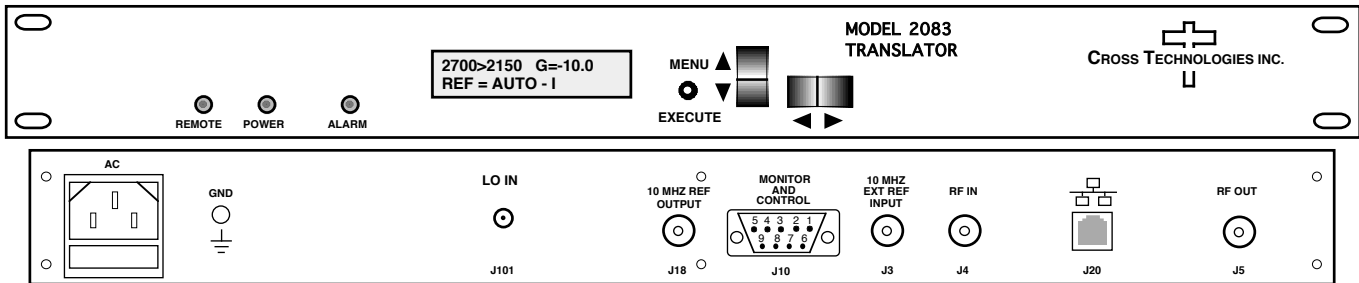


2083-2821 Block Translator, 2600-2800 to 2050-2250 MHz

The 2083-2821 Block Translator converts a 2600-2800 MHz block to 2050-2250 MHz block **with or without spectrum inversion (selectable)**. The **2600-2800 MHz** input is mixed with local oscillator (LO) signals, first (**LO1**) to a 400 MHz center frequency and finally (**LO2**) to the **2050-2250 MHz** block output (**Option W89 allows for an external LO2, switched & terminated, 50Ω, SMA, +8 to +12 dBm input signal**). Gain can be set for **0 to -30 dB** in **0.5 ± 0.5 dB increments**. The output translation is fixed (**Option X5050 - ±50kHz LO1 tuning, 50 Hz steps**). Multifunction switches select Gain and internal or External 10 MHz reference (**and Options W89 and X5050 settings**) which appear on the LCD display and can be adjusted remotely. Front panel LEDs indicate DC power (green), PLL alarm (red), and remote operation (yellow). Connectors are **BNC female** for RF and 10 MHz input and output. 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" rack mount chassis.



2083-2821 Front and Rear Panels (Shown with optional Ethernet and W89)

EQUIPMENT SPECIFICATIONS*

Input Characteristics

Input Impedance/RL **50Ω /14 dB**
 Frequency **2600 - 2800 MHz**
 Input Level **-15 to 0 dBm**

Output Characteristics

Impedance/RL **50Ω/14 dB**
 Frequency **2050 - 2250 MHz**
 Output Level **-30 to -15 dBm**
 Output 1 dB compression **-5 dBm, at max gain**

Channel Characteristics

Gain, max; adjustment **+0 dB ±1 dB, max. gain; 0 to -30 dB gain adjustment in 0.5 ± 0.5 dB Steps**
 Spurious, Inband **< -55 dBC in band, signal dependent and signal independent; -15 dBm Out**
 Spurious, out of band **< -50 dBm, 2050-500 MHz to 2050 MHz and 2250 to 2250+500 MHz Out**
 Intermodulation **< -55 dBC for two carriers each at -20 dBm out**
 Frequency Response **± 2.0 dB, 200 MHz bandwidth; ± 1.0 dB, any 100 MHz bandwidth; ± 0.5 dB, any 20 MHz increment**
 Frequency Sense **Non-inverting or Inverting, selectable**

Synthesizer Characteristics

Translation; Accuracy **± 1ppm; Option H, ±0.01 ppm**
 Reference **10 MHz Internal; Internal/ External selection**

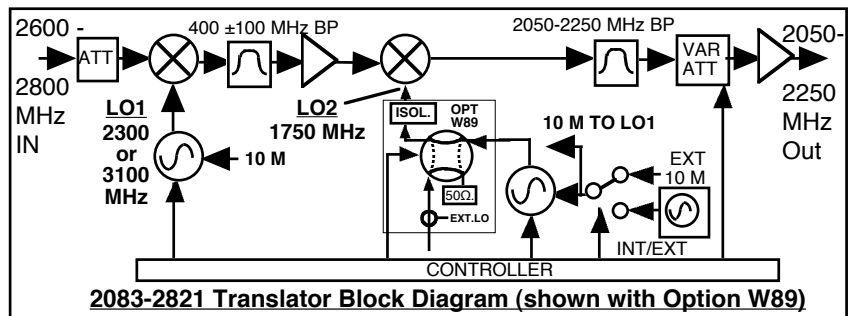
Phase Noise @ F (Hz) >	100	1K	10K	100K	1M
dBC/Hz	-70	-80	-80	-95	-100

Controls, Indicators

Gain (MGC) **Direct readout LCD; manual or remote selection**
 Ext. ref. **Direct readout LCD; manual or remote selection**
 Power; Alarm; Remote **Green LED; Red LED; Yellow LED**
 Remote **RS232C/RS485/422, 9600 baud (Ethernet Optional)**

Other

RF In/RF Out Connector **BNC (female)**
 10 MHz Connector **BNC (female), 75Ω, works with 50 or 75 ohms**
 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.**



2083-2821 Translator Block Diagram (shown with Option W89)

Available Options

H - High Stability (±0.01ppm) Internal Ref
W89 - Ext. LO2, switched & terminated, 50Ω, SMA, +8 to +12 dBm in.
X5050 - ±50kHz LO1 tuning, 50 Hz steps
Comm. Interface/Standard RS232
W8 - Ethernet; w/Web Browser (WB)
W18 - Ethernet; w/WB & SNMP
W28 - Ethernet; w/TCP/IP, Telnet
W828 - Ethernet, W18 + W28
Connectors/Impedance
 Std. - 50Ω BNC (RF IN), 50Ω BNC (RF OUT)
 NN - 50Ω N (RF IN), 50Ω N (RF OUT)
 SS - 50Ω SMA (RF IN), 50Ω SMA (RF OUT)
Contact Cross for other options

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