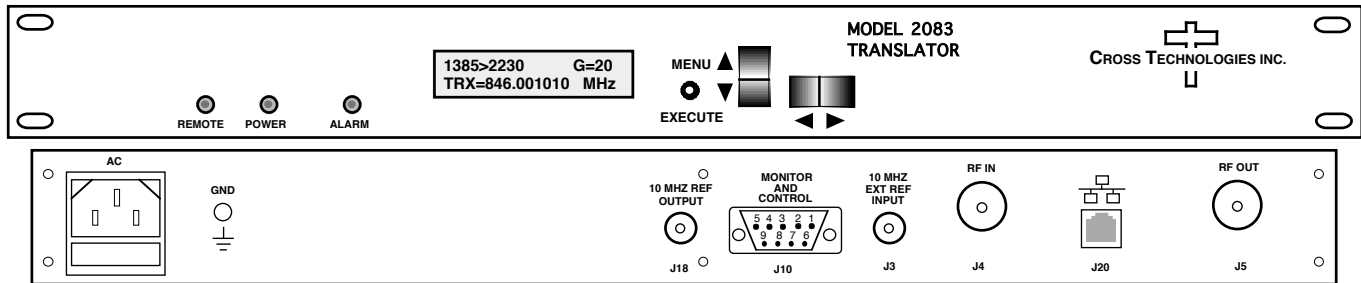


2083-21-1422 Block Translator, 1375-1395 or 1540-1560 to 2220-2240 MHz

2083-21-1422 Block Translator - The 2083-21-1422 Block Translator converts either a 1375-1395 MHz or a 1540-1560 MHz block to 2220-2240 MHz block with no spectrum inversion. The 1375-1395 or 1540-1560 MHz input is mixed with local oscillator (LO) signals, first to a 1750 MHz center frequency and finally to the **2220-2240 MHz** block output. The gain can be set for 0 to +20 dB in 1 dB increments. **The input 1385 and 1550 MHz translation center frequencies can be adjusted by ± 10 MHz in 1 MHz (10 Hz, Option -X10) increments. The output center frequency is fixed at 2230 MHz.** Multifunction switches select gain, translation frequency and internal or External (+3±3 dBm) 10 MHz reference (Option E), also adjustable remotely. Front panel LEDs show DC power (green), PLL alarm (red), and remote operation (yellow). Connectors are **BNC female** for (Option E) 10MHz In and Out, and RF In and Out. It is powered by a 100-240 ±10% VAC, 47-63 HZ input power supply and in a 1 3/4" X 19" X 16" 1RU chassis.



2083-21-1422 Front and Rear Panels (Shown with optional Ethernet and options E, H, X10)

EQUIPMENT SPECIFICATIONS*

Input Characteristics

Input Impedance/RL **50Ω /12 dB**
 Frequency (20MHz BW) **Band1 Fc=1375 - 1395 MHz**
Band2 Fc=1540 - 1560 MHz

Input Composite Level **-70 to -50 dBm**
 Input, max. no damage **+15 dBm**

Output Characteristics

Impedance/RL **50Ω/12 dB**
 Frequency **2220 - 2240 MHz, Bands 1 and 2**
 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±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 Input 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 **±1ppm; Option -H, ±0.01 ppm**
 Reference **10 MHz Internal; Option -E, Internal/ External selection; external level = +3±3 dBm, BNC connector**
 Frequency Step **1 MHz; ± 10 MHz Translation adjustment; Option -X10, 10 Hz translation step adjustment**

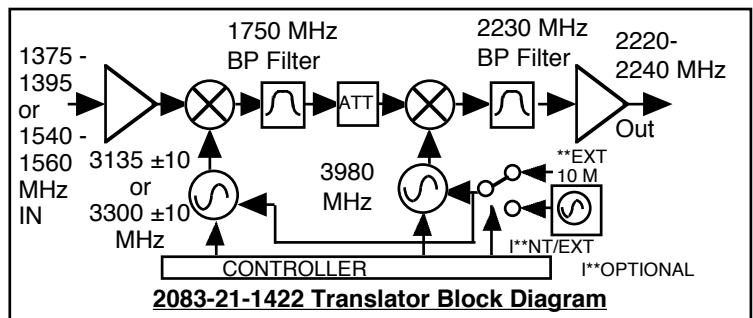
Phase Noise @ F (Hz) >	100	1K	10K	100K	1M
dBc	-70	-70	-80	-90	-100

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 **50Ω 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 (±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 (±0.01ppm) 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 - 75Ω BNC (RF IN), 75Ω BNC (RF OUT)
 NN - 50Ω N (RF IN), 50Ω N (RF OUT)
Contact Cross for other options

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