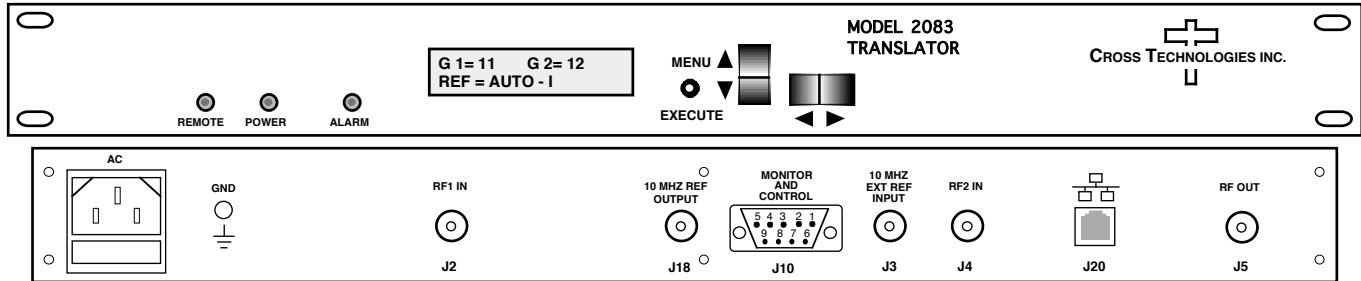


2083-0915-2150 Block Translator(Inverted)/Combiner, 950-1450 to 1650-2150 MHz

2083-0915-2150 Block Translator(Inverted)/Combiner - The 2083-0915-2150 Block Translator(Inverted)/Combiner converts a 950-1450 MHz block (CH2) to 1650-2150 MHz block **with spectrum inversion**, and combines it with a second 950-1450 MHz block (CH1) to provide a 950-2150 MHz combined spectrum. The 950-1450 MHz (CH2) input is mixed with synthesized local oscillator (LO) at 3100 MHz to generate the 1650-2150 MHz, **spectrum inverted**, block output. The CH1 950-1450 MHz block goes to an amplifier, variable attenuator and **bandpass** filter and then is summed in with the 1650-2150 MHz (CH2) block to provide the 950-2150 MHz combined spectrum. Each channel's gain can be adjusted from 0 to +20 dB in 1±1 dB increments. Multifunction switches adjust each channel's gain and internal or External (**Option E**) 10 MHz reference which appear on the LCD display and can be set remotely. Front panel LEDs provide indication of DC power (green), PLL alarm (red), and remote operation (yellow). Connectors are **Type F female** for RF 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.



2083-0915-2150 Front and Rear Panels (Shown with optional Ethernet and option E)

EQUIPMENT SPECIFICATIONS (CH1 and CH2)*

Input Characteristics

Input Impedance/RL **75Ω /12 dB**
 Frequency 950 - 1450 MHz
 Input Composite Level -30 to -50 dBm
 Noise Figure, max. 15 dB at max gain
 Input 1 dB compression -20 dBm

Output Characteristics

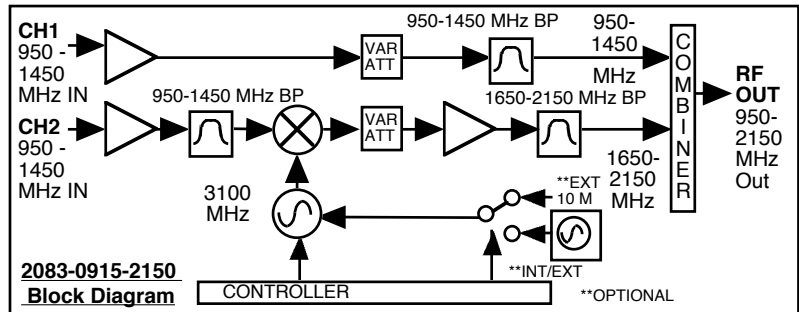
Impedance/RL **75Ω/12 dB**
 Frequency **950 - 2150 MHz (CH1 + CH2)**
 Output Composite Level -20 to -40 dBm
 Output 1 dB compr. -10 dBm, at max gain

Channel Characteristics

Gain, Max; Adjustment **+20 ±2 dB at Fc; 0 to +20 dB, selectable in 1±1 dB steps**
 Frequency Response **± 1.5 dB, 500 MHz bandwidth; ± 0.5 dB, any 40 MHz increment**
 Spurs-Inband **< -40 dBc in band, signal dependent and signal independent; -20 dBm out; See NOTE 1**
 Spurs-out of band **< -30 dBc, 0.5- 0.94 GHz and 2.2-2.6 GHz; -20 dBm out; See NOTE 1**
 Frequency Sense **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**
 Frequency Step **None, fixed frequency translation**



2083-0915-2150 Block Diagram

NOTE 1: dBc is relative to the COMPOSITE Output Level

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

Controls, Indicators

Gain (CH1 and CH2) 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 Conn. Type F (female)
 10 MHz Connector BNC (female), **75Ω, works with 50 or 75 ohms**
 Alarm/Remote Conn. 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.

Available Options

E - External 10 MHz Input & Output
 H - High Stability (±0.01ppm) Internal Ref
 R- Redundant Power Supplies
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
W828 - Ethernet, W18 + W28
Connectors/Impedance
 Std. - 75Ω Type F (RF IN and RF OUT)
Contact Cross for other options

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