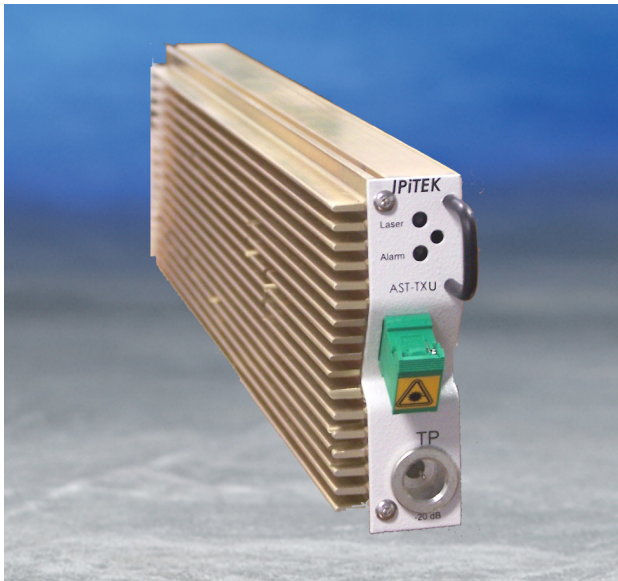


## ADVANCED SERVICES TRANSPORT RETURN PATH OPTICAL TRANSMITTER AST-TXU



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, CWDM or 1550 nm DWDM lasers with a choice of 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.

### Features and Benefits

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

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

# 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 (±0.75 dB typical) 5 - 300 MHz

**Optical**

**Standard:** 1310nm  
 +2 dBm to +10 dBm  
**Optional:** CWDM  
 1470 - 1610 nm  
 +4 mW to +6mW typical  
**Optional:** DWDM  
 ITU Ch. 20 - 59  
 +6 dBm to +10 dBm

Optical Connector: SC/APC; E-2000/APC

**PERFORMANCE**

Link Budget: Typical 11 dB - 19 dB  
 Performance: 5-300 MHz, analog (CW Carriers), with 4 T Channels (typical 9 dBm optical power into RXU Receiver @ 12% OMI)  
 CNR: 50 dB  
 CSO: 55 dB  
 CTB: >60 dB  
 NPR: 35/13

**Mechanical/Electrical:**

RF Connector: Type G (quick disconnect)  
 RF Input Test Point : 20 ± 0.5 dB  
 Power Consumption: 3.5 W Nominal

**Environmental:**

Operating Temperature: 0° to 42°  
 Humidity: 50 % to 85%, non-condensing  
 Storage Temperature: -40C to +70C, 24 hours

# ORDERING INFORMATION

AST-TXU	-	PXX-XX	-	XX	-	XX
AST Return Path Transmitter		Laser Type & Output power		Channel Designation		Optical Connector
		P13-02 = 1310 nm, 2 dBm		1310 = 00		SC = SC/APC
		P13-06 = 1310 nm, 6 dBm		1310 = 00		E2 = E2000/APC
		P13-10 = 1310nm, 10 dBm		1310 = 00		
		PCW-04= CWDM, 4 dBm		CW Channel C1 to C8		
		PCW-06= CWDM, 6 dBm		CW Channel C1 to C8		
		PCW-08= CWDM, 8 dBm		CW Channel C1 to C8		
		P15-06= DWDM, 6 dBm		DWDM Cahnnel 23 to39		
		P15-08= DWDM, 8 dBm		DWDM Channel 23 to 39		
		P15-10= DWDM, 10 dBm		DWDM Channel 23 to 39		



IPITEK reserves the right to modify product specifications without notice.

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