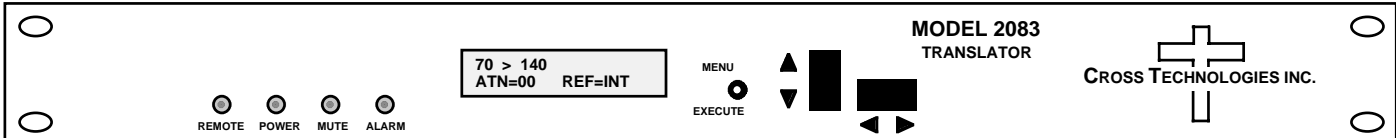


2083-714 IF to IF Translator

The 2083-714 Frequency Translator converts a 70 MHz signal to 140 MHz or a 140 MHz signal to 70 MHz with no spectrum inversion, low group delay, and flat frequency response. The 70 MHz or 140 MHz IF input is mixed with synthesized local oscillator (LO) signals, first to 1750 MHz and finally to 140 MHz or 70 MHz. Multi-function push button switches select the translation and gain. Frequency translation and gain (0 to -10 dB, adjustable) settings appear on the LCD display. Front panel LEDs light when DC power is applied (green), a PLL alarm occurs (red), the signal is muted (yellow), or remote control is active (yellow). A 10 MHz input allows for connection of an external 10 MHz reference. The 10 MHz output contains the 10 MHz reference signal (be it internal or external). Connectors are BNC female for the IF and 10 MHz input and output. The 2083-714 Translator is housed in a 1 3/4" X 19" X 16" deep rack mount chassis. **Option -H** provides a 0.01 ppm high stability reference.



2083-714 TRANSLATOR

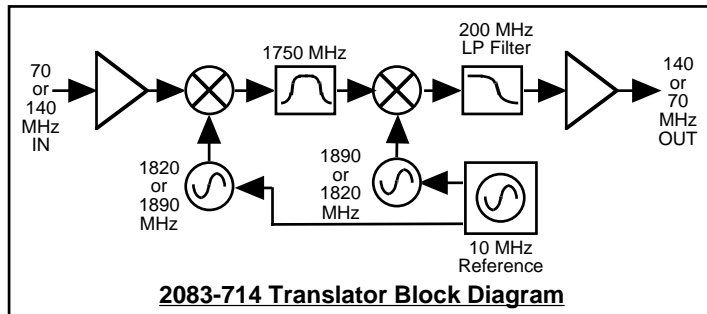
EQUIPMENT SPECIFICATIONS*

Input Characteristics

Input Impedance/RL	75 Ω /18 dB
Frequency, 70 to 140	70 ± 18 MHz
Frequency, 140 to 70	140 ± 18 MHz
Input Level	-10 to -20 dBm
Input 1 dB compression	0 dBm

Output Characteristics

Impedance/RL	75 Ω/18 dB
Frequency, 70 to 140	140 ± 18 MHz
Frequency, 140 to 70	70 ± 18 MHz
Output 1 dB compression	+5 dBm



2083-714 Translator Block Diagram

Channel Characteristics

Gain	0 to -10 ± 0.5 dB, selectable in 1dB steps
Spurious Response	<-50 dBC in band ; < -50 dBC out of band
Frequency Response	± 0.3 dB, ± 12 MHz; ± 0.5 dB, ± 18 MHz
Group Delay, max	3 ns, 30 MHz, 5 ns, 36 MHz BW
10MHz In/Out Level	0 dB ± 3 dB
Frequency Sense	Non-inverting

Synthesizer Characteristics

Frequency Accuracy	±70 Hz max over temp; ±1.0 ppm internal reference (±0.01 ppm option -H)
Phase Noise (dBC/Hz)	< -80 @ 1 kHz; < -90 @ 10 kHz; < -100 @ 100 kHz; < -110 @ 1 MHz

Controls, Indicators

Frequency Translation	pushbutton switches; setting shown on LCD display
Gain Selection	pushbutton switches; setting shown on LCD display
Pwr; Alm; Mute; Remote	Green LED; Red LED; Yellow LED; Yellow LED

Other

IF Connectors	BNC, female, 75 ohm
10MHz Connectors	BNC, female, 75 ohm
Connector, Alarm	DB9 - NO or NC contact closure on Alarm
Size	19 inch standard chassis 1.75" high X 16.0" deep
Power	90 - 260 VAC, 47 - 63 Hz, 30 watts max.

Options

- H	High Stability, ±7 Hz max over temp using ± 0.01 ppm internal reference
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*+10°C to +40°C; Specifications subject to change without notice