



## PRODUCT OVERVIEW

### CATV FIBER OPTIC TRANSPORT

#### Other Product Lines

- 50 – 3000 MHz L-Band Fiber Optic Links
- 0.05 – 40 GHz Microwave Fiber Optic Links
- Video, Audio, and Data Fiber Optic Signal Transport
- 0.05 – 2000  $\mu$ sec Fiber Optic Delay Lines
- Outdoor Enclosures for RF Over Fiber Links
- 1 – 100 MHz Reference Oscillator Fiber Optic Links
- IRIG-B Fiber Optic Links
- Laser Diode Components
- Photodiode Components & Receiver Boards
- Optical Matrix Switching Systems
- RF Matrix Switching Systems
- RF Routing and Sensing Redundancy Switches
- RF Line Amplifiers, Splitters, Combiners
- RF Frequency Converters

For 30 years, Emcore has pioneered innovative RF over fiber solutions for hybrid fiber-coax (HFC) and PON CATV networks. Linear high power DFB laser diodes, RF predistortion, narrow linewidth low RIN DWDM source lasers, and linear photodiode impedance matching are among the innovations at the core of this technology. The complete line of fiberoptic transmitters, receivers, and optical amplifiers (EDFAs) removes the constraints of transporting high fidelity AM-VSB analog and QAM over distances up to 100 km without RF regeneration.

Transmitters (1550 nm)	8000	8100	6100
Application	HFC, FTTx, RfOG	DOCSIS 3.1, HFC, FTTx, RfOG	DOCSIS 3.1, HFC, FTTx, RfOG
Distance	$\leq 30$ km	$\leq 25$ km (J-Type) $\leq 30$ km (F-Type + EDFA) $\leq 40$ km (C-Type) $\leq 65$ km (S-Type + EDFA)	$\leq 25$ km (L-Type + EDFA) $\leq 40$ km (F-Type + EDFA) $\leq 65$ km (S-Type + EDFA)
Channel Loading	Analog, QAM, and/or OFDM (with SAT-IF option)	Analog, QAM, and/or OFDM (with SAT-IF option)	Analog, QAM, and/or OFDM (with SAT-IF option)
Frequency Range (MHz)	47 – 1002, (950 – 2700 SAT-IF option)	45 – 1218, (950 – 3500 SAT-IF option for J-Type)	45 – 1218, (950 – 3500 SAT-IF option)

Transmitters (1310 nm)	OTOT-1000C	OPAT-14
Application	Campus HFC CATV Distribution	Campus HFC CATV Distribution
Distance	$\leq 70$ km (Optical Output Powers of +3 to +15 dBm)	$\leq 60$ km (Adjustable Optical Output Powers of +3 to +14 dBm)
Channel Loading	Analog AM-VSB + QAM	Analog AM-VSB + QAM
Frequency Range (MHz)	48 – 1000	50 - 1000

Receivers	OTPN-400C	OTPN-800C-H/L	OTPN-2000C	OTOR-300
Application	Indoor HFC/PON Optical Mini-Node	Indoor HFC/PON Optical Mini-Node	Indoor HFC/PON Optical Mini-Node	HFC/PON Optical Return Path Receiver
Form Factor	Flange Mount	Flange Mount	Flange Mount	19" 1RU or Flange Mount
Frequency Range (MHz)	40 - 1000	54 - 1000	54 - 1000	5 - 300
Optical Input Power (dBm)	-8 to 0	-8 to +2	-6 to +2	-14 to +3
RF Output Power (dBmV)	+28 dBmV @ -1 dBm Optical Input	+38 dBmV (H Model), +28 dBmV (L Model) @ -1 dBm Optical Input (Variable Gain/Slope)	+46 dBmV (Variable Gain/Slope Adjustment)	$\leq 46$ dBmV
Optional Return Path Transmitter	No	Yes	Yes	-

EDFAs	7100	7110	7200
Maximum Optical Output (dBm) per Output Port	21	21	21
Maximum Number of Output Ports	10	16	64
Input Optical Power Range (dBm)	-10 to +12	-10 to +12	-10 to +12
Wavelength Range (nm)	1528 - 1562	1545 – 1562	1545 - 1562