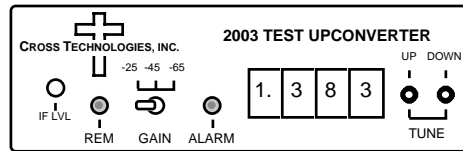


2003 Test Upconverter, 950 - 1450 MHz

The 2003 takes a 70 or 140 MHz IF signal and converts it to 950 - 1450 MHz in 1MHz steps. The IF input is mixed with a synthesized 1020 - 1520 (C) or 880 - 1380 (Ku) MHz local oscillator. Push-button switches control the synthesized oscillator which determines the output frequency. