

ATLT-400 model



Features

- Four Operating Bands – C, X, Ku, and Ka
- Cost effective solution
- Front panel control (local)
- Full remote control (remote)

Overview

The Advantech Test Loop Translators ATLT-400 models are available in variety of operating bands. The units are designed for testing satellite communications links. They simulate the satellite by band-translating the uplink frequencies to the corresponding downlink frequency. A single quad band TLT unit works with four operating frequency bands – C, X, Ku and Ka.

The flexible and comprehensive monitor and control features on the TLT-400 ensure that it will fit into any network management system architecture. The user-friendly front panel or the RS485 remote interface will provide full set-up and fault monitoring facilities.

The translator unit is housed in 19" 1U shelf. It is designed to meet the phase noise and frequency stability requirements of the satellite communications industry.

Options

- 5 MHz external reference
- Other operating bands

Operating Bands

Tri-Band TLT Model # ATLT- 400TB1

Band	RF Transmit Band	RF Receive Band
C-Band	5.85 - 6.425 GHz	3.625 - 4.200 GHz
X-Band	7.9 - 8.4 GHz	7.250 - 7.75 GHz
Ku-Band	14.0 - 14.5 GHz	11.70 - 12.20 GHz

Ka-Band TLT Model # ATLT- 400Ka1

Band	RF Transmit Band	RF Receive Band
Ka-Band	30.00 - 31.00 GHz	20.20 - 21.20 GHz

Quad-Band TLT Model # ATLT- 400QB1

Band	RF Transmit Band	RF Receive Band
C-Band	5.85 - 6.425 GHz	3.625 - 4.200 GHz
X-Band	7.9 - 8.4 GHz	7.250 - 7.675 GHz
Ku-Band	14.0 - 14.5 GHz	11.70 - 12.20 GHz
Ka-Band	30.00 - 31.00 GHz	20.20 - 21.20 GHz

Alternate Bands

Band	RF Transmit Band	RF Receive Band
C-Band	5.85 - 6.425 GHz	3.625 - 4.200 GHz
C-Band	5.85 – 6.65 GHz	3.450 – 4.200 GHz
Ku-Band	14.0 - 14.5 GHz	11.70 - 12.20 GHz
Ku-Band	14.0 - 14.5 GHz	12.25 - 12.75 GHz
Ku-Band	13.75 - 14.5 GHz	12.0 - 12.75 GHz
Ku-Band	13.75 - 14.5 GHz	10.95 – 11.70GHz
DBS Band	17.35 – 18.1 GHz	11.7 – 12.50GHz
Ka-Band	29.50 - 30.00 GHz	19.20 – 19.70 GHz
Ka-Band	29.50 - 30.00 GHz	19.70 – 20.20 GHz
Ka-Band	29.50 - 31.50 GHz	20.50 – 21.50 GHz

Satellite Test Loop Translator

Technical Specifications

Frequency range	(See table on front page)
Input impedance	50 Ω
Input VSWR	1.5:1 max over any operating band
Max input level	+10 dBm
Output impedance	50 Ω
Output VSWR	1.5:1 max over any operating band
RF Input	
Input level	0 dBm max +10 dBm no damage
Input/Output Connector	SMA (female)
Return loss	18 dB
Conversion Parameters	
Conversion Gain	-35 dB max
Gain adjustment	50 dB
Attenuator step size	1 dB
Gain flatness	2.0 dB P-P max. 0.8 dB P-P max. over any 40 MHz
Gain stability	± 0.75 dB/15°C max. 0°+55°C
Spurious	-40 dBc In-band -50 dBm Out-of-band
Group delay (over 40 MHz)	Linear 0.02 ns/Hz Parabolic 0.003 ns/MHz ² Ripple 1 ns p-p
Phase noise	10 Hz -35 dBc 100 Hz -65 dBc 1000Hz -75 dBc 10 kHz -85 dBc 100 kHz -95 dBc 1 MHz to 5 MHz -95 dBc
Controls & Indicators	
Band select	
Attenuator select	
Local/Remote	
Mute/ Unmute	
Total time is use	
Reference	
External Reference	10 MHz (5 MHz option)
External ref. input level	0 dBm $\pm$ 5 dB
Internal reference stability	$\pm 2 \times 10^{-8}$ / day
Aging	$\pm 1 \times 10^{-7}$ / year
Mechanical	
Dimensions	Width 19" (482.6 mm) Height 1U 1.75" (44.5 mm) Depth 20" (508 mm)
Power Supply	
Voltage	90 – 265 VAC (47 – 63 Hz)
Power	20W
Connector	IEC 603320 10A
Monitor and Control	
RS 485	DB9
RS232	DB9
Discrete	DB9
Environmental	
Operational	0°C to +50°C standard
Storage	-55°C to +85°C
Humidity	Non-condensing
Altitude	3,000m AMSL

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Ref.: PB-ATLT-QUAD-13150