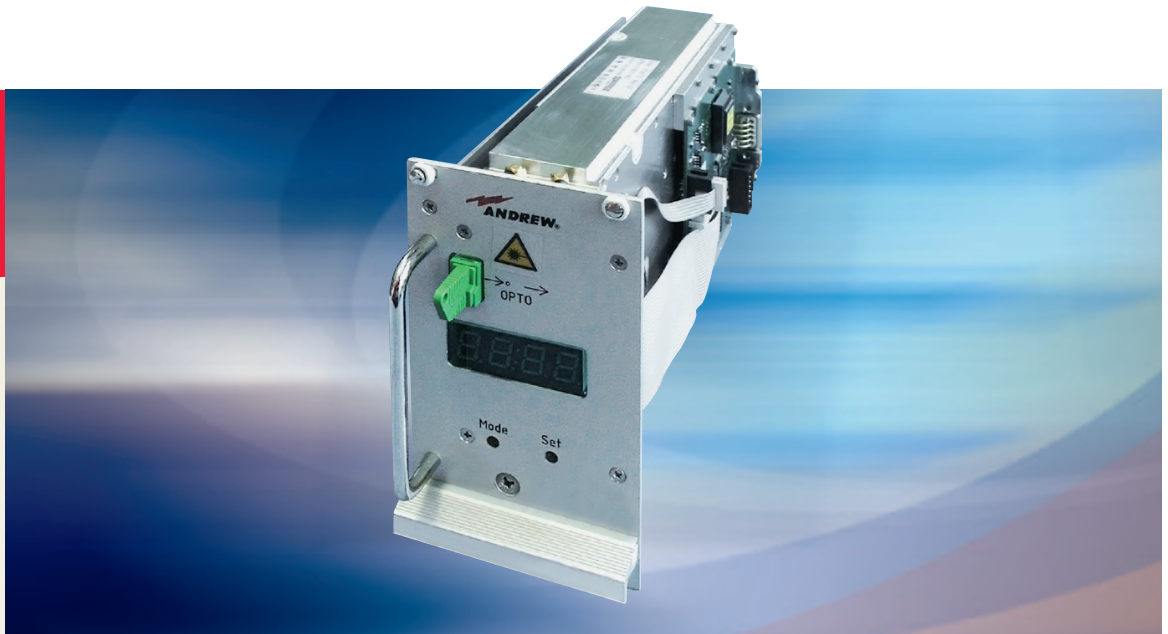


**PRODUCT
SPECIFICATION**



ION-M OTRx 4 MU-G

Optical Distribution for Essential Services Mobile Networks

The ION optical distribution system leads the industry in flexibility while minimizing the overall deployment cost.

Designed for Radio over Fiber (RoF) in analogue optical transmission systems.

CommScope's OTRx 4 MU-G has been designed to transport RF signals via optical fibre for Essential Services mobile networks.

The optical distribution system for mobile communication services comprises mainly of the Master Unit part (located next to the Base Station) and the Remote Unit part (located close to the antenna or radiating point). Master Unit and Remote Unit are connected via an optical link, that carries all RF- and signalling channels. The optical interface of the Remote Unit is a single fixed part of this unit and not field-replaceable.

The Master is equipped with a number of optical interfaces depending on the size of the network. These optical interfaces are plug-in modules and are connected by an electrical interface to the Base Station and through an opti-

cal interface to the Remote Unit. The OTRx 4 MU-G supports one frequency band.

The OTRx 4 MU-G has a built-in WDM for 1310 nm DL and 1550 nm UL, so only one single fiber is needed to connect the Remote Unit. Up to four Remote Units can be connected to the OTRx in a star or daisy chain configuration.

- Integrated WDM - only one single fiber is needed to connect a Remote Unit
- Support of up to four Remote Units connected to a single OTRx
- Integrated control channel to the remote-unit
- 10 dB optical budget

ION-M OTRx 4 MU-G – Product Specifications

Electrical

Master Unit OTRx Power Supply	
Internal from subrack, Vdc	12 to 14
Power consumption, Watts	7

Remote Unit OTRx Power Supply	
Internal from PSU, Vdc	28 to 32
Power consumption, Watts	8.5

Optical Transmitter

Operating wavelength, nm	1555 ± 7 / 1310 ± 20	
Spectral width, nm (dB)	±0.1 (20)	
SMSR, dB	1550	40
	1310	35
Optical output power, dBm	7 max.	
Allowed back reflection, dB	-40 at full spec max.	
Optical connectors	Master Unit	E2000 APC 8°
Fiber optic	Mono mode E9/125	
Composite input power @ OTRx master side @ Ref-Point A, dBm	4	0

Damage-level, dBm @ Ref-Point A 20

Optical Receiver

Operating wavelength, nm	1200 - 1600	
Optical input level, dBm	+7 max.	
Input back reflection, dB	-40 max.	
Optical fault threshold, dBm	Factory pre-set to -15	
Optical connectors	Master Unit	E2000 APC 8°
Fiber optic	Mono mode E9/125	

