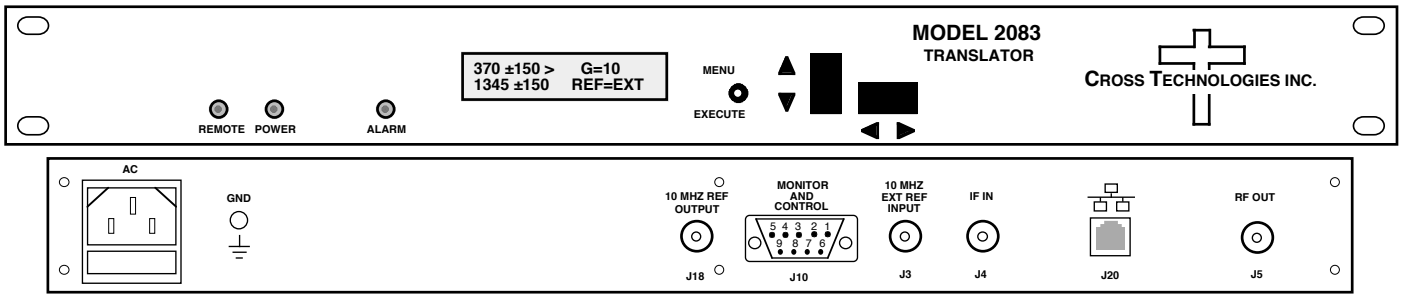
CROSS TECHNOLOGIES, INC.

DATA SHEET

11/30/22 REV. 0

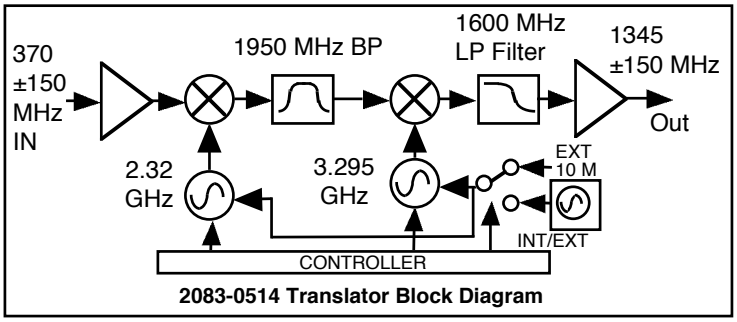
2083-0514 Block 370 ±150 to 1345 ±150 Translator, Fixed Frequency

2083-0514 Block 370 ±150 to 1345 ±150 Translator - The 2083-0514 Block 370 ±150 to 1345 ±150 Translator converts a 370 ±150 MHz block to 1345 ±150 MHz block with no spectrum inversion, low group delay and flat frequency response. The 370 ±150 MHz input is mixed with synthesized local oscillator (LO) signals, first to 1950 MHz center frequency and finally to the 1345 ±150 MHz block output. Multi-function switches select the gain and internal or external 10 MHz. The input frequency band, output frequency band, internal or external reference, and gain (0 to +20 dB, selectable in 1 dB steps) settings appear on the LCD display. Front panel LEDs provide indication of DC power (green), PLL alarm (red), and remote operation (yellow). Remote operation allows setting the overall gain and 10 MHz reference. Connectors are BNC female for RF input and output and for the external 10 MHz reference (+3± 3 dBm in). 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.



2083-0514 Front and Rear Panels (Shown with optional Ethernet)

EQUIPMENT SPECIFICATIONS*



2083-0514 Translator Block Diagram

Input Characteristics

Input Impedance/RL	50Ω /**15 dB**
Frequency,	**370 ±150 MHz**
Input Level	**-30 to -10 dBm**
Noise Figure	**+18 dB, max., Fc, Gmax**

Output Characteristics

Impedance/RL	50Ω/**15 dB**
Frequency	**1345 ±150 MHz**
Output Level, Range	**-25 to -5 dBm**
Output 1 dB compr.	**+5 dBm, Fc, Gmax**

Channel Characteristics

Gain **at F_C**	**0 to +20 ± 2 dB**, selectable in **1 ±1 dB steps**
Frequency Response	**± 1.5dB, Fc ±150 MHz;** ± 0.5 dB, **Fc ±80 MHz; Gmax**
Spurious, In band	**>50 dBc signal dependent or independent at -5 dBm out, Gmax**
Spurious, Out of band	**<-50 dBm, 0.5 - 1.195 and 1.495 - 2.0 GHz, Gmax**
Frequency Sense	Non-inverting

Synthesizer Characteristics

Frequency Accuracy	± 1.0 ppm max over temp (±0.01 ppm, option-H)
Reference	10 MHz Internal; Internal/External
Frequency Step	None, fixed frequency translation

Phase Noise @ F (Hz) >	*100*	*1K*	*10K*	*100K*	*1M*	*10M*
dBc/Hz	*-60*	*-70*	*-80*	*-90*	*-100*	*-110*

10 MHz Level (In or Out) 3 dBm, ± 3 dB, **50 ohms**

Controls, Indicators

Gain Selection	direct readout LCD; manual or remote selection
Pwr; Alarm; Rem;	Green LED; Red LED; Yellow LED
Remote	RS232C, 9600 baud **(RS485, Ethernet Optional)**

Other

RF In/RF Out Conn.	BNC (female), 50Ω
10 MHz Conn. (In & Out)	BNC (female)**, 50Ω**
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.

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

Available Options

H - High Stability (±0.01ppm) Internal Ref
W31 0 to +50 degrees C operation

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 - W8 +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

Cross Technologies, Inc. • www.crosstechnologies.com
6170 Shiloh Road • Alpharetta, GA 30005 • 770.886.8005 • FAX 770.886.7964