for single fiber
- Burst and continuous operational mode
- Downstream 1550 nm and 1310 nm models available
- Upstream CWDM fixed on board

- 1 (CMX1) or 2 outputs (CMX4)
- 1218 MHz down- and 204 MHz upstream
- Diplexer/filter kit to define the split
- Push buttons and LED indication for adjustements

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DISTRIBUTION NODE / OX3

TECHNICAL SPECIFICATIONS: OPTICAL [1]

Optical return loss	40.0 dB	WDM wavelength downstream	1550 nm
WDM insertion loss	0.7 dB	WDM wavelength upstream [2]	1270...1610 nm

TECHNICAL SPECIFICATIONS: DOWNSTREAM [1]

Receiving wavelength [2]	1550 (S1), 1310 (S2) or 1310+1550 (S3) nm	Flatness	± 1.0 dB
Optical receiving power	-8...0 dBm	Interstage attenuator	0...18 dB, 1 dB step
OLC range	-5/-6/-7/-8...0 dBm adjustable	Interstage slope	0...15 dB, 1 dB step
Frequency range [3]	85/105/258...1218 MHz	Umax (112 QAM channels, 9 dB sloped)	106 dBµV
Return loss	18 dB @ 40 MHz -1.5 dB/oct.	Test point	20 dB

TECHNICAL SPECIFICATIONS: UPSTREAM [1]

Output wavelength CWDM [2]	CWDM	Return loss	16 dB
Optical output power	+3 dBm	Adjustable attenuator	0...18 dB, 1 dB step
Frequency range	5...65/85/204 MHz	RF input level	68...85 dBµV

GENERAL SPECIFICATIONS [1]

Supply Voltage	OX3L: 180...255 VAC OX3R: 30...90 VAC	Optical connector	SC/APC8
Power Consumption	Typical 16.5 W without FSK receiver	Test point connectors	F-female
Remote current (OX3R)	7A	EMC compatibility	EN 60728-2
Class of enclosure	IP 50	Safety	EN 60728-11
Dimensions (h x w x h)	220 x 210 x 80 mm	ESD	4 kV

NOTES

(1) Typical values. Please contact us for detailed conditions.
(2) Check availability and possibilities before ordering. Minimum order quantities applicable.
(3) Set by diplexer and filters kit OX3Kxxx. Other frequencies and applications on request.

BLOCK DIAGRAM

IMAGERY (OX3R)

ORDERING INFORMATION

OX3vxxx-yyS1	Single fiber compact node, 1550 nm downstream window OX3L: 230VAC cable at the side, no fuse holders at the outputs OX3R: 65VAC with F-female adapter at the side, no fuses - upstream bandwidth "xxx" (65/85/204 MHz, set by OX3Kxxx diplexer/filter kit) - upstream CWDM transmitter wavelength 1yy0 nm (integrated on motherboard) - 1 output (CXM1 output module) with F-female adapter
OX3vxxx-yyS2	Similar as S1 but with 1310 nm downstream window
OX3vxxx-yyS3	Similar as S1 but with both 1310 and 1550 nm downstream windows (ask for availability)
CXT001	FSK module for optional RIS (Remote Ingress Switching) in combination with headed RIS controller HDM155. Carrier frequency typically 253 MHz.
CXT002	Manual RIS controller for on-site setting the OX3 ingress attenuators in case HDM155 control is not available.

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