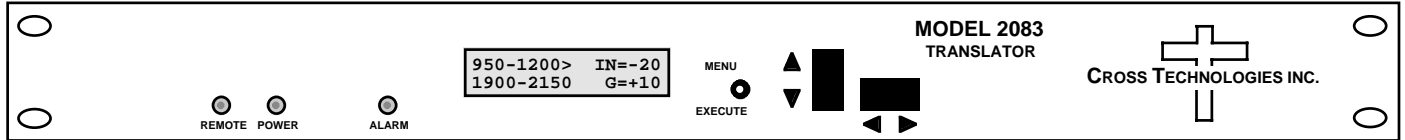


2083-1222 Agile L-Band to L-Band Translator

The 2083-1222 Agile L-Band to L-Band Translator converts a 950-1200 MHz block to 1650-1900 MHz or 1900-2150 MHz block (selectable) with spectrum inversion, low group delay and flat frequency response. The 950-1200 MHz input is mixed with synthesized local oscillator (LO) of 2850 MHz to 1650-1900 MHz or with an LO signal of 3100 MHz to 1900-2150 MHz output. Multi-function push button switches select the translation, input level, and gain. Frequency translation, input level, and gain (0 to +20 dB, selectable in 1 dB steps) settings appear on the LCD display. Front panel LEDs indicate DC power (green), remote control (yellow), or a PLL alarm (red). Connectors are BNC female for RF input and output and for optional external 10 MHz reference (+3± 3 dBm in, option E). The 2083-1222 Translator is housed in an 1 3/4" X 19" X 16" deep rack mount chassis. Option H provides a ±0.01 ppm reference.



Front Panel

EQUIPMENT SPECIFICATIONS*

Input Characteristics

Impedance/Return Loss 75Ω / 12 dB
 Frequency 950-1200 MHz
 Input Level -30 to -10 dBm

Output Characteristics

Impedance/Return Loss 75Ω / 12 dB
 Frequency 1650-1900 MHz OR
 1900-2150 MHz
 Output level -30 to -10 dBm

Channel Characteristics

Gain range (adjustable) 0 to +20 dB, selectable in 1 dB steps
 Frequency Response ±1.0 dB, 250 MHz BW, ±0.5 dB, any 36 MHz increment
 Intermodulation < -50 dBm for two carriers each at -13 dBm out
 Spurious Response < -60 dBm in band; < -50 dBm out of band
 < -40 dBC, .95-1.2 GHz out; < -45 dBC, 1.65-2.15 GHz out; < -50 dBm, LO out
 Group Delay, max 0.01 ns/MHz² parabolic; 0.03 ns/MHz linear; 1 ns ripple - any 36MHz BW
 Frequency Sense Inverting

Synthesizer Characteristics

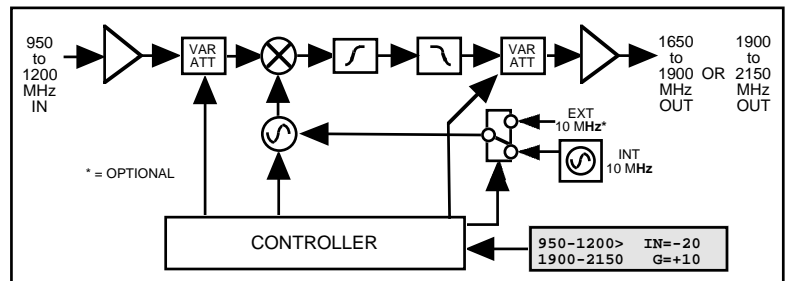
Frequency Accuracy ± 1.0 ppm internal reference (±0.01 ppm, option H)
 10 MHz In/Out Level 3 dBm ± 3 dB (option E)
 Phase Noise @ Freq | 100Hz 1kHz 10kHz 100kHz 1MHz
 dBC/Hz | < -65 < -75 < -85 < -95 < -110

Controls, Indicators

Frequency Selection direct readout LCD; pushbutton switches or remote selection; Set for low or high block
 Input Level Selection direct readout LCD; pushbutton switches or remote selection; Set to composite input level
 Gain Selection direct readout LCD; pushbutton switches or remote selection; Set to 0 to +20 dB (-10 dBm max output level)
 Power; Alarm; Remote Green LED; Red LED; Yellow LED
 Remote RS232C, 9600 baud (RS485, option Q)

Other

RF Connectors BNC (female)
 10MHz Connectors BNC (female) 50Ω/75Ω (option E)
 Alarm/Remote Connector DB9 - NO or NC contact closure on Alarm
 Size 19 inch, 1RU standard chassis 1.75"high X 16.0" deep
 Power 100-240 ± 10% VAC, 47-63 Hz, 45 watts max



Block Diagram

Available Options

E - External 10 MHz ref input & output
 H - High Stability (±0.01ppm) int ref
 Q - RS485 Remote Interface

Connectors/Impedance
 D - 50Ω BNC (In), 50Ω BNC (Out)

*10°C to 40°C; Specifications subject to change without notice

