

DTLH200

Dual, Modular, Test Loop Translator with optional 1+1 redundancy



Available Test Loop Translator modules for the DTLH200 chassis;

Model	Input	Output	Notes
MTLH202	2020-2120MHz	2200-2300MHz	
MTLH600	5.85-6.65GHz	950-1750MHz	
MTLH601i	5.85-6.425GHz	1525-950MHz	Inverted output spectrum.
MTLH672	5.850-6.725GHz	950-1825MHz	
MTLH2225	5.850-6.425GHz	3.625-4.200GHz	In-band carrier related spurious limited to -40dBc at 0dBm input typ.
MTLH585	5.85-6.65GHz	3.4-4.2GHz	In-band carrier related spurious limited to -40dBc at 0dBm input typ.
MTLH585i	5.85-6.65GHz	4.2-3.4GHz	Inverted output spectrum.
MTLH642	6.425-6.725GHz	3.4-3.7GHz	
MTLH6725	6.725-7.025GHz	4.5-4.8GHz	
MTLH790	7.9-8.4GHz	950-1450MHz	
MTLH742	7.9-8.4GHz	7.25-7.75GHz	In-band carrier related spurious limited to -45dBc at 0dBm input typ.
MTLH127	12.75-13.50GHz	950-1700MHz	
MTLH137	13.75-14.50GHz	950-1700MHz	
MTLH140	14.0-14.5GHz	950-1450MHz	
MTLH145	14.5-14.8GHz	950-1250MHz	
MTLH1000	13.75-14.50GHz	11.85-12.60GHz	
MTLH1001	14.0-14.5GHz	11.7-12.2GHz	
MTLH142	12.25-12.75GHz	3.7-4.2GHz	
MTLH180	17.3-18.1GHz	950-1750MHz	
MTLH184	17.3-18.4GHz	950-2050MHz	
MTLH173	17.3-18.4GHz	10.85-11.95GHz	In-band carrier related spurious limited to -45dBc at 0dBm input typ.

For other 'non-standard' frequency requirements, please contact the factory.




For equivalent remote mountable units, please see TLTR series datasheet.

The 19-inch 1U rack mounted **DTLH200** chassis unit is designed to accept two Test Loop Translator modules. Modules can be inserted/ replaced in the **DTLH200** unit from the rear without the need to remove power or disturb the other channel in any way.

The **DTLH200** chassis units are mains powered (redundant power supplies as standard) and are constructed of high-grade components to give the ultimate gain flatness and stability performance.

TLT units are supplied without filtering and the output of the unit therefore contains all mixing products. For higher level applications, units with filtering are also available, please consult the factory.

Peak Features

-  High stability and excellent phase noise
-  Redundant power supplies with dual mains input
-  Integral 1+1 redundancy option for module switching



DTLH200 Chassis - Typical Specification

Mechanical

Width	19", standard rack mount
Height	1U (1.75")
Depth	568mm (22.4"), plus connectors
Construction	Aluminium chassis
Weight	Approx. 9kgs (20lbs)

Environmental

Operating temp	0°C to +50°C
EMC	EN 55022, part B & EN 50082-1
Safety	EN 60950

Power Supply (2off in redundant configuration)

Voltage	90-264VAC
Option 11;	48VDC
Frequency	47-63Hz
Total power	50 Watts max.

Control System Interface

Local interface	Graphics display & keypad
Remote control	RS232/ RS485 port
Option 9;	Ethernet; embedded web server & SNMP network management support
Alarms	PSU fail

Internal Reference Stability

Allan deviation	5×10^{-11} over 1s
Ageing	$<5 \times 10^{-9}$ per day, $<5 \times 10^{-7}$ per year
Temp stability	$<5 \times 10^{-8}$ over 0 to 50°C

Note; higher stability reference option available

External Reference Input (Option 4) with auto-detect

Frequency	10MHz (5MHz factory settable)
Level	0dBm \pm 5dB
Connector	BNC (f), 50 Ω

Integral 1+1 'Module' Redundancy (Option 6)

Connections	SMA (f), 50 Ω
Switching speed	<150ms (from fault to switch completion)
Switch isolation	>60dB input to output
Option 13;	Output 'chassis mute' facility (>80dB)

Cables Includes high grade rear panel links

Note; the connection to the internal redundancy circuitry is made via SMA (f) RF links on the rear panel, this allows for by-pass wiring should the need arise. High grade co-axial linking cables are provided.

DTLH Options

- 4) External 10MHz reference input
- 6) Integral 1+1 redundancy module switching
- 9) Ethernet interface with embedded web server & SNMP, replaces RS232/485 port
- 11) 48VDC prime power supply
- 13) Output 'chassis mute' facility (only available with option 6)

Notes; the addition of options can modify the typical specification, for details please consult the factory

MTLH Modules - Typical Specification

Input

Connector	SMA (f), 50 Ω
Option 1a;	N-Type (f), 50 Ω
Return loss	>18dB

Output

Connector	SMA (f), 50 Ω
Option 1b;	N-Type (f), 50 Ω
Return loss	15dB

RF Performance

Conversion loss	20dB \pm 2dB
Gain stability	\pm 0.25dB from 0 to 40°C
Option 7;	Adjustment; 30dB range, 0.1 or 0.5dB steps (L/ S-Band only)
LO phase noise	-75dBc/Hz @ 100Hz
	-92dBc/Hz @ 1kHz
	-100dBc/Hz @ 10kHz
	-105dBc/Hz @ 100kHz
	-125dBc/Hz @ 1MHz

MTLH Module Options

- 1a) N-Type (f), 50 Ω MLA module input connector
- 1b) N-Type (f), 50 Ω MLA module output connector
- 7) Variable attenuation, 30dB range, 0.1dB steps, L/ S-Band
- 7a) Variable attenuation, 30dB range, 0.5dB steps, L/ S-Band

Notes; the addition of options can modify the typical specification, for details please consult the factory

Rear panel view (sample, shown with 1+1 redundancy option fitted)

