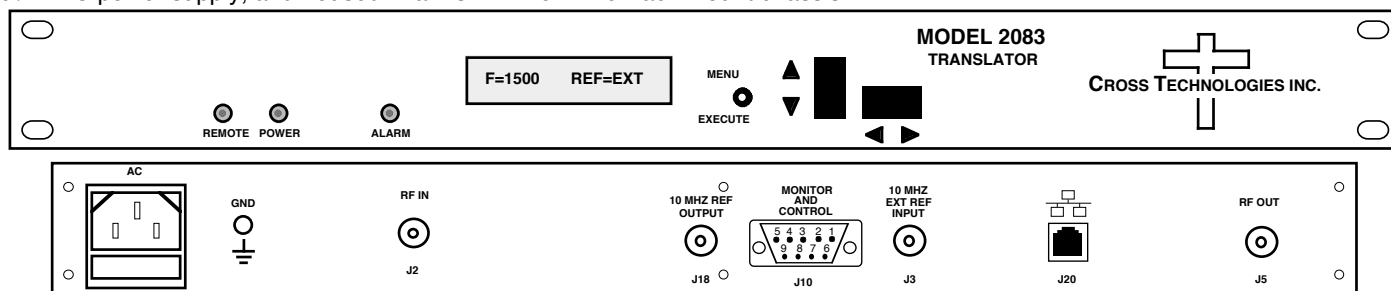


2083-1515 Channel Translator, 0.95 - 1.50 GHz to 0.95 - 1.50 GHz

The 2083-1515 Channel Translator converts a 10 MHz Channel in the 950 to 1500 MHz input band at the same center frequency in the 950 to 1500 MHz output band in 1 MHz steps **which functions as a tunable bandpass filter**. A synthesized local oscillator (LO) provides the frequency selection. Push button switches select the RF frequency and other parameters. Front panel LEDs provide indication of DC power (green), PLL alarm (red), and remote operation (yellow). The gain is +0 dB. Remote operation allows selection of the frequency. Parameter selection and frequency settings appear on the LCD display. Connectors are BNC female for the RF In and RF Out and the optional external reference input and output. **The external 10 MHz option E** includes a 10 MHz output connector which contains either the internal or external 10 MHz reference signal. A high stability **option H** (± 0.01 ppm) is also available. The unit is powered by a 100-240 $\pm 10\%$ VAC power supply, and housed in a 1 3/4" X 19" X 16" rack mount chassis.



EQUIPMENT SPECIFICATIONS*

Input Characteristics (IF)

Impedance/Return Loss	50 Ω /12 dB
Frequency	950 to 1500 MHz
Noise Figure	25 dB max
Input Level	-55 to -15 dBm, -65 goal
Input 1 dB comp.	-5 dBm

Output Characteristics (RF)

Impedance/Return Loss	50 Ω /12 dB
Frequency	950 to 1500 MHz
Output level	-55 to -15 dBm
Output 1 dB comp.	-5 dBm

Channel Characteristics

Gain, fixed	0.0 \pm 2 dB at 1.2 GHz
Frequency Response	± 1.5 dB, 950 - 1500 MHz; ± 0.5 dB, 10 MHz BW; ± 1.5 dB, 20 MHz BW; < 40 dBC, at ± 50 MHz
Spurious, In band	< -45 dBC, in band; < -40 dBC of the 950-1500 input band to the output
Spurious, Out of Band	< -50 dBm (.25-.94 GHz and 1.51-2.2 GHz Out)
Group Delay, max	0.03 ns/MHz² parabolic; 0.1 ns/MHz linear; 1 ns ripple, 10 MHz bandwidth
Frequency Sense	Non-inverting

Synthesizer Characteristics

Frequency Accuracy	± 1.0 ppm max over temp (± 0.01 ppm, option H)
Frequency Step	1.0 MHz (125 kHz to 1 kHz step options available)

Phase Noise @ F (Hz) >	10	100	1K	10K	100K	1M
Standard-1 MHz steps: dBC/Hz	-55	-70	-70	-80	-90	-110

10 MHz Level (In or Out) 3 dBm, ± 3 dB, 75 ohms (option E)

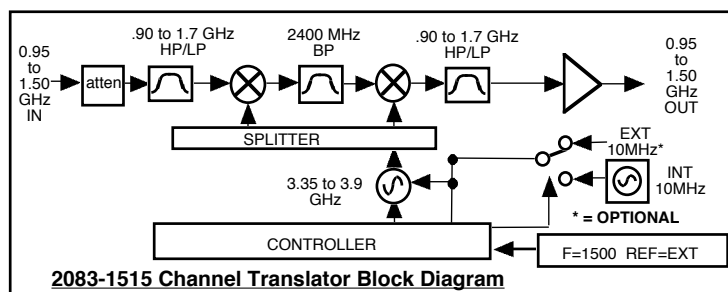
Controls, Indicators

Freq Selection	direct readout LCD; manual or remote selection
Pwr; Alarm; Rem	Green LED; Red LED; Yellow LED;
Remote	RS232C, 9600 baud (RS485, Ethernet Optional)

Other

RF Connectors	BNC (female)
10 MHz Connectors	BNC (female), 75Ω, works with 50 or 75 ohms (option E)
Alarm/Remote Connector	DB9 (female) - NO or NC contact closure on Alarm
Size	19 inch, 1RU standard chassis 1.75" H X 16.0" D
Power	100-240 $\pm 10\%$ VAC, 47-63 Hz, 25 W max. (24 , 48 VDC Optional)

2083-1515 Front and Rear Panels



Available Options

E - External 10 MHz ref in & out; RF Ins.
H - High Stability (± 0.01 ppm) Internal Ref
X or X1- 125 kHz or 100 kHz step size

Comm. Interface/Standard RS232

Q - RS485 Remote Interface
W8 - Ethernet; w/Web Browser (WB)
W18 - Ethernet; w/WB & SNMP
W28 - Ethernet; w/TCP/IP, Telnet

Connectors/Impedance (In & Out)

Std. - 50 Ω BNC
B - 75 Ω BNC
F - 75 Ω Type F
N N- 50 Ω N-type

Contact Cross for other options

*10°C to 40°C; Specifications subject to change without notice.