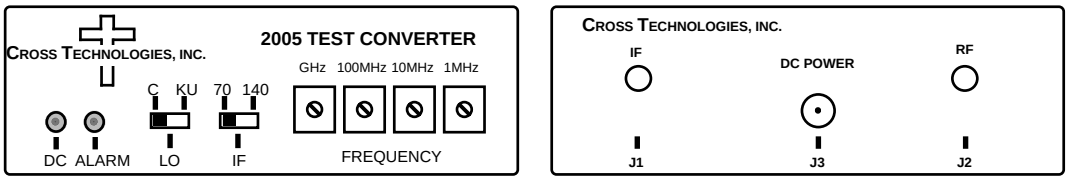
CROSS TECHNOLOGIES, INC.

DATA SHEET
REV. 0
1/26/2011

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**).

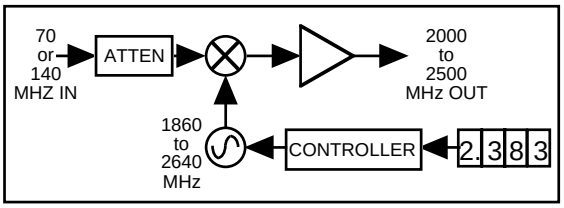


Front Panel and Rear Panel (shown with option -SS connectors)

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



Block Diagram

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; **OUTPUT NOT FILTERED, LO<= RF nominal.**
Frequency Response	± 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*

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)

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**)

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

Request A Quote