

ITU GRID DWDM FORWARD PATH TRANSMITTER

FSX-TXDQ
 DTX-TXDQ



The IPITEK forward path transmitter is a direct modulation 1550 nm laser transmitter with output wavelengths based on the International Telecommunications Union (ITU) grid frequency plan. It is an integral part of the IPITEK Dense Wave Division Multiplex (DWDM) transport system. The transmitter transports 64 QAM or 256 QAM modulated signals, QPSK or other modulated digital signals. System applications include pro-visions of cable digital video, internet data and telephony, Video-On-Demand (VOD) and pay-per-view services. In system applications, the transmitter allows system providers to trunk narrowcast services from a main headend facility to multiple hubs, reducing the requirements for equipment necessary to provide targeted services to multiple areas.

An optimal feature of the transmitter is the ability to tune the output wavelength over a range of three 100GHz spaced ITU channels. This enables one transmitter to be used as a spare for multiple transmitters and can substantially reduce required spares inventory. The transmitter can be tuned directly at the

FEATURES & BENEFITS

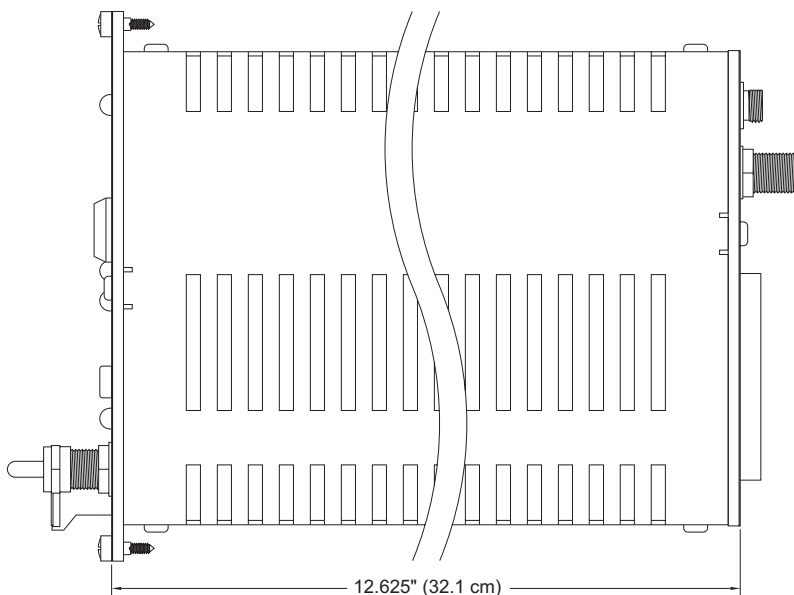
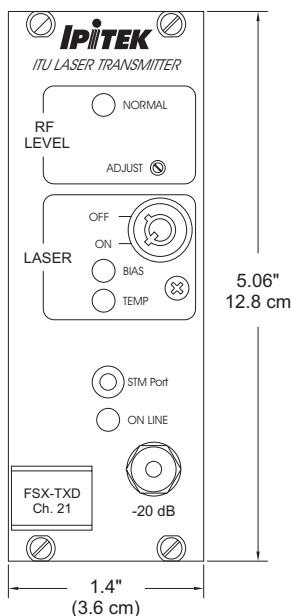
- Provides Maximum Fiber Usage when Integrated in DWDM Systems
- Optimized Performance for QAM and other Digital Modulation Signals
- Local or NMS Tunable over 3 100 GHz Channels for Optimum Flexibility
- Compatible with IPITEK Optical Amplifiers and DTX Receivers for Long Distance Transmission
- Compact Size Allows up to 8 Tx's (DTX) or 10 Tx's (FSX) in One Chassis

unit or tuning can be managed through the IPITEK Network Management System.

The FSX/DTX-TXDQ transmitter can be operated as a stand alone transmitter or as part of an IPITEK DWDM system. The transmitter is fully compatible with IPITEK optical amplifiers, which allows system operators to create systems with multiple wavelengths over longer link budgets and/or larger service areas. Since the transmitter output is on the ITU grid frequency plan, the unit may be integrated into a larger DWDM system which may include other signals with comparable levels. This also allows the user to create system designs which provide equipment or route redundancy or a combination of both applications.

As an integral part of the IPITEK FSX and DTX systems, the FSX/DTX-TXDQ can be integrated into a chassis as either a complete system or intermixed with other transport modules.

MECHANICAL



SPECIFICATIONS

Optical

Laser Type: 1550 nm ITU Grid based Laser Transmitter

Optical Wavelength: Typical match to Optical Multiplexer
1530.33 nm (ITU Ch. 59)
to 1561.42 nm (ITU Ch. 20)

Spacing: Capable of 100 GHz spacing

Optical Output: 6, 8 or 10 mW avg. output power

Wavelength Stability: ± 0.1 nm over 24 hours at operating temperature, typically ± 0.01 nm

Noise Power Ratio: > 40 dB with 200 MHz 256 QAM signals

Electrical

RF Bandwidth: 50 - 870 MHz

Nominal Bandwidth: 550 - 860 MHz

Input Signal: 200 MHz 64 QAM or
200 MHz 256 QAM

Input Signal Level: +30 dBmV, ± 2 dB for 200 MHz QAM

Input Impedance: 75 ohms

Environmental

Operating Temperature: 0°C to 50°C

Storage Temperature: -40° to 70°C

Humidity: 5% to 85% non-condensing

Power Consumption: 27 watts max.

ORDERING INFORMATION

FSX-TXDQ	- 860	- N15	- IXX	- PXX	- FT	- XX	- X
12-SLOT FSX COMPATIBLE DOWNSTREAM ITU TRANSMITTER	Bandwidth 860 = 50-860 MHz	Wavelength N15 = 1550 nm	ITU Channel # IXX = Channel #(20 to 59) I20 = Channel #20 I21 = Channel #21 ⋮ I59 = Channel #59	Output Power P06 = 6 mW avg P08 = 8 mW avg P10 = 10 mW avg	RF Connector FT = F-Type	Optical Connector FC = FC SC = SC E2 = E-2000	Polish A = APC P = UPC

DTX-TXDQ	- 860	- N15	- IXX	- PXX	- FT	- XX	- X
10-SLOT DTX COMPATIBLE DOWNSTREAM ITU TRANSMITTER	Bandwidth 860 = 50-860 MHz	Wavelength N15 = 1550 nm	ITU Channel # IXX = Channel #(20 to 59) I20 = Channel #20 I21 = Channel #21 ⋮ I59 = Channel #59	Output Power P06 = 6 mW avg P08 = 8 mW avg P10 = 10 mW avg	RF Connector FT = F-Type	Optical Connector FC = FC SC = SC E2 = E-2000	Polish A = APC P = UPC



2330 Faraday Avenue • Carlsbad • CA • 92008
(760) 438-1010 • Toll Free (888) 4-IPiTEK (447-4835)

IPiTEK reserves the right to modify product specifications without prior notification.