ATCi 402LZ

L-Band Fiber Transmitter Module

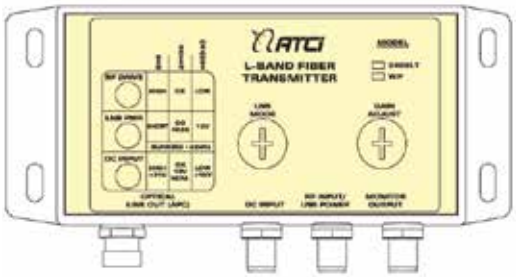
Summary

The 402LZ is a outdoor/indoor mounted fiber optic transmitter for RF signals in the satellite L-Band or wider frequency range. It accepts a single RF input on coaxial cable and provides a single output for optical transmission. Up to four 402LZ's may be installed in the ATCi Link4i chassis. Fiber links offer superior performance to coax by preserving signal C/N and slope over distance, while also providing electrical isolation between antenna and facility, mitigating ground loop and lightning issues.

The 402LZ is modular and hot-swappable, allowing for easy system expansion and service. A full power RF monitor output offers a convenient means of obtaining peak satellite signal strength, or additional signal distribution. The 402LZ allows gain to be adjusted manually or managed automatically via AGC. and also offers SmartMON™ which relays monitoring parameters including incoming RF signal strength, LNB current, temperature and other data over the fiber output for monitoring through SNMP/VistaLINK® (requires SmartMON™ capable companion fiber receiver). The 402LZ also provides LNB power and comprehensive LED indicators for status information on input DC power, RF drive level and LNB power status.

Features & Benefits

- Wide frequency range for extended L-Band, over the air DTV and other signals
- Protocol independent design - transports all modulation formats
- DC pass through and 13V DC modes for LNB power
- Active LNB current limit & short circuit protection (no fuses needed)
- Minimizes coaxial cable length for superior C/N performance
- 22kHz tone on/off for LNB local oscillator control
- RF monitor output for signal peaking and signal distribution
- Tri-color LED status indicators for Link RF drive strength, LNB voltage and DC input voltage level
- Designed for extended temperature range operation
- SmartMON™ capability: Provides remote status monitoring via SNMP without a separate data connection
- LNB current monitoring to provide advance warning of LNB failure
- Manually adjustable or AGC gain modes
- Available with 16 CWDM wavelengths for fiber-limited applications



Specifications: 402LZ L-Band Fiber Transmitter Module

RF Input:

Number of Inputs:	1
Connector:	F-Type (50Ω BNC Optional)
Conductor Range:	23-18 AWG (0.26-0.82 mm2)
Input Impedance:	75Ω (50Ω Optional)
Frequency Range:	
1310nm FP laser	850MHz - 3000MHz
CWDM or DFB laser	120MHz - 3000MHz
Return Loss:	
120-500MHz:	> 11dB
500MHz - 3GHz:	> 15dB
AGC Hold Range:	-8 to -38dBm +/-2dBm
Input IP3:	+10dBm
IMD:	< -55dBc at -15dB input and min. gain
LNB Power:	
Voltage:	DC Input-0.5V DC, 13.5V DC, off (selectable)
Current:	500mA
Protection:	Short Circuit, current limited
LO Control:	22kHz on/off (selectable)
Input Power Range:	-10dBm to -50dBm
Manual Gain Range:	+2 to +30dB in 2dB steps

RF Monitor Output:

Number of Outputs:	1
Connector:	F-Type (50Ω BNC Optional)
Conductor Range:	23-18 AWG (0.26-0.82 mm2)
Output Impedance:	75Ω (50Ω Optional)
Return Loss:	> 15dB
Output Level:	Within -2dB of input signal

Optical Output:

Number of Outputs:	1
Connector:	Female FC/APC
Operating Wavelength:	
Standard:	1310nm
CWDM:	1270-1610nm
Output Power:	
Standard 1310nm:	+2dBm
CWDM:	+2dBm

RF System Performance 401/402LZ+7708LRA pair:

Flatness:	
950 - 2150MHz:	±1.5dB
120MHz - 3GHz:	±2.0dB
	+/ -0.25dB on 36MHz BW to 2.3GHz
Gain variation over temperature:	
	±2dB (from -20°C to +70°C)

DC Input:

Voltage:	+24V DC nominal, +11V DC to +36V DC range
Power:	2W max excluding LNB Power
Connector:	F-Type
Conductor Range:	23-18 AWG (0.26-0.82 mm2)

Physical:

Dimensions	
With Flanges:	2.5"L x 5.5"W x 1.4"H
	(64mm L x 140mm W x 36mm H)

Compliance:

Laser safety:	Class 1 laser product Complies with 24 CFR 1040.10 and 1040.11
	IEC 60825-1
EMI/RFI:	Complies with FCC Part 15, Class A EU EMC directive

Environmental:

Temperature:	
1310nm:	-20 to +70°C
CWDM:	-20 to +60°C

Ordering Information:

401LZ13 L-Band fiber transmitter module, 1310nm FP laser
402LZ13 L-Band fiber transmitter module, 1310nm FP laser, adjustable gain, 13V/DC Pass + 22kHz LNB power, inband SmartMONTM monitoring
402LZXX L-Band fiber transmitter module, CWDM DFB laser, adjustable gain, 13V/DC Pass + 22kHz LNB power, inband monitoring

XX = CWDM wavelength: 27=1270nm, 29=1290nm, 31=1310nm, 33=1330nm, 35=1350nm, 37=1370nm, 43=1430nm, 45=1450nm, 47=1470nm, 49=1490nm, 51=1510nm, 53=1530nm, 55=1550nm, 57=1570nm, 59=1590nm, 61=1610nm

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