Satellite Test Loop Translator
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 ATLT-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.

Operating Bands

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 - 7.75 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

Options

- 5 MHz external reference
- Other operating bands

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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)			
Conversion Parameters				
Conversion Gain (loss)	-35 dB max			
Attenuation adjustment range	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 ± 5 dB			
Internal reference stability	+/-2 x 10^{-8} / day			
Aging	+/-1 x 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			

Ref.: PB-ATLT-QUAD-001-22269

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