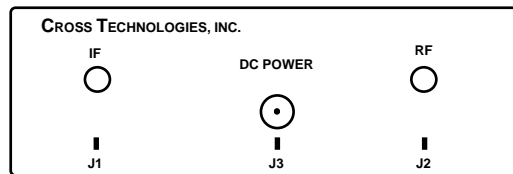
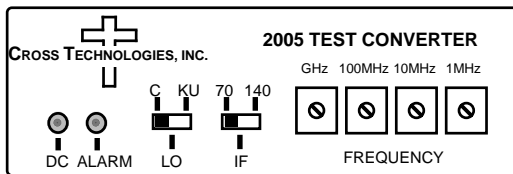


2005-10-01 Upconverter, High Level

The 2005-10-01 Upconverter converts a 70 MHz or 140 MHz IF signal to 2000 to 2500 MHz in 1 MHz steps with selection of high side LO (C = inverted) or low side LO (Ku = non-inverted) and 70 or 140 MHz input over the 2.0 - 2.5 GHz range for loop-back applications. **The 2005-10-01 allows for an input level range of +10 to -15 dBm.**

Featuring low phase noise, these units are used to loop 70 or 140 MHz modulators to 2.0 - 2.5 GHz receivers for test purposes and the output consists of the LO and both upper and lower sidebands. The 70 or 140 MHz carrier input is mixed with a synthesized local oscillator (LO) signal. The output frequency is selected **and indicated by the four BCD switches** which control the synthesized LO. Front panel LEDs light when DC power is applied (green) and when a PLL alarm occurs (red). The mixer output is applied to the output amplifier providing a nominal gain of -10 dB. Connectors are 50Ω BNC (female) for the IF input and for the RF output (other connector options are available). Powered by a 120 VAC wall power supply (100-240 ±10%VAC, **option -P4**). The 2005 can be mounted on a 1 3/4" X 19" rack mount panel (**option -R**).



Front Panel and Rear Panel (shown with option -SS connectors)

EQUIPMENT SPECIFICATIONS*

Input Characteristics

Impedance	50Ω
Return Loss	15 dB
Frequency	70 or 140 MHz center, ± 20 MHz
Level	+10 to -15 dBm
1dB compression	+15 dBm

Output Characteristics

Impedance	50Ω
Return Loss	12 dB
Frequency Range	2.0 to 2.5 GHz

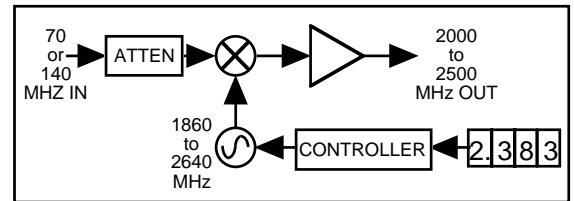
Channel Characteristics

Gain	-10 dB ± 3 dB
Spurious Response	< -40 dBC max, < -45 dBC typ for Fc ± 20 MHz;
Frequency Response	OUTPUT NOT FILTERED, LO<= RF nominal. ± 2 dB, 2.0 - 2.5 GHz; ± 0.5 dB, any 10MHz increment

Synthesizer Characteristics

Frequency Accuracy	± 25 kHz max; Option -HT -for ±0.1ppm Int. Ref.
Frequency Step	1.0 MHz minimum

Phase Noise @ F (Hz) >	100	1K	10K	100K	1M
dBC/Hz	-70	-70	-80	-90	-100



Block Diagram

Indicators

DC Power	Green LED
PLL Alarm	Red LED

Other

RF, IF Connectors	50Ω BNC (RF), 50Ω BNC (IF)
Size, Bench Top	4.7" wide X 1.75" high X 6.5" deep
Size, w/Rack Mount Panel	19 inch standard chassis 1.75" high X 7.0" deep (option -R)
Power, Standard	120 ± 10% VAC, 60 Hz, 10W max. wall mount power supply
Power (option -P4)	100-240 ±10% VAC, 47-63 Hz wall mount power supply (option -P4)

Available Options

HT - High Stability (±0.1ppm) Internal Ref
P4 - 100-240 ±10% VAC, 47-63 Hz wall PS
R, R2, R3 - 1,2, or 3 unit Rack Mount Panel
Connectors/Impedance
STD - 50Ω BNC (RF), 50Ω BNC (IF)
B - 75Ω BNC (RF), 75Ω BNC (IF)
C - 50Ω BNC (RF), 75Ω BNC (IF)
SS - 50Ω SMA (RF), 50Ω SMA (IF)

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