

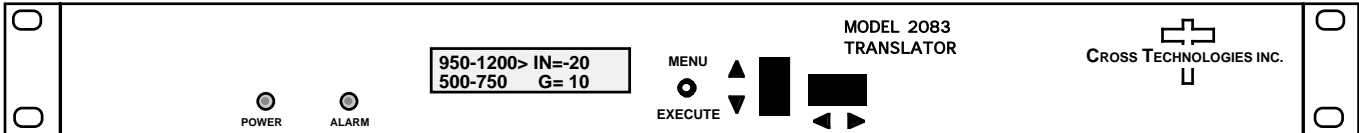


# DATA SHEET

## PRELIMINARY 4/3009

### Series 2083-1205 Agile L to UHF Translator

**2083-1205 Agile L to UHF Translator** - The 2083-1205 Agile L to UHF Translator converts a 950-1200 MHz block to 250-500 MHz and 500-750 MHz with no 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 and then with an LO signal of 2400 MHz to 250-500 MHz and 500-750 MHz. 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 light when DC power is applied (green) or a PLL alarm occurs (red). Connectors are BNC female for RF input and output and for **(optional)** external 10 MHz reference (+3± 3 dBm in). The 2083-1205 Translator is housed in an 1 3/4" X 19" X 16" deep rack mount chassis.



### 2083-1205 Agile L to UHF Translator

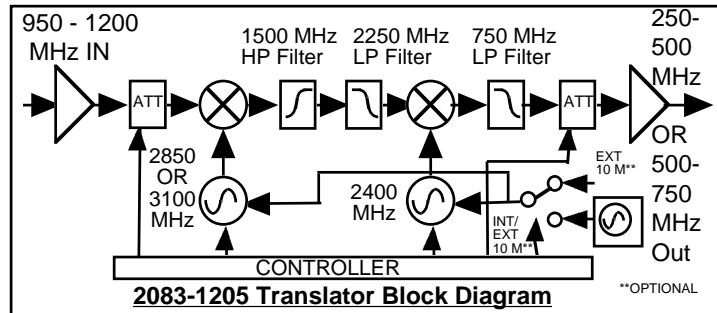
#### EQUIPMENT SPECIFICATIONS\*

##### Input Characteristics

Input Impedance/RL 75 Ω /12 dB  
 Frequency, 950-1200 MHz  
 Input Level -10 to -30 dBm  
 Input 1 dB compression 0 dBm

##### Output Characteristics

Impedance/RL 75 Ω /12 dB  
 Output Level, Range -10 to -30 dBm  
 Output 1 dB compression 0 dBm  
 Frequency 250-500 MHz  
 OR 500-750 MHz



##### Channel Characteristics

Gain 0 to +20 ± 0.5 dB, selectable in 1 dB steps  
 Frequency Response ± 1.0 dB, 250 MHz bandwidth; ± 0.5 dB, any 36 MHz increment  
**Intermodulation**  
 Spurious Response <-50 dBC for two carriers each at -13 dBm out  
 <-60 dBC in band; < -50 dBC out of band  
 <-40 dBC, 0.95 to 1.2 GHz out; <-45 dBC, 1.9 to 2.4 GHz out; <-50 dBC, LO out  
 Group Delay, max 0.01 ns/MHz<sup>2</sup>, parabolic, 0.03ns/MHz, linear, 1 ns ripple any 36 MHz BW  
 Frequency Sense **Non-Inverting**

##### Synthesizer Characteristics

Frequency Accuracy ± 1 ppm max over temp: Optional, High Stability (± 0.01 ppm) Option -H  
 Reference 10 MHz Internal; Internal/External selectable is Option -E

Phase Noise @ F (Hz) >	100	1K	10K	100K	1M
dBC/Hz	-65	-75	-85	-95	-110

##### Controls, Indicators

Frequency Translation pushbutton switches; setting shown on LCD display; Set for low or high block  
 Input Level Selection pushbutton switches; setting shown on LCD display; Set to composite input level  
 Gain Selection pushbutton switches; setting shown on LCD display; Set to 0 to +20 dB (-10 dBm max out)  
 DC Power; PLL Alarm Green LED; Red LED

##### Other

Connectors RF In and Out and (optional) external 10 MHz reference In, 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 100-240 (±10%) VAC, 47-63 Hz, 30 watts max.

##### OPTIONS

-E External 10 MHz reference In  
 -D BNC, female, 50 ohms for RF In and Out  
 -H High Stability (± 0.01 ppm) internal reference

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

