

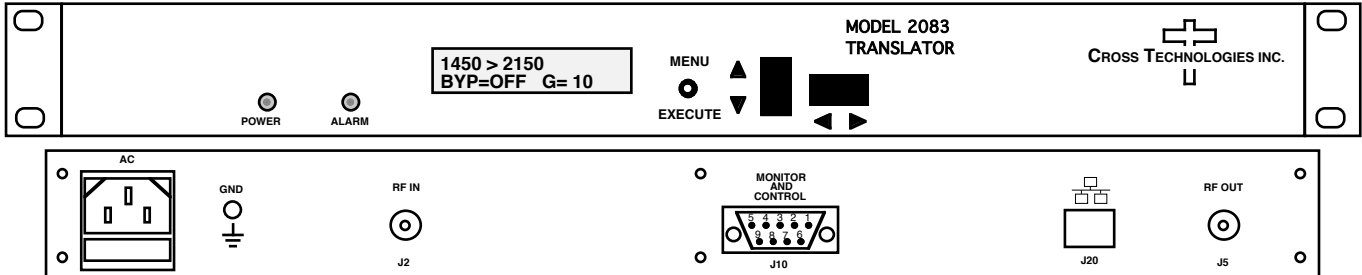


DATA SHEET

Rev. A 3/10/10

Series 2083-1622 L-Band Channel Translator

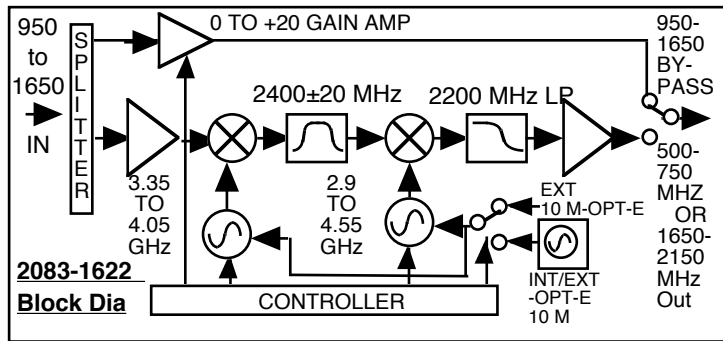
2083-1622 L-Band Channel Translator - The 2083-1622 L-Band Channel Translator converts a 40 MHz channel in the 950-1650 MHz band to a 40 MHz channel in the 500-750 MHz or 1650-2150 MHz bands or switches (user selectable) the 950-1650 input band to the output with no spectrum inversion, low group delay and flat frequency response. The 950-1650 MHz input is mixed with synthesized local oscillator (LO) signals, first to 2400 MHz center frequency (± 20 MHz) and finally to the 500-750 MHz or 1650-2150 MHz bands. A splitter on the input and a SPDT switch at the output allows switching the 950-1650 input to the output at a 0 to +20 Gain identical to where the translated channel gain is set at this time. Frequency translation or by-pass, and gain (0 to +20 dB, selectable in 1 dB steps) are selectable via either the multi-function push button switches or Remote M&C (RS232 or, optional, Ethernet). Settings appear on the LCD display. Front panel LEDs light when DC power is applied (green) or a PLL alarm occurs (red). Connectors are BNC female for RF input and output. The 2083-1622 Translator is housed in an 1 3/4" X 19" X 16" deep rack mount chassis.



2083-1622 L-Band Channel Translator Front and Rear Panels - shown with Ethernet Option

EQUIPMENT SPECIFICATIONS*

Input Characteristics	
Input Impedance/RL	75 Ω /12 dB
Frequency,	950-1650 MHz
Input Level	-30 to -50 dBm
Input 1 dB compression	-20 dBm
Output Characteristics	
Impedance/RL	75 Ω /12 dB
Output Level, Range	-20 to -40 dBm
Output 1 dB compression	-10 dBm
Frequency	a 40 MHz band
	in the 500-750 or 1650-2150 MHz bands
	OR
	Input by-pass



Channel Characteristics	
Gain	0 to +20 \pm 1.5 dB, selectable in 1 dB steps
Frequency Response	\pm 1.5 dB, 500 MHz bandwidth; \pm 1.0 dB, 40 MHz Band; <25 dBC, at \pm 53 MHz
Spurious Response	<-40 dBC in band; <-40 dBC of the 950-1650 input band to the output
Group Delay, max	0.02 ns/MHz ² , parabolic, 0.04ns/MHz, linear, 1 ns ripple any 40 MHz BW
Frequency Sense	Non-inverting

Synthesizer Characteristics	
Frequency Accuracy	\pm 1 ppm max over temp (\pm 0.01 ppm is option-H)
Frequency Step	1 MHz (125 kHz is option-X)
Reference	10 MHz Internal (external/internal is option-E)

Phase Noise @ F (Hz) >	100	1K	10K	100K	1M
dBC/Hz	65	70	80	95	110

Available Options

- E - External 10 MHz ref
- H - High Stability (\pm 0.01ppm) internal ref
- Q - RS485 Remote Interface
- X - 125 kHz frequency step
- W8 - Ethernet Interface
- W18 - Ethernet Interface w/SNMP
- R - Redundant Power Supplies

Controls, Indicators	
Frequency Translation	pushbutton switches; setting on LCD display; Band or by-pass
Gain Selection	pushbutton switches; setting on LCD display; Set to 0 to +20 dB
DC Power; PLL Alarm	Green LED; Red LED

Other	
Connectors, RF In & Out	BNC, female, 75 ohm
Connector, Alarm	DB9 - NO or NC contact closure on Alarm
Size	19 inch standard chassis 1.75" high X 16.0" deep
Power	90 - 260 VAC, 47 - 63 Hz, 30 watts max.

Connector Options/Impedance

- D - 50 Ω BNC (RF), 50 Ω BNC (IF)
- F - 75 Ω F-type (RF), 75 Ω F-type (IF)

*+10 to +40 degrees C; Specifications subject to change without notice

