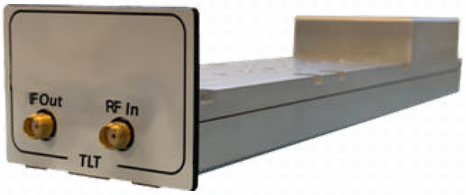
C-Band to L-Band Test Loop Translator Module

C-Band to L-Band

TLT-D-C3L1-1005-S5S5 is a C band input to L band output Test Loop Translator designed to be housed in the 1U GENUS chassis, with 30dB of variable attenuation and LO synthesised frequency. The 1U chassis has the capacity for up to 16 hot-swap RF modules (dependant upon module type fitted). Contact ETL for module types available.

TLT Module



TLT Module
Compact form factor allowing multiple modules to be housed in the Genus chassis. Each module occupies 4 slots in the chassis.

Hot Swap & replaceable
RF TLT modules

Frequency Conversion
Input Frequency: 5.725 - 6.725GHz
Output Frequency: 950 - 1950MHz

Variable Attenuation
30dB of available attenuation

Chassis Options

Local control & monitoring
via HMI high resolution touchscreen

Resilience
from dual redundant hot-swap power supplies & field replaceable CPU & HMI

Compact indoor & outdoor
chassis options, which can be part populated

Secure protocols
with SNMPv3 and HTTPS

Flexible Module Configurations
choose from a mixture of TLT modules with different operating frequencies.

Remote control & monitoring
via RJ45 Ethernet port with SNMP & web browser interface

Field replaceable Internal 10MHz reference source
and external reference inject port with auto detection

Indoor Chassis

Outdoor Unit

GENERAL SPECIFICATIONS		
Operating Frequency Range	Input	5.725 - 6.725 GHz
	Output	0.95 - 1.95 GHz
LO Control Range		3925 - 5625 MHz
Instantaneous Bandwidth		1 GHz (At LO centre frequency)
LO Step Size		1 kHz, Input and output frequency user controllable
Max Input Power Level		0 dBm (operational)
Absolute max Input Power Level		+20 dBm (For no damage)
Conversion Gain		-20 ± 3.0 dB (At 0 dB attenuation setting)
Attenuation control range		0 to 30 dB
Attenuation control steps		0.25 ± 0.20 dB Over full operating band
Flatness	Full Input Band	±2.0 dB
	Any 40 MHz	±0.5 dB
Input Return Loss		14 dB typ. 12 dB min
Output Return Loss		14 dB typ. 12 dB min
Internal Reference Stability		± 5 x 10-8 over 0 to 50°C
Spurs In-Band	Non-carrier related	< -60 dBm , (At -10 dBm input, min attenuation. Non-harmonic)
	Carrier related (> 1MHz Offset)	< -30 dBc, (At -10 dBm input, min attenuation. Non-harmonic)
Spurs Out-of-Band	Non-carrier related	< -65 dBm , (At -10 dBm input, min attenuation. Non-harmonic)
	Carrier related (>1 MHz Offset)	< -30 dBc , (At -10 dBm input, min attenuation. Non-harmonic)
Harmonics		-30 dBc max, (At -10 dBm input, min attenuation)
LO Breakthrough		< -60 dBm max.
External Reference Input Freq		10 MHz
External Reference Input Level		+3 dBm ± 3 dB
Mute		80 dB min.
Spectral Inversion		Non-inverting
Number of modules per chassis		3 max. Module 4 slots wide
MTBF		>80,000 hours
Control Method		Via Chassis

PHASE NOISE	
100 Hz	-75 dBc / Hz (typical)
1 KHz	-80 dBc / Hz (typical)
10 KHz	-85 dBc / Hz (typical)
100 KHz	-90 dBc / Hz (typical)
1 MHz	-110 dBc / Hz (typical)

Note 1: The specification is subject to regular reviews and will be updated from time to time as part of our continuing product development and improved spec accuracy.
Note 2: Operation beyond the quoted limits stated above may cause instantaneous and permanent damage.
Note 3: All specs are for 50 Ohm connectors unless detailed otherwise.