CROSS TECHNOLOGIES, INC.

DATA SHEET

6/20/17 REV. C

2083-1919-02 Translator, 0.95 to 1.95 GHz, ±250 MHz, Spectrum Inverter

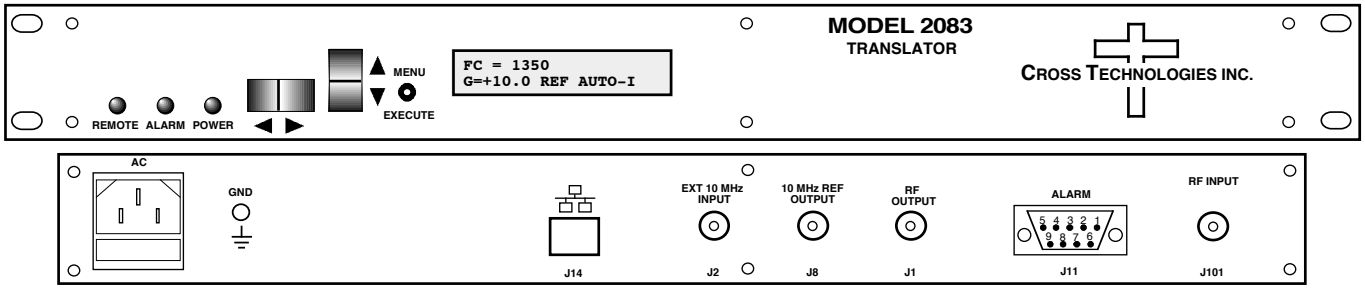
2083-1919-02 Block Translator - The 2083-1919-02 Block Translator works from 0.95 to 1.95 GHz and has three operating modes:

1) Tracking - Provides a **±250 MHz block** inverted spectrum with Fin = Fout.

2) Independent - Provides a **±250 MHz block** inverted spectrum with Fin and Fout tuned independently.

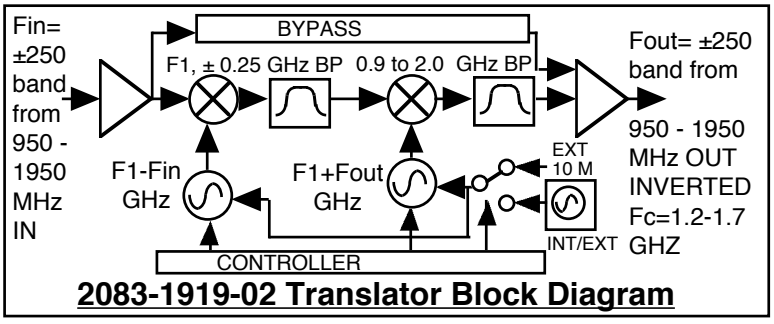
3) Bypass - Provides a non-inverted pass through of the entire 0.95 to 1.95 GHz band with gain control.

The 0.95-1.95 GHz input is mixed, first to a **±250 MHz block** at F1 center frequency with a low side LO (F1 - Fin), and then to a **±250 MHz block** with a high side LO (F1 + Fin) which provides spectrum inversion. The **Tracking** and **Independent** modes function as shown above. In **Bypass" mode** the entire 0.95 to 1.95 GHz band is just amplified. The gain range is **0 to +30 dB in 0.5 ±0.5 dB** steps. Tuning of Fin and Fout is in 1 MHz **steps from 1.2 - 1.7 GHz**. Multifunction switches select the Gain, Fin and Fout frequencies 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 **Type F female** for RF input and output. The unit is powered by a 100-240 ±10% VAC, 47-63 HZ input power supply and housed in a 1 3/4" X 19" X 16" rack mount chassis.



2083-1919-02 Front & Rear Panels (shown with optional Ethernet)

EQUIPMENT SPECIFICATIONS*



2083-1919-02 Translator Block Diagram

Input Characteristics	
Input Impedance/RL	**75Ω** /12 dB
Frequency	950 - 1950 MHz
Input **Composite** Level	**-50 to -30 dBm**
Input, max. no damage	+10 dBm
Output Characteristics	
Impedance/RL	**75Ω**/12 dB
Frequency	**Fc = 1.2 - 1.7 GHz, ±250 MHz**
Output **Composite** Level	**-40 to -20 dBm**
Output 1 dB compression	**-10 dBm, at max gain**
Channel Characteristics	
Gain	**0 to +30 dB, ± 2 dB, selectable in 0.5 ±0.5 dB steps, at Fc**
Frequency Response	**± 2.0 dB, ± 0.25 GHz bandwidth;** ± 0.5 dB, any 40 MHz increment
Spurious, Inband	**< -50 dBC in band, signal dependent and signal independent; See NOTE 1**
Spurious, out of band	**< -30 dBC, 0.5- 0.94 GHz and 1.96-2.5 GHz; See NOTE 1**
Frequency Sense	**Inverting**
Synthesizer Characteristics	
Translation; Accuracy	**±0.01 ppm**
Reference	10 MHz Internal; Internal/ External selection
Frequency Step	**1 MHz; Fin = Fout Center frequency adjustment, 1.2-1.7 GHz**

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	
Frequency Translation	Direct readout LCD; manual or remote selection
Gain (MGC)	Direct readout LCD; manual or remote selection
Power; Alarm; Remote	Green LED; Red LED; Yellow LED
Remote	RS232C, 9600 baud **; RS485, Ethernet Optional**
Other	
RF In/RF Out Connector	**Type F (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.

Available Options

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)
D - 50Ω BNC (RF IN), 50Ω 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

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