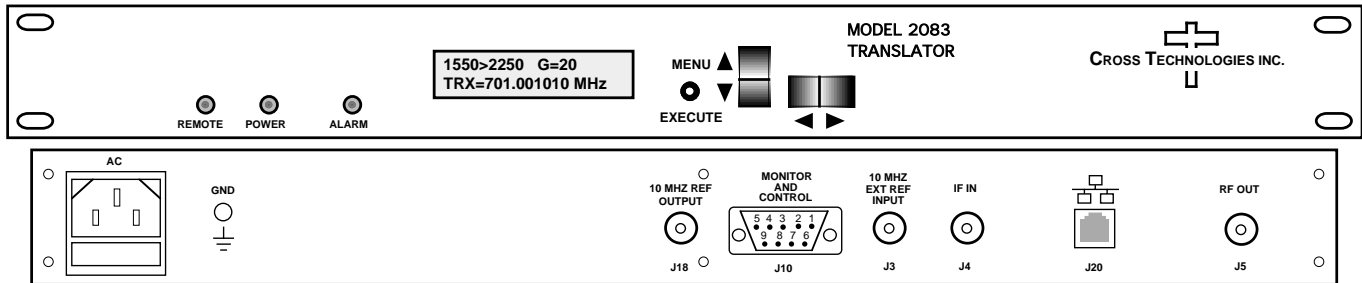


2083-1320 Block Translator, 1350-1560 to 2050-2260 MHz

2083-1320 Block Translator - The 2083-1320 Block Translator converts a 1350-1560 MHz block to 2050-2260 MHz block with no spectrum inversion, low group delay and flat frequency response. The 1350-1560 MHz input is mixed with synthesized local oscillator (LO) signals, first to 3100 MHz center frequency and finally to the **2050-2260 MHz** block output. The gain can be set for 0 to +20 dB in 1 dB increments. The output translation can be adjusted by ± 10 MHz in 1 MHz (**10 Hz, Option -X10**) increments. Multifunction switches select the Gain, the translation frequency and internal or External 10 MHz reference which appear on the LCD display and can be adjusted remotely. Front panel LEDs provide indication of DC power (green), PLL alarm (red), and remote operation (yellow). Connectors are **BNC female** for RF input and output. The unit is powered by a 100-240 $\pm 10\%$ VAC, 47-63 HZ input power supply and housed in a 1 3/4" X 19" X 16" rack mount chassis.



2083-1320 Front and Rear Panels (Shown with optional Ethernet, options H, X10)

EQUIPMENT SPECIFICATIONS*

Input Characteristics

Input Impedance/RL **50 Ω /12 dB**
 Frequency **1350 - 1560 MHz**
 Input **Composite Level -70 to -50 dBm**
 Input, max. no damage **+15 dBm**

Output Characteristics

Impedance/RL **50 Ω /12 dB**
 Frequency **2050 - 2260 MHz**
 Output **Composite Level -50 to -30 dBm**
 Output 1 dB compression **-20 dBm, at max gain**

Channel Characteristics

Gain **0 to +20 dB, ± 1 dB, selectable in 1 dB steps**
 Frequency Response **± 1.0 dB, 20 MHz bandwidth; ± 0.5 dB, any 5 MHz increment**
 Spurious, Inband **< -50 dBc in band, signal dependent and signal independent; See NOTE 1**
 Spurious, out of band **< -30 dBc, 1.6- 2.2 GHz and 2.3-3.0 GHz and 1.54-1.56 GHz feed through rejection; See NOTE 1**
 Group Delay, max. **0.03 ns/MHz², parabolic, 0.1ns/MHz, linear, 1 ns ripple, 20 MHz BW**
 Frequency Sense **Non-inverting**

Synthesizer Characteristics

Translation; Accuracy **700 MHz; 1ppm; Option -H, ± 0.01 ppm**
 Reference **10 MHz Internal; Option -E, Internal/ External selection**
 Frequency Step **1 MHz; ± 10 MHz Translation adjustment: Option -X10, 10 Hz translation step adjustment**

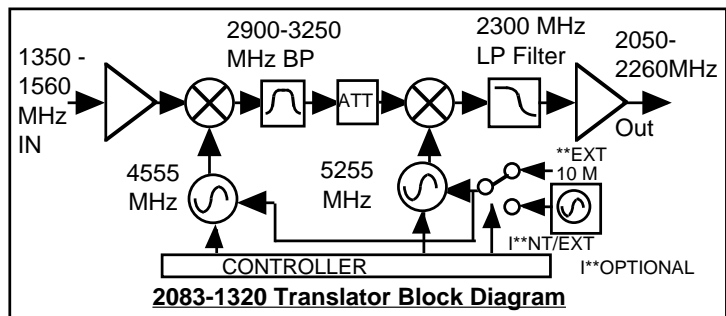
Phase Noise @ F (Hz) >	100	1K	10K	100K	1M
dBC/Hz	-70	-70	-80	-90	-100

Controls, Indicators

Frequency Translation **Direct readout LCD; manual or remote selection**
 Gain (MGC) **Direct readout LCD; manual or remote selection**
 Ext. ref. (Option -E) **Direct readout LCD; manual or remote selection**
 Power; Alarm; Remote **Green LED; Red LED; Yellow LED**
 Remote **RS232C, 9600 baud ; RS485, Ethernet Options**

Other

RF In/RF Out Connector **BNC (female)**
 Alarm/Remote Connector **DB9 (female) - NO or NC contact closure on Alarm**
 Size **19 inch standard chassis 1.75" High X 16.0" Deep**
 Power **100-240 ($\pm 10\%$) VAC, 47-63 Hz, 30 watts max.**



NOTE 1: dBc is relative to the COMPOSITE Output Level

Available Options

E - External 10 MHz Input & Output
 H - High Stability (± 0.01 ppm) Internal Ref
 X10 - 10 Hz Tuning

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

B - 75 Ω BNC (RF IN), 75 Ω BNC (RF OUT)
 NN - 50 Ω N (RF IN),, 50 Ω N (RF OUT)

Contact Cross for other options

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