The 2083-1515 Channel Translator converts a 10 MHz Channel in the 950 to 1500 MHz input band at the same center frequency in the 950 to 1500 MHz output band in 1 MHz steps which functions as a tunable bandpass filter. A synthesized local oscillator (LO) provides the frequency selection. Push button switches select the RF frequency and other parameters. Front panel LEDs provide indication of DC power (green), PLL alarm (red), and remote operation (yellow). The gain is +0 dB. Remote operation allows selection of the frequency. Parameter selection and frequency settings appear on the LCD display. Connectors are BNC female for the RF In and RF Out and the optional external reference input and output. The external 10 MHz option E includes a 10 MHz output connector which contains either the internal or external 10 MHz reference signal. A high stability option H (±0.01 ppm) is also available. The unit is powered by a 100-240 ± 10% VAC power supply, and housed in a 1 3/4" X 19" X 16" rack mount chassis.

**EQUIPMENT SPECIFICATIONS**

*Input Characteristics (IF)*
- Impedance/Return Loss: 50Ω / 12 dB
- Frequency: 950 to 1500 MHz
- Noise Figure: 25 dB max
- Input Level: -55 to -15 dBm, -65 goal
- Input 1 dB comp.: -5 dBm

*Output Characteristics (RF)*
- Impedance/Return Loss: 50 Ω / 12 dB
- Frequency: 950 to 1500 MHz
- Output Level: -55 to -15 dBm
- Output 1 dB comp.: -5 dBm

*Channel Characteristics*
- Gain, fixed: 0.0 ± 2 dB at 1.2 GHz
- Frequency Response: ±1.5 dB, 950 - 1500 MHz; ±0.5 dB, 10 MHz BW; ±1.5 dB, 20 MHz BW; <40 dBc, at ± 50 MHz
- Spurious, In band: < -45 dBc, in band; < -40 dBc of the 950-1500 MHz input band to the output
- Spurious, Out of Band: < -50 dBc (.25-.94 GHz and 1.51-2.2 GHz Out)
- Group Delay, max: 0.03 ns/MHz² parabolic; 0.1 ns/MHz linear; 1 ns ripple, 10 MHz bandwidth
- Frequency Sense: Non-inverting

*Synthesizer Characteristics*
- Frequency Accuracy: ± 1.0 ppm max over temp (±0.01 ppm, option H)
- Frequency Step: 1.0 MHz (125 kHz to 1 kHz step options available)

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

*Controls, Indicators*
- Freq Selection: direct readout LCD; manual or remote selection
- Pwr, Alarm: Green LED; Red LED; Yellow LED;
- Remote: RS232C, 9600 baud (RS485, Ethernet Optional)

*Other*
- RF Connectors: BNC (female)
- 10 MHz Connectors: BNC (female), 75Ω, works with 50 or 75 ohms (option E)
- Alarm/Remote Connector: DB9 (female) - NO or NC contact closure on Alarm
- Size: 19 inch, 1RU standard chassis 1.75” H x 16.0” D
- Power: 100-240 ±10% VAC, 47-63 Hz, 25 W max. (24, 48 VDC Optional)

*Available Options*
- E - External 10 MHz ref in & out; RF Ins.
- H - High Stability (±0.01 ppm) Internal Ref
- X or X1 - 125 kHz or 100 kHz step size

*Comm. Interface/Standard RS232*
- Q - RS485 Remote Interface
- W8 - Ethernet; w/Web Browser (WB)
- W18 - Ethernet; w/WB & SNMP
- W28 - Ethernet; w/TCP/IP, Telnet

*Connectors/Impedance (In & Out)*
- Std. - 50Ω BNC
- B - 75Ω BNC
- F - 75Ω Type F
- N - 50Ω N-type

*Cross Technologies for other options*

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