HFC *Enhance*®

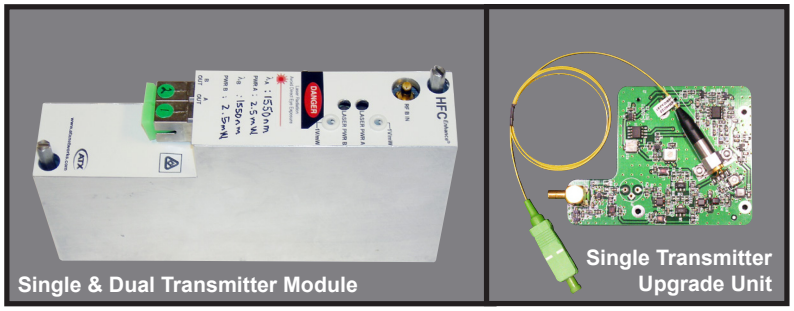
Drop-in Node Upgrades

D3.1 / CCAP™ Compliant

ISX-30XX Dual & Field-Upgradeable Single Return Path Transmitters:

Features & Benefits:

- 1310nm, 1550nm or CWDM, DFB-based return path transmitter module
- Designed to perform better than or equal to the original manufacturer's model
- Replace failed legacy return path transmitters or improve return path performance by replacing existing F-P transmitter module with a DFB transmitter module
- Single transmitter modules allow for immediate legacy module replacement or upgrade, and can also be field upgraded to a dual transmitter module in order to support future node segmentation requirements (for details, see HFC *Enhance*® Node Segmentation for the ISX-30XX Platform spec sheet)
- Dual transmitter module accommodates node segmentation (for details, see HFC *Enhance* Node Segmentation for the ISX-30XX Platform spec sheet) or route redundancy applications
- Convenient DC test point provides indicator of optical output power (1V/mW)
- Low power consumption & good heat dissipation increases service life & reliability



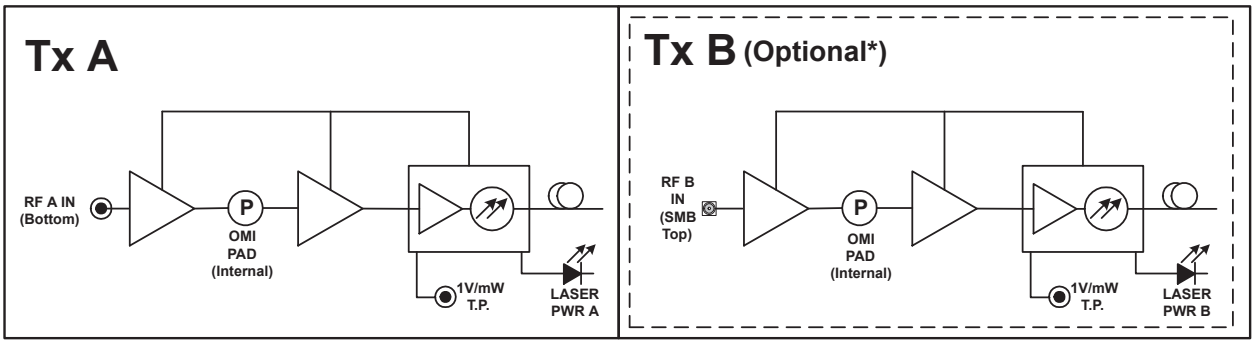
Return Path Transmitter Specifications

SPECIFICATIONS	RETURN TRANSMITTERS: DFB & CWDM
RF INPUT & PERFORMANCE PARAMETERS	
FREQUENCY RESPONSE RANGE (+/- 1.0 dB)	5-220 MHz
NPR (DFB/CWDM)*	> 15 dB over 41 dB NPR*
INPUT RETURN LOSS	> 16 dB
LINK LEVEL STABILITY	+/- 2.5 dB
OPTICAL OUTPUT PARAMETERS	
OPTICAL OUTPUT (DFB)	1.0, 2.0 or 3.0mW @ 1310nm / 2.5mW @ 1550nm / CWDM +/- 1.5 dB
RETURN LOSS	> 60 dB with APC Connector
OPTICAL CONNECTOR	SC/APC; FC/APC; SC/UPC; FC/UPC
USER INTERFACE	
OPTICAL OUTPUT LEVEL	1V/mW +/- 10%
LASER ON INDICATOR	LED
INPUT LEVEL CONTROL	SXP PAD
ELECTRICAL, ENVIRONMENTAL & MECHANICAL PARAMETERS	
OPERATING TEMPERATURE	-40ºC to +60ºC (-40ºF to +140ºF) (ambient temperature around Node)
HUMIDITY	20%-55% (without condensation, inside housing)
POWERING	Single Transmitter Module: 24V, 65mA Dual Transmitter Module: 24V, 130mA
PHYSICAL	
DIMENSIONS	6.3"H x 1.54"W x 3.94"D (16.0H x 3.6W x 10.0D cm)
WEIGHT	0.9 lbs (0.41 kg)

NOTES:
* Measured with 17 km of fiber, 35 MHz loading.
Call ATX for assistance in determining optimum drive levels for your system.

ISX-30XX Dual & Field-Upgradeable Single Return Path Transmitters:

Dual Return Path Transmitter Functional Schematics



* Tx B can be installed at time of manufacture or field installed at a later date

Ordering Information

Single Transmitter Modules:

1310nm DFB

HEIX13__ __

- **1** = 1mW
- **2** = 2mW
- **3** = 3mW

- **SA** = SC/APC
- **SU** = SC/UPC
- **FA** = FC/APC
- **FU** = FC/UPC

1550nm and CWDM DFB, 2.5mW

HEIX__ __2.5

- **SA** = SC/APC
- **SU** = SC/UPC
- **FA** = FC/APC
- **FU** = FC/UPC

- **15** = 1550nm
- **47** = 1470nm
- **49** = 1490nm
- **51** = 1510nm
- **53** = 1530nm

Single Transmitter Upgrade Unit:

1310nm DFB

HEIX13__ __U

- **1** = 1mW
- **2** = 2mW
- **3** = 3mW

- **SA** = SC/APC
- **SU** = SC/UPC
- **FA** = FC/APC
- **FU** = FC/UPC

1550nm and CWDM DFB, 2.5mW

HEIX__ __2.5U

- **SA** = SC/APC
- **SU** = SC/UPC
- **FA** = FC/APC
- **FU** = FC/UPC

- **15** = 1550nm
- **47** = 1470nm
- **49** = 1490nm
- **51** = 1510nm
- **53** = 1530nm

ISX-30XX Dual & Field-Upgradeable Single Return Path Transmitters:

Ordering Information (cont'd)

Dual Transmitter Modules:

1310nm DFB

HEIX13/13__ __

- **1** = 1mW
- **2** = 2mW
- **3** = 3mW

- **SA** = SC/APC
- **SU** = SC/UPC
- **FA** = FC/APC
- **FU** = FC/UPC

1310/1550 DFB, 2.5mW

HEIX13/15__2.5

- **SA** = SC/APC
- **SU** = SC/UPC
- **FA** = FC/APC
- **FU** = FC/UPC

CWDM DFB, 2.5 mW

HEIXCW__ __2.5

- **SA** = SC/APC
- **SU** = SC/UPC
- **FA** = FC/APC
- **FU** = FC/UPC

- **47/49** = Tx A = 1470nm / Tx B = 1590nm
- **51/53** = Tx A = 1510nm / Tx B = 1530nm

Specifications subject to change without notice.