Mechanical

Height, width, depth, mm (in.)	128.7 x 70.8 x 223.8 (5.1 x 2.8 x 8.8)
Weight, kg (lb)	1.5 (3.3)

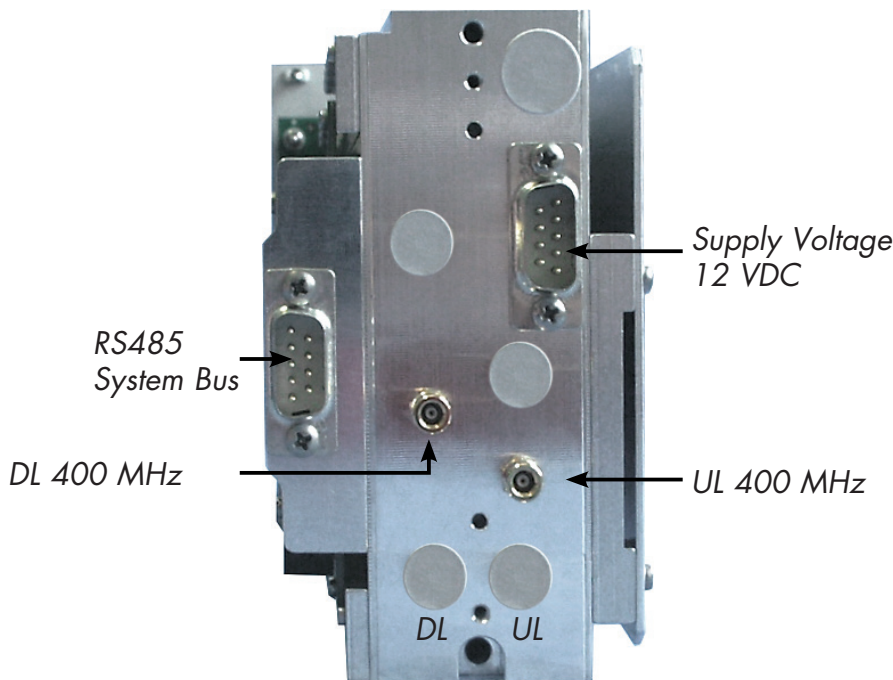
Environmental

Operating temperature range +5° C to +40° C

Ordering Information

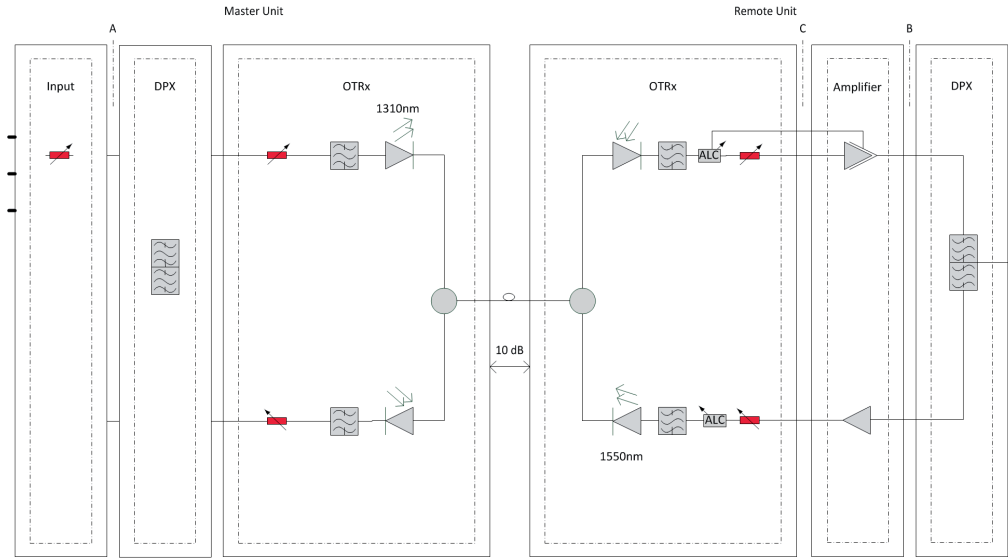
OTRx 4 MU-G 7708447-XX

All figures are typical values unless otherwise stated.



Rear of OTRx

ION-M OTRx 4 MU-G – Product Specifications



OTRx Design Principle

Optical Link / Electrical Performance

OTRx		4
Frequency, MHz	UL	350-512
	DL	350-512
Gain, dB	DL*	2
	UL NF opt.**	17
	UL ICP opt.**	10
Additional DL Gain, dB		22
ICP3, dBm***	DL OICP3*	35 min.
	UL IICP3 NF opt.**	15.0 min.
	UL IICP3 ICP opt.**	22 min.
NF, dB***	DL*	51
	UL NF opt.**	31.5
	UL ICP opt.**	38.5

* From input optical transmitter unit master Ref. A to output optical receiver unit remote Ref. C.

** From input optical transmitter unit remote Ref. C to output optical receiver unit master Ref. A.

*** Worst case constellation (fibre loss).

All figures are typical values unless otherwise stated.



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Bulletin PA-109793-EN.GB (10/15)