

Test Loop Translators

Fixed LO – Manual Attenuation Control

- S, C, X, Ku & DBS Bands
- Simulates Satellite Link
- Tx-Rx, Tx-L and L-Rx Conversions
- High Stability
- Low Phase Noise
- Gain Adjustment
- 1U Rack Height
- Custom Options



General Specifications

Maximum Input Level	+10dBm
Conversion Gain	-20dB nom.
Conversion Flatness	+/-2dB typ. +/-0.5dB/40MHz max.
Attenuation Range	30dB min.
Impedance	50 ohms
Input VSWR	1.8:1 typ.
Output VSWR	1.8:1 typ.
LO Frequency Stability	+/-5ppm max. over 0+50C +/-2ppm typ. over +10+40C +/-2ppm/day max.
Internal Reference	25 or 50MHz standard
Reference Output	As internal reference
Signal Related Spurious	-50dBc typ.
LO Related Spurious	-50dBm typ.
Input Power	80-240V, 50-60Hz
Input Power Connector	IEC with fuse
Operating Temperature	0+50C
Storage Temperature	-40+85C
Attenuation Control	10 turn with dial, front panel
Lock Alarm	LED, front panel
RF Input Connector	SMA female, rear panel
RF Output Connector	SMA female, rear panel
Ref. Monitor Connector	SMA female, rear panel
Size	19" x 1U x 13.5" (343mm) incl. connectors & protrusions

Single Band TLT

The ALT series of Test Loop Translators are designed to replace the satellite link for test and alignment of earth station systems operating in S, C, X, Ku or DBS frequency bands. Incorporating fundamental frequency phase locked oscillators and double balanced mixers, the translators block convert frequencies from uplink to either downlink or L-Band and from L-Band to downlink for instantaneous monitoring of frequency, power levels and modulation. The input path contains a front panel controlled continuously variable attenuator for reducing input power levels. Each unit also provides a reference frequency output and LO lock alarm.

Multi Band TLT

Multiple transmit or receive frequency bands can be accommodated within a single Test Loop Translator and these can be selected from the single band model table. Band selection is then by means of a front panel switch.

Phase Noise (dBc/Hz) typical

Offset Frequency (Hz)	LO Frequency (MHz)					
	650	1750	3050	5100	7400	13050
100	-76	-75	-66	-60	-56	-53
1K	-80	-78	-76	-92	-90	-85
10K	-115	-110	-100	-105	-100	-95
100K	-122	-120	-118	-112	-110	-105
1M	-132	-130	-128	-125	-120	-115

Options:

- -00 Standard
- -01 10MHz Int. Ref.
- -02 50MHz Ext. Ref.
- -03 10MHz Ext. Ref.
- -04 OCXO Int. Ref.
- -11 Switched Ext. LO
- -12 Exclusive Ext. LO
- -21 0dB Conv. Gain
- -31 Step Atten. 69dB
- -41 N Female Input
- -42 N Female Output

Custom Options:

- Multi Band Units
- Filtered Output
- Modular Construction
- Portable Units
- Outdoor Units

Frequency Configuration Table

Model No	Translation Bands	Input Frequency Range (MHz)	Ouput Frequency Range (MHz)	LO Frequency (MHz)
ALT-0175-S	S Tx-Rx	2025-2125	2200-2300	175
ALT-1075-S	S Tx-L	2025-2125	950-1050	1075
ALT-1250-S	S L-Rx	950-1050	2200-2300	1250
ALT-2225C	C Tx-Rx	5845-6425	3620-4200	2225
ALT-4975-C	C Tx-L	5925-6425	950-1450	4975
ALT-2750-C	C L-Rx	950-1450	3700-4200	2750
ALT-7375-CI	C Tx-L (inv)	5925-6425	1450-950	7375
ALT-0650-X	X Tx-Rx	7900-8400	7250-7750	650
ALT-6950-X	X Tx-L	7900-8400	950-1450	6950
ALT-6300-X	X L-Rx	950-1450	7250-7750	6300
ALT-1800-Ku	Ku Tx-Rx	12750-13250	10950-11450	1800
ALT-2050-Ku	Ku Tx-Rx	12750-13250	10700-11200	2050
ALT-11800-Ku	Ku Tx-L	12750-13250	950-1450	11800
ALT-1750-KuE	KuE Tx-Ku Rx	13750-14500	12000-12750	1750
ALT-2300-KuE	KuE Tx-Ku Rx	13750-14500	11450-12200	2300
ALT-2800-KuE	KuE Tx-Ku Rx	13750-14500	10950-11700	2800
ALT-3050-KuE	KuE Tx-Ku Rx	13750-14500	10700-11450	3050
ALT-12800KuE	KuE Tx-L	13750-14500	950-1700	12800
ALT-11050-Ku	Ku L-Rx	950-1700	12000-12750	11050
ALT-10500-Ku	Ku L-Rx	950-1700	11450-12200	10500
ALT-10000-Ku	Ku L-Rx	950-1700	10950-11700	10000
ALT-9750-Ku	Ku L-Rx	950-1700	10700-11450	9750
ALT-11300-Ku	Ku L-Rx	950-1450	12250-12750	11300
ALT-10750-Ku	Ku L-Rx	950-1450	11700-12200	10750
ALT-1750-Ku	Ku Tx-Rx	14000-14500	12250-12750	1750
ALT-2300-Ku	Ku Tx-Rx	14000-14500	11700-12200	2300
ALT-2550-Ku	Ku Tx-Rx	14000-14500	11450-11950	2550
ALT-3050-Ku	Ku Tx-Rx	14000-14500	10950-11450	3050
ALT-13050-Ku	Ku Tx-L	14000-14500	950-1450	13050
ALT-5100-DBS	DBS Tx-Rx	17300-17800	12200-12700	5100
ALT-5178-DBS	DBS Tx-Rx	17300-17800	12122-12622	5178
ALT-5600-DBS-A	DBS Tx-Rx	17300-17800	11700-12200	5600
ALT-5600-DBS-B	DBS Tx-Rx	17300-18100	11700-12500	5600
ALT-5600-DBS-C	DBS Tx-Rx	17800-18100	12200-12500	5600
ALT-7400-DBS	DBS Tx-Rx	18100-18400	10700-11000	7400
ALT-16350-DBS-A	DBS Tx-L	17300-17800	950-1450	16350
ALT-16350-DBS-B	DBS Tx-L	17300-18100	950-1750	16350
ALT-16350-DBS-F	DBS Tx-L	17300-18400	950-2050	16350
ALT-168350-DBS	DBS Tx-L	17800-18100	950-1250	16850
ALT-17150-DBS	DBS Tx-L	18100-18400	950-1250	17150
ALT-11250-DBS	DBS L-Rx	950-1450	12200-12700	11250
ALT-11172-DBS	DBS L-Rx	950-1450	12122-12622	11172
ALT-10750-DBS	DBS L-Rx	950-1750	11700-12500	10750
ALT-9750-DBS	DBS L-Rx	950-1250	10700-11000	9750

We reserve the right to change standard product specifications without notice but will be pleased to consider control drawings for quotation.