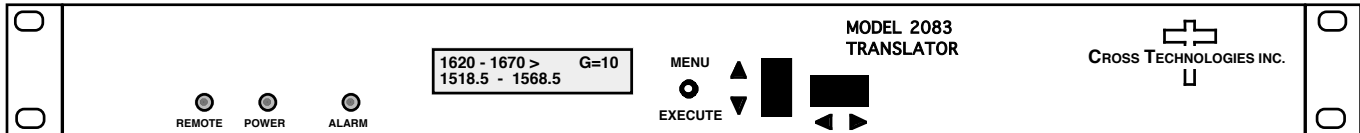


## Series 2083-1615 Block L to L Translator, Fixed Frequency

**2083-1615 Block L to L Translator** - The 2083-1615 Block L to L Translator converts a 1620-1670 MHz block to 1518.5-1568.5 MHz block with no spectrum inversion, low group delay and flat frequency response. The 1620-1670 MHz input is mixed with synthesized local oscillator (LO) signals, first to 2400 MHz center frequency and finally to the 1518.5-1568.5 MHz block output. Multi-function switches select the gain. The input frequency band, output frequency band, 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 (yellow). Remote operation allows setting the overall gain **and Mute**. Connectors are BNC female for RF input and output and for (optional) external 10 MHz reference (+3± 3 dBm in). It 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. Option -H provides a 0.01 ppm reference.



### 2083-1615 Block L to L Translator

#### EQUIPMENT SPECIFICATIONS\*

##### Input Characteristics

Input Impedance/RL 50Ω /12 dB  
 Frequency, 1620 – 1670 MHz  
 Input Level -10 to **-30 dBm**  
 Input, max. no damage +15 dBm

##### Output Characteristics

Impedance/RL 50Ω/12 dB, **Mute & UnMute**  
 Frequency 1518.5 – 1568.5 MHz  
 Output Level, Range -10 to **-30 dBm**  
 Output 1 dB compression 0 dBm  
**Mute** >**60 dB @ -10dBm output**

##### Channel Characteristics

Gain at **F<sub>c</sub>** **0 to +20 ± 1 dB**, selectable in 1 dB steps  
 Frequency Response **± 1.0 dB**, 50 MHz bandwidth; ± 0.5 dB, **center** 36 MHz increment  
**Spurious, In band** >**45 dBC signal dependent at -10 dBm out; <-50 dBm signal independent**  
**Spurious, Out of band** <**-50 dBm, 0.5 to 3.0 GHz**  
 Group Delay, max 0.010 ns/MHz<sup>2</sup>, parabolic, 0.03ns/MHz, linear, 1 ns ripple **center** 36 MHz BW  
 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, Option -E  
 Frequency Step None, fixed frequency translation

Phase Noise @ F (Hz) >	100	1K	10K	100K	1M
dBC/Hz	<b>-65</b>	<b>-70</b>	<b>-78</b>	<b>-90</b>	<b>-100</b>

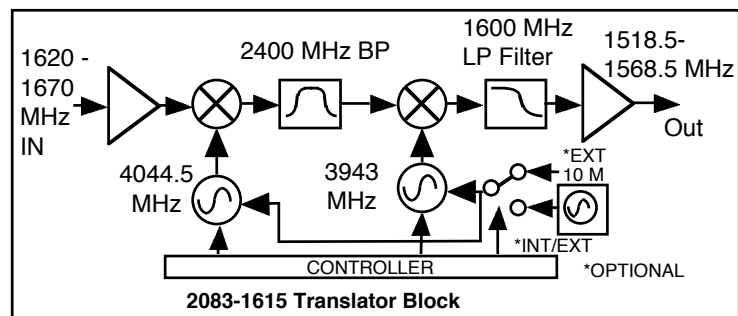
10 MHz Level (In or Out) 3 dBm, ± 3 dB, 75 ohms (option-E)

##### Controls, Indicators

Frequency Translation Setting Shown on LCD Display  
 Gain Selection, **Mute** direct readout LCD; manual or remote selection  
 Power; Alarm: Remote Green LED; Red LED; Yellow LED  
 Remote RS232C, 9600 baud (RS485, option-Q)  
 (Ethernet Interface, options - W8, W18, W28)

##### Other

RF In/RF Out Connector BNC (female)  
 10 MHz Conn. (In & Out) BNC (female) (option-E)  
 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

- E** - External 10 MHz ref input & output
- E1**- Ext.10 MHz ref input & output w/ Auto Detect/Switching & Auto Return
- H** - High Stability (±0.01ppm) internal reference M&C Interface RS232 Std.
- Q** - RS485 Remote Interface
- W8** - Ethernet M&C Web Browser Interface
- W18** - Ethernet M&C Web Browser Interface & SNMP
- W28** - Also allows direct TCP/IP and/or Telnet addressability
- Connector/Impedance**
- B** - 75Ω BNC (RF In), 75Ω BNC (RF Out)
- NN** - 50Ω N-type (RF In), 50Ω N-type (RF Out)

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