

IPITEK's AST-RXU-DR optical receiver is a high performance broadband unit, designed for return path and secondary hub operations. Advanced engineering design exceeds the requirements for operation in current and future broadband systems. The compact module provides operational input from -18 dBm to +2 dBm and accepts both 1310 nm and 1550 nm wavelengths. The wide optical power range allows the same receiver package to provide a variety of high density solutions. The AST-RXU-DR supports full bandwidth with very low distortions. It also supports both NTSC and PAL formats. The unit provides an adjustable output level with a total adjustment range of 22.5 dB. Engineered with the newest low power components, AST-RXU-DR is both energy efficient and completely hot swappable.

The dual receiver is housed in a single module and can operate either as a stand-alone unit or can be configured as a redundant receiver in conjunction with a second module and a control cable. Only one cable is required between the chassis for any number of redundant modules in the chassis. This is a major advantage compared to other products, as only one cable is required. In the dual mode, both optical path resiliency and hardware redundancy is provided.

In the event of an optical path or hardware failure, uninterrupted service is maintained through automatic switch over to the second receiver in a fraction of a second. The two receivers, located at the same site, can be placed in a common chassis or in separate

Features and Benefits

- 5 -300 MHz Bandwidth
- High output power - for RFoG, FTTH, and Pon Networks
- Automatic backup switching in case of an optical path or equipment failure
- User defined alarm and switching threshold
- Wide optical range
- Adjustable output level
- Full HMS-SNMP Monitoring

chassis. 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 (CMU) 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 Signal Present and a summed fault alarm indicating a loss of input signal or output power in the unit. The unit offers the flexibility of setting both optical input level as well as RF output level for automatic switching to the redundant receiver. Moreover, an alarm is generated if the optical in/out power or RF output power level drops below a user defined low limit that can be different from the switching threshold. This allows the network user to be alerted to potential issues before a major fault causes protection system switching occurs.

CONTROL FUNCTIONS

- Optical Input Level
- RF Output Adjustment
- Protection Switching

SPECIFICATIONS

Optical:

Optical Input Wavelength: 1100 - 1650 nm
 Optical Input Power: -18 dBm to +2 dBm
 Responsivity: 0.85 A/W @ 1310 nm
 0.95 A/W @ 1550 nm

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

RF:

Bandwidth: 5 MHz to 300 MHz
 Typical Operating Range: 5 MHz to 200 MHz;
 RF Output: up to +45 dBmV/ch(*)
 Attenuation Control Range: 22.5 dB, 1.5 dB steps
 Response Flatness (typ/max): $\pm 0.5/\pm 0.75$ dB up to 300 MHz
 Output Return Loss: >16 dB
 Output Impedance: 75 ohms

Performance:

Distortion:* CNR>48 dB, CTB>66 dB CSO>55 dB

Power Consumption: 10 W Max

System Specifications

Capacity: Up to 21 modules in 1 AST Chassis

Mechanical/Electrical:

RF Connector
 RF Connector: Module - Type G connector
 Chassis Rear Panel - Type F

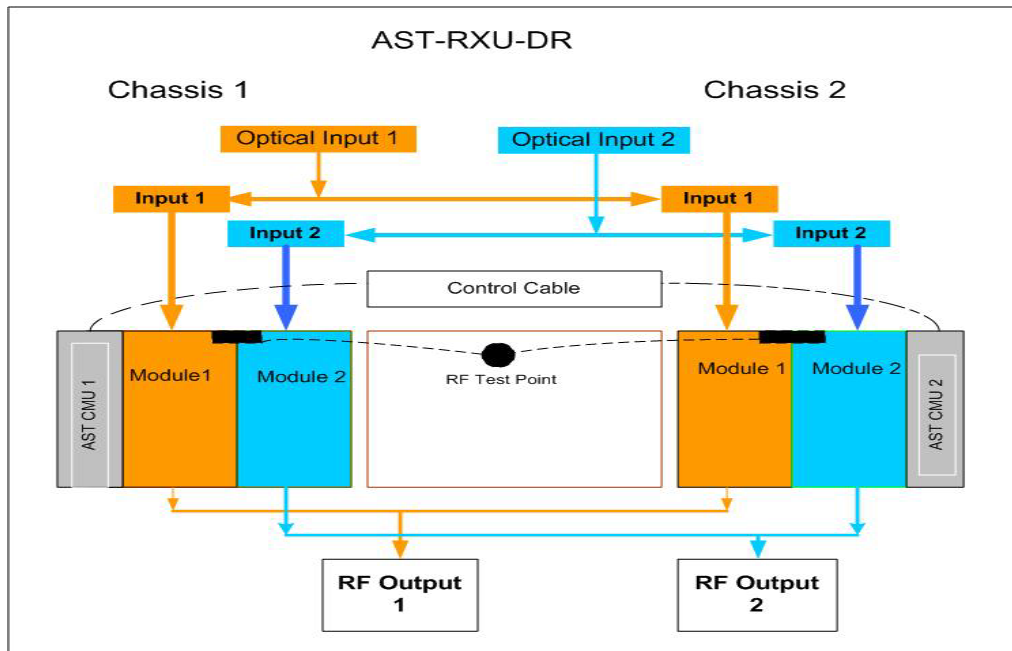
Environmental:

-20, ± 1 dB Max, relative to RF output
 Operating Temperature: 0° to 50° C
 Storage Temperature: -40° to 85° C, 24 hours
 Relative Humidity: 10 to 95%, non-condensing

Physical Dimensions:

(Excluding Handles and connectors)
 1.2" (W) x 15.4" (D) x 3.2" (H)
 2.9 cm x 39.0 cm x 8.2 cm

***Notes:** 4T/NTSC channels @ +20 dBmV/ch into TXU with 12% OMI and receiver optical power of -9 dBm



ORDERING INFORMATION

AST-RXU-DR	XX	AST-RXD-CTRL-CBL	- XX
------------	----	------------------	------

Return Path Optical Receiver	Optical Connector	Length of Control Cable in ft.	01
			05
	E2 = E2000/APC		10
	SC = SC/APC		20

