

DTL200

Dual, modular, 'hot-swappable' Test Loop Translator with optional 1+1 redundancy



Available Test Loop Translator modules for the DTL200 chassis;

Model	Input	Output	Notes
MTL202	2020-2120MHz	2200-2300MHz	
MTL600	5.85-6.65GHz	950-1750MHz	
MTL601i	5.85-6.425GHz	1525-950MHz	Inverted output spectrum.
MTL672	5.850-6.725GHz	950-1825MHz	
MTL2225	5.850-6.425GHz	3.625-4.200GHz	In-band carrier related spurious limited to -40dBc at 0dBm input typ.
MTL585	5.85-6.65GHz	3.4-4.2GHz	In-band carrier related spurious limited to -40dBc at 0dBm input typ.
MTL585i	5.85-6.65GHz	4.2-3.4GHz	Inverted output spectrum.
MTL642	6.425-6.725GHz	3.4-3.7GHz	
MTL6725	6.725-7.025GHz	4.5-4.8GHz	
MTL790	7.9-8.4GHz	950-1450MHz	
MTL742	7.9-8.4GHz	7.25-7.75GHz	In-band carrier related spurious limited to -45dBc at 0dBm input typ.
MTL127	12.75-13.50GHz	950-1700MHz	
MTL137	13.75-14.50GHz	950-1700MHz	
MTL140	14.0-14.5GHz	950-1450MHz	
MTL145	14.5-14.8GHz	950-1250MHz	
MTL1000	13.75-14.50GHz	11.85-12.60GHz	
MTL1001	14.0-14.5GHz	11.7-12.2GHz	
MTL142	12.25-12.75GHz	3.7-4.2GHz	
MTL180	17.3-18.1GHz	950-1750MHz	
MTL184	17.3-18.4GHz	950-2050MHz	
MTL173	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 **DTL200** chassis unit is designed to accept two Test Loop Translator modules. Modules can be inserted/ replaced in the **DTL200** unit from the rear without the need to remove power or disturb the other channel in any way.

The **DTL200** 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



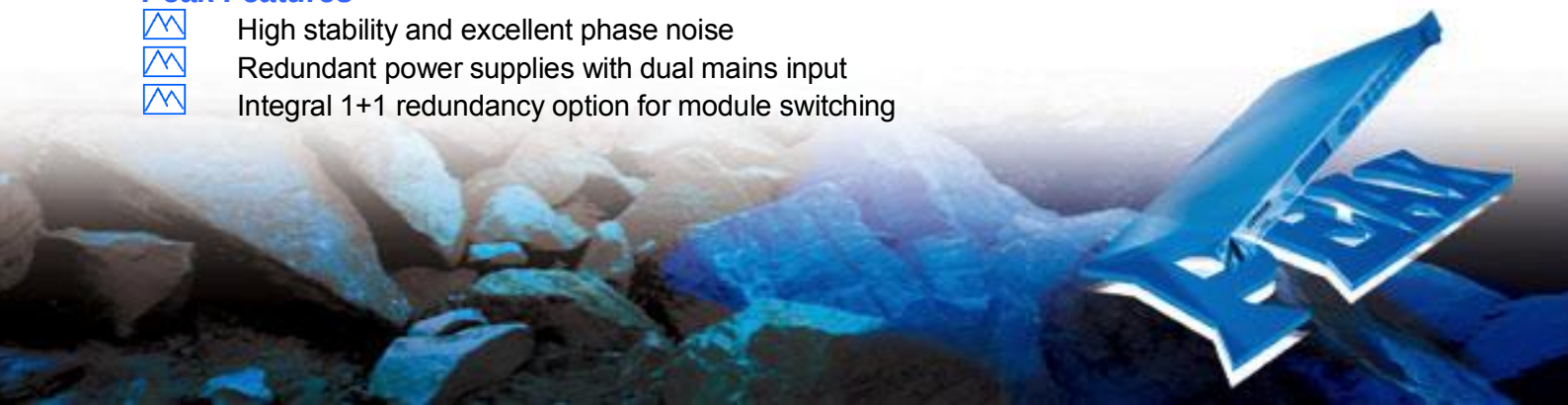
High stability and excellent phase noise



Redundant power supplies with dual mains input



Integral 1+1 redundancy option for module switching



DTL200 Chassis - Typical Specification

Mechanical

Width	19" standard rack mountable
Height	1U (1.75")
Depth	400mm (15.7"), plus connectors
Construction	Aluminium chassis
Weight	4.5kgs (10lbs)

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	Front panel key switches (for option 6)
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 ± 5 dB
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

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.

DTL 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

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

MTL 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 ± 2 dB
Gain stability	± 0.25 dB from 0 to 40°C
LO phase noise	-75dBc/Hz @ 100Hz -92dBc/Hz @ 1kHz -100dBc/Hz @ 10kHz -105dBc/Hz @ 100kHz -125dBc/Hz @ 1MHz

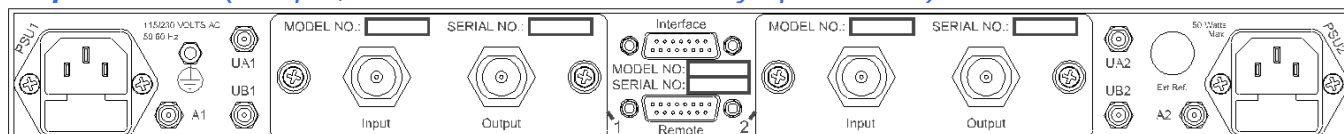
MTL Module Options

1a) N-Type (f), 50 Ω MLA module input connector

1b) N-Type (f), 50 Ω MLA module output connector

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)



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