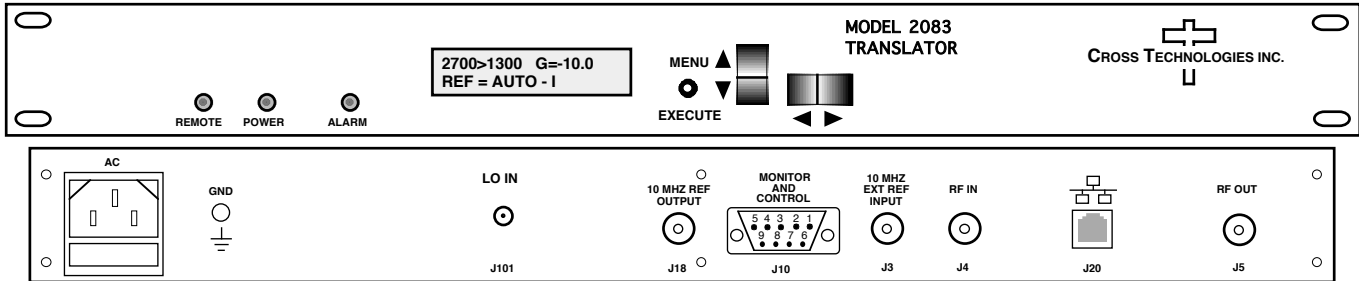


2083-2813 Block Translator, 2600-2800 to 1200-1400 MHz

The 2083-2813 Block Translator converts a 2600-2800 MHz block to 1200-1400 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 **1200-1400 MHz** block output (Option W89 allows for an external LO2, switched & terminated, 50Ω, SMA, +8 to +12 dBm input signal) **NOTE: In non-invert, an increase in external LO2 frequency results in a decrease in output frequency.** 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.



2083-2813 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 **1200 - 1400 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, 1200-500 MHz to 1200 MHz and 1400 to 1400+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**

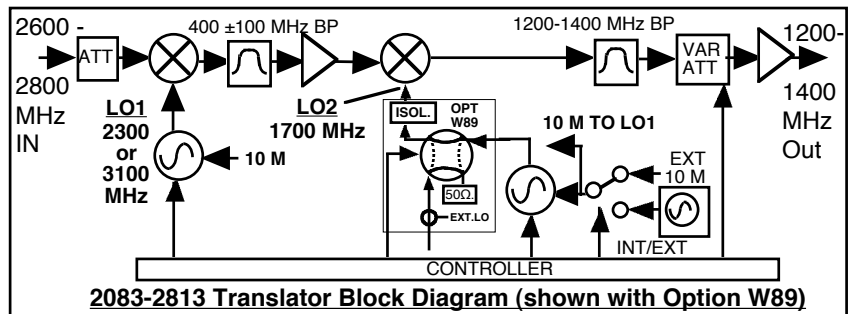
Phase Noise @ F (Hz) >	100	1K	10K	100K	1M
dBc	-70	-80	-80	-95	-100

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.



2083-2813 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