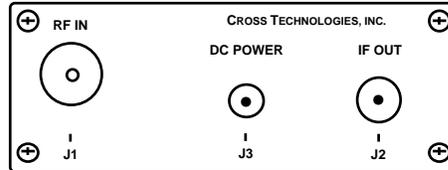
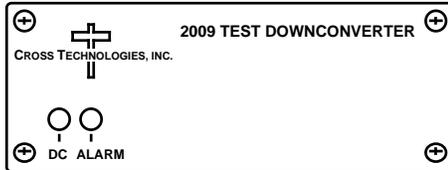


## 2009-58 Downconverter, 5.85 - 7.05 GHz

The 2009-58 Downconverter converts a 5.85 - 7.05 GHz signal to 950 - 2150 MHz with a low side local oscillator (LO) (non-inverted spectrum) for loop-back applications. This unit is used to down convert "clean" (having only this frequency) 5.85 - 7.05 GHz signals to 950 - 2150 MHz for test purposes. The 5.85 - 7.05 GHz input is **amplified and** mixed with a synthesized local oscillator (LO) signal to 950 - 2150 MHz. The mixer output is applied to the output **amplifier** providing a nominal gain of **+25 dB**. Connectors are 50Ω type-N (female) for the RF input and 75Ω type-F (female) for the 950 - 2150 MHz output. Front panel LEDs light when DC power is applied (green) and when a PLL alarm occurs (red). DC power is provided by the LNB voltage from the receiver under test or by an external wall mount power supply (**option -P or -P4**). The 2009 can be mounted on an 1 3/4" X 19" rack mount panel (**option -R**).



Front and Rear Panels

### EQUIPMENT SPECIFICATIONS\*

#### Input Characteristics

Impedance / Return Loss 50Ω / 12 db  
 Frequency **5.85-7.05 GHz**  
 Level **-50 to -35 dBm**

#### Output Characteristics

Impedance / Return Loss 75Ω / 10 db  
 Frequency 950 to **2150 MHz**  
 Level **-25 to -10 dBm**  
 Output 1 dB compression **0 dBm**

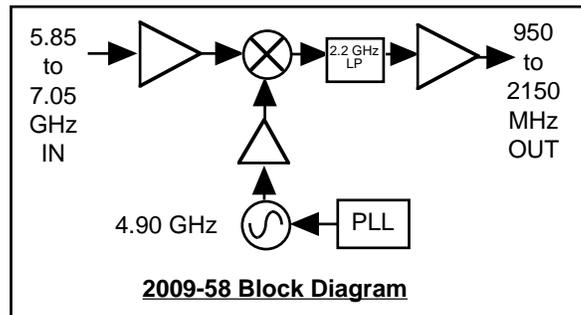
#### Channel Characteristics

Gain at band center **+25 dB ±3 dB**  
 Spurious Response **<-35 dBC, 950-2150 MHz out**  
 Spectrum Sense Non-inverting  
 Frequency Response ± 2 dB, 950-2150 MHz; ± 0.5 dB, any 10 MHz increment

#### Synthesizer Characteristics

LO Frequency **4.90 GHz**  
 Frequency Accuracy ± 2.5ppm max

Phase Noise @ F (Hz) >	100Hz	1kHz	10kHz	100kHz	1MHz
dBc/Hz	-60	-75	-85	-100	-110



#### Indicators

DC Power Green LED  
 Alarm Red LED

#### Other

RF In Connector Type-N (female), 50Ω  
 L-band (IF) Out Connector Type-F (female)  
 Size, Bench Top 4.7" wide X 1.75" high X 6.5" deep  
 Size, Rack Mount (-R) 9" standard chassis, 1.75" high X 7.0" deep (optional)  
 Power +15 to +18 VDC, 250 ma on RF Out (Wall mount power supply unit optional)

#### Options

**-M** Type N RF (input), 50Ω BNC L-band (output)  
**-P** 120 VAC Wall Power Supply, +15 VDC  
**-P4** 100-240 ± 10% VAC Wall Power Supply, +15 VDC  
**-R** 1RU Rack Mounting  
**-C** Power Supply not included. Requires Cross 2000-01 Power Supply  
**-W42** Alarm Contact Terminal Strip, Dry Contact, NC-C-NO Terminations

\*+10°C to +40°C; 2000 meters max elevation; 80% max humidity; Specifications subject to change without notice