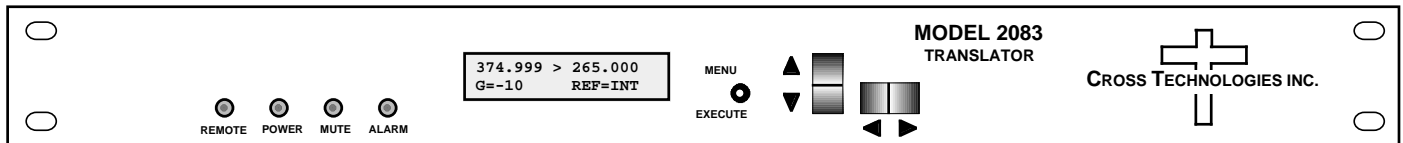


2083-43 Agile UHF-to-UHF Translator, 1 kHz steps

The 2083-43 Frequency Translator, **1 kHz steps**, converts any **50 MHz band in the 290-400 MHz range (Fc 315-375 MHz), in 1 kHz steps, to a fixed 265 ±25 MHz output** with no spectrum inversion, low group delay, and flat frequency response. The UHF input signal is mixed with synthesized local oscillator (LO) signals, first to 1750 MHz and finally to the **265 ± 25 MHz** output signal. Multifunction switches select the frequency translation, gain (0 to -10 dB, adjustable), and 10 MHz reference. These three 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 UHF input and output and 10 MHz input and output. The 2083-43 **has an internal a ±0.01 ppm high stability reference** and is housed in a 1 3/4" X 19" X 16" rack mount chassis.



Front Panel

EQUIPMENT SPECIFICATIONS*

Input Characteristics

Input Impedance/RL 75Ω /12 dB
 Frequency **290-400 MHz (315-375, 50 MHz BW)**
 Input Level -20 to -10 dBm
 Input 1 dB compression 0 dBm

Output Characteristics

Impedance/RL 75Ω/12 dB
 Frequency, **265 ± 25 MHz**
 Output Level **-10 to -30 dBm**

Channel Characteristics

Gain **0 to -10 dB; selectable in 1dB steps**
 Spurious Response **<-40 dBC**
 Bandwidth, response **±25 MHz, ±0.75 dB**
 Frequency Response **Over 290-400 MHz input to 265 MHz output, ±1.5 dB**
 Group Delay, **±25 MHz** **0.015 ns/MHz² parabolic; 0.05 ns/MHz linear; 2 ns ripple**
 10MHz In/Out Level 3 dB ± 3 dB
 Frequency Sense Non-inverting

Synthesizer Characteristics

Frequency Accuracy **±0.01 ppm internal reference**
 Step Size **1 kHz, 315 to 375 MHz input center frequency to 265 MHz output center frequency, ±25 MHz bandwidth**
 10 MHz In/Out Level 3 dBm ± 3 dB

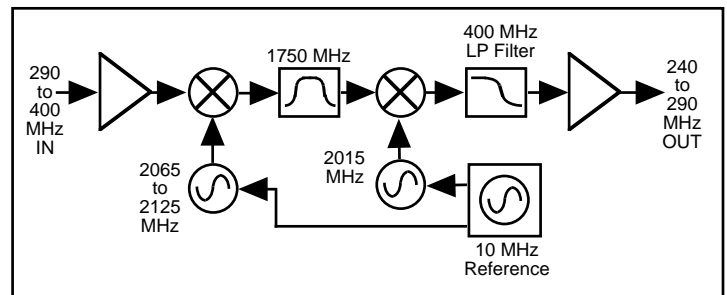
Phase Noise @ Freq	100Hz	1kHz	10kHz	100kHz	1MHz
dBC/Hz	-75	-80	-85	-100	-110

Controls, Indicators

Frequency Translation On LCD display; push-button switches or remote selection
 Gain Selection On LCD display; push-button switches or remote selection
 Power; Alarm; Mute Green LED; Red LED; Yellow LED
 Remote Yellow LED; RS232C, 9600 baud

Other

RF Connectors BNC (female), 75Ω
 10MHz Connectors BNC (female), 50Ω/75Ω
 Alarm Connector DB9 - 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, 45 watts max.



Block Diagram

Available Options

Q - RS485 Remote Interface
 W8 - Ethernet; w/Web Browser (WB)
 W18 - Ethernet; w/WB & SNMP
W36 - 0 to 60dB, 1dB Step Attenuator
Connectors/Impedance
 C - 50Ω BNC (RF), 75Ω BNC (IF)
 K - 75Ω BNC (RF), 50Ω BNC (IF)
 M - 50Ω N-type (RF), 50Ω BNC (IF)
 N - 50Ω N-type (RF), 75Ω BNC (IF)
 S - 50Ω SMA (RF), 50Ω BNC (IF)
SS - 50Ω SMA (RF), 50Ω SMA (IF)

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