

## TLTR(Ka) series



### Ka-Band Remote Mounted Test Loop Translators

<b>TLTR2750</b>	Ka-Band TX (27.5-28.6GHz) to L-Band
<b>TLTR2800</b>	Ka-Band TX (28.0-29.5GHz) to L-Band
<b>TLTR2900</b>	Ka-Band TX (29.0-30.0GHz) to L-Band
<b>TLTR2960</b>	Ka-Band TX (29.6-30.2GHz) to L-Band
<b>TLTR3000</b>	Ka-Band TX (30.0-31.0GHz) to L-Band
<b>TLTR3100</b>	Full Ka-Band TX (27.5-31.0GHz) to Ka-Band
RX (17.7-21.2GHz)	

For other non-standard frequency requirements, please contact the factory.  
For equivalent rack mount units, please see TLT(Ka) & TLTH(Ka) series datasheets.

The **TLTR(Ka) Series** of Test Loop Translators are designed to take a sample of the TX signal and convert it to a frequency at which it can be monitored or analysed. Often monitoring of the Transmit signal is required at L-band, or alternatively a translation of the Transmit signal to the Receive band which is then applied to the Receive equipment in a test mode.






Normally TLT units are supplied without filtering and the output of the unit therefore contains all mixing products. Units with filtered outputs (suitable for re-transmission) are also available, but if required, please consult the factory.

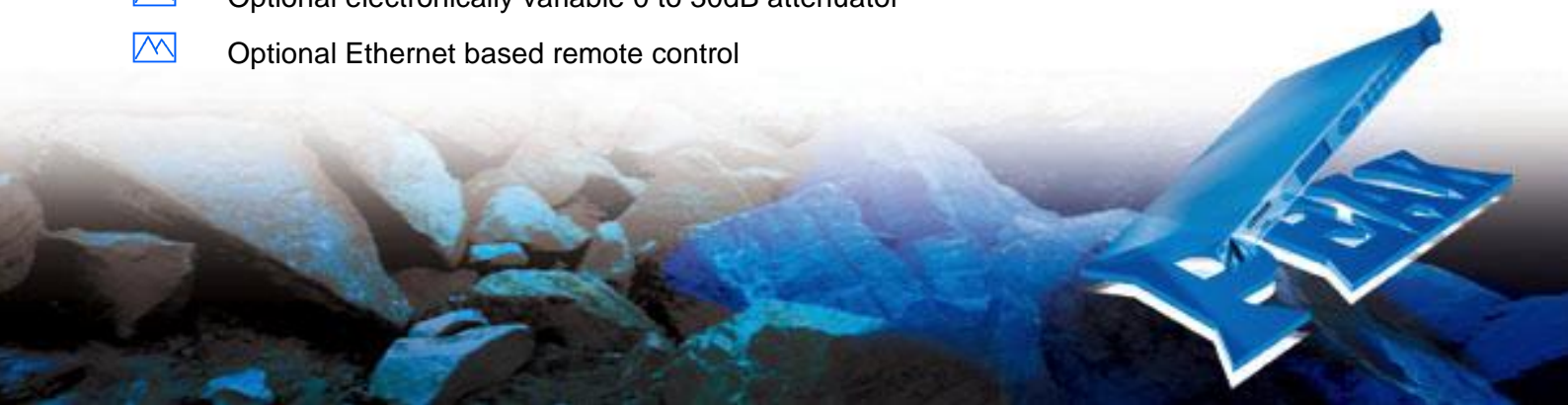
These units are offered with optional electronically variable Attenuation and Ethernet for remote control (with embedded web-server and supporting SNMP Network Management). Ethernet can also be used to power the units, reducing the number of connection cables and simplifying the installation process.

The unit is housed in a rugged weatherproof chassis, suitable for either internal or external/remote locations.

These units are offered with optional electronically variable Attenuation and Ethernet for remote control (with embedded web-server and supporting SNMP Network Management).

### Peak Features

-  High stability and excellent phase noise
-  Full Alarm monitoring
-  Rugged weatherproof housing
-  Optional electronically variable 0 to 30dB attenuator
-  Optional Ethernet based remote control



## TLTR(Ka) series – Typical Specification

### Models;

#### TLTR2750

Input Frequency	27.5-28.6GHz
Output Frequency	950-2050MHz

#### TLTR2800

Input Frequency	28.0-29.5GHz
Output Frequency	950-2450MHz

#### TLTR2900

Input Frequency	29.0-30.0GHz
Output Frequency	950-1950MHz

#### TLTR2960

Input Frequency	29.6-30.2GHz
Output Frequency	950-1550MHz

#### TLTR3000

Input Frequency	30.0-31.0GHz
Output Frequency	950-1950MHz

#### TLTR3100

Input Frequency	27.5-31.0GHz
Output Frequency	17.7-21.2GHz

### L-Band Variable Attenuation (Option 3)

Attenuation range	30dB nominal
Step size	0.1dB, 0.5dB or 1dB
Control	Remote via Ethernet (Option 9)

### Input

Connector	K-type (f) or 2.92mm (f), 50Ω
Return Loss	>18dB
1dB GCP	+15dBm

### Output

Connector	N-type (f), 50Ω
Option 2c;	K-type (f) or 2.92mm (f), 50Ω
Return Loss	>15dB

### Transfer characteristics

Conversion Loss	20dB ±2dB at 0dB attenuation
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### RF Performance

LO phase noise	-65dBc/Hz @ 100Hz
	-90dBc/Hz @ 1kHz
	-100dBc/Hz @ 10kHz
	-105dBc/Hz @ 100kHz
	-120dBc/Hz @ 1MHz

### External Reference Input (Option 4)

Frequency	10MHz (5MHz factory settable)
Level	0dBm ±3dB
Connector	Separate TNC (f), 50Ω
Required phase noise	Better than 50dBc/Hz of output Phase Noise
Locking delay	<2 minutes to stabilise from cold

### Mechanical

Width	123mm (4.85")
Height	172mm (6.8"), plus connections & mounting flanges
Depth	48mm (1.89")
Construction	Die-cast Aluminium, IP66 rated
Weight	1.4kgs (3lbs)

### Control System Interface

Alarms	Summary alarm contacts
Connection	5-pin circular, weatherproof (mating part supplied)
Remote Control (Option 9)	Ethernet; Embedded web server & SNMP network management support

### Environmental

Operating temp	-25°C to +70°C
EMC	EN 55022 part B & EN 50082-1
Safety	EN 60950

### Power Supply

Voltage	+16.5 to +35VDC
Current	1.5A max
Connection	Fed in on 5-pin control interface connection or powered via Ethernet connection (Option 9)

### Options

- 3a) 30dB L-Band Electronic Variable Attenuator, 1dB step
- 3b) 30dB L-Band Electronic Variable Attenuator, 0.1dB step
- 4) External 10MHz Reference input.
- 9) Ethernet interface with embedded web server & SNMP

Note; some of the above options have an impact on the performance specification, for details please contact the factory if this is thought to be critical