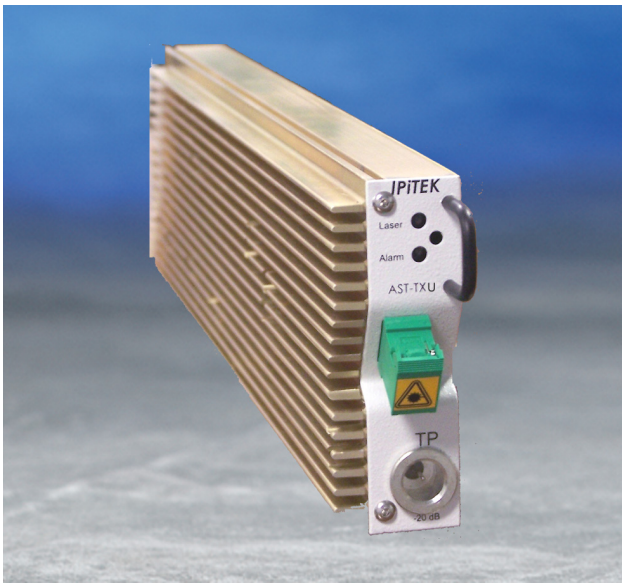
IPITEK
INTEGRATED PHOTONICS TECHNOLOGY
ISO 9001 Registered

ADVANCED SERVICES TRANSPORT
RETURN PATH OPTICAL TRANSMITTER
AST-TXU



Features and Benefits

- **5 to 300 MHz bandwidth**
- **Choice of 1310 nm powers**
- **Full HMS-SNMP Monitoring System**
- **Quick disconnect connector for easy replacement**
- **High Density - up to 210 transmitters in a single rack**

The new AST-TXU high performance laser transmitter is designed and engineered to meet current and future requirements for Broadband systems return path operations. The compact, half height module provides full bandwidth operation to 300 MHz and a choice of 1310 nm laser output powers.This allows the same transmitter package to meet the requirements for all types of return services, allowing the operator to meet current requirements as well as growing bandwidth intensive return services.

The AST-TXU transmitter provides superior transport of return video, voice and data services, assuring excellent handling of newer bandwidth intensive services. The transmitter is provisioned so the RF input port is suitable for combined Broadcast and Narrowcast signals. The unit's advanced design provides for combined broadcast/Narrowcast signal that can be applied to the without signal degradation. This feature eliminates the requirement for two different transmitters, providing the highest level of flexibility in system operations.

Engineered with the latest low power components, AST-TXU is both energy efficient and fully hot swappable. Level control is provided through an internal attenuator. The internal system provides gain adjustments with the integrated software, using the remote or local network management control.

An onboard micro-controller provides complete monitoring and control of the unit. Software design includes both function control and unit monitoring. The controller system also provides alarm processing and status monitoring functions. These signals are routed to the AST chassis Control and Management module that provides unit management through a Local Craft Interface as well as remote management. The management system provides an HMS-SNMP compliant interface to a higher level element manager, such as the IPITEK Node Wizard system or to HP OpenView or Castle Rock SNMPc. Front panel indicators also provide immediate visual indication for Laser On and a summed Fault Alarm.

CONTROL FUNCTIONS

RF Level Adjust

IPITEK FIBER OPTIC HFC ACCESS

SPECIFICATIONS

RF:

Bandwidth:	5 to 300 MHz
Typical Operating Range:	5 - 200 MHz
Input Range:	26 dBmV to 36 dBmV, total power
Input Impedance:	75 Ohms
Return Loss:	>16 dB
Response Flatness:	± 1.0 dB Max,+/- 0.5 dB typical) 5 - 300 MHz
Optical	**Standard:** 1310nm +2 dBm to +8 dBm
Optical Connector:	SC/APC; E-2000/APC

PERFORMANCE

Link Budget: Typical 11 dB - 17 dB

Performance: 5-300 MHz, analog (CW Carriers), with 4 T Channels (typical -9 dBm optical power into RXU Receiver @ 12% OMI)

CNR: 48 dB
CSO: 60 dB
CTB: 66 dB
NPR: 35/13

Mechanical/Electrical:
RF Connector: Type G (quick disconnect)
RF Test Point : -20 ± 0.5 dB, relative to RF input level
Power Consumption: 3.5 W Nominal

Environmental:
Operating Temperature: 0° to 50°
Humidity: 50 % to 85%, non-condensing
Storage Temperature: -40°C to +70°C, 24 hours

ORDERING INFORMATION

AST-TXU	**-**	**PXX-XX**	**-**		**-**	**XX**
AST Return Path Transmitter		Laser Type & Output power				Optical Connector
		P13-02 = 1310 nm, 2 dBm P13-06 = 1310 nm, 6 dBm P13-08 = 1310nm, 8 dBm				SC = SC/APC E2 = E2000/APC

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