

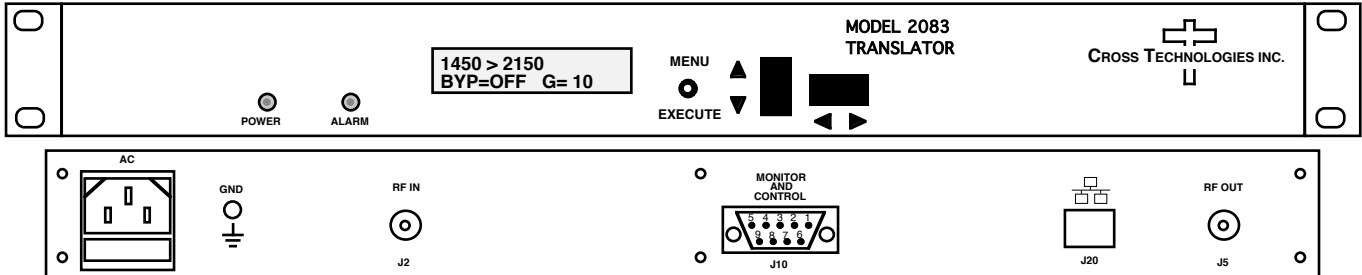


# DATA SHEET

Rev. A 3/10/10

## Series 2083-1622 L-Band Channel Translator

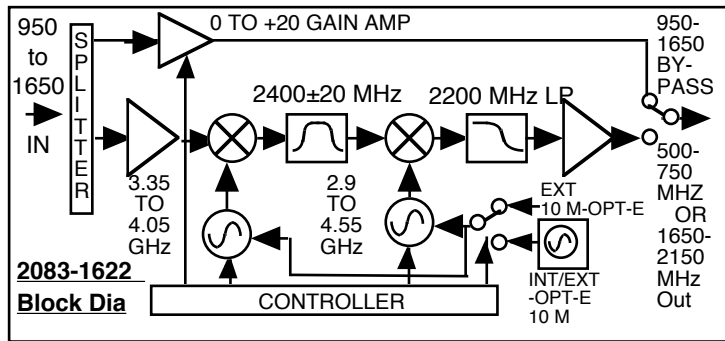
**2083-1622 L-Band Channel Translator.** - The 2083-1622 L-Band Channel Translator converts a 40 MHz channel in the 950-1650 MHz band to a 40 MHz channel in the 500-750 MHz or 1650-2150 MHz bands or switches (user selectable) the 950-1650 input band to the output with no spectrum inversion, low group delay and flat frequency response. The 950-1650 MHz input is mixed with synthesized local oscillator (LO) signals, first to 2400 MHz center frequency ( $\pm 20$  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\*

<b>Input Characteristics</b>	
Input Impedance/RL	75 $\Omega$ /12 dB
Frequency,	950-1650 MHz
Input Level	-30 to -50 dBm
Input 1 dB compression	-20 dBm
<b>Output Characteristics</b>	
Impedance/RL	75 $\Omega$ /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



<b>Channel Characteristics</b>	
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 <sup>2</sup> , parabolic, 0.04ns/MHz, linear, 1 ns ripple any 40 MHz BW
Frequency Sense	Non-inverting

<b>Synthesizer Characteristics</b>		<b>Available Options</b>	
Frequency Accuracy	$\pm$ 1 ppm max over temp ( $\pm$ 0.01 ppm is <b>option-H</b> )	E - External 10 MHz ref	H - High Stability ( $\pm$ 0.01ppm) internal ref
Frequency Step	1 MHz (125 kHz is <b>option-X</b> )	Q - RS485 Remote Interface	X - 125 kHz frequency step
Reference	10 MHz Internal (external/internal is <b>option-E</b> )	W8 - Ethernet Interface	W18 - Ethernet Interface w/SNMP
		R - Redundant Power Supplies	

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

<b>Controls, Indicators</b>	
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

<b>Other</b>		<b>Connector Options/Impedance</b>	
Connectors, RF In & Out	BNC, female, 75 ohm	D - 50 $\Omega$ BNC (RF), 50 $\Omega$ BNC (IF)	F- 75 $\Omega$ F-type (RF), 75 $\Omega$ F-type (IF)
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.		

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

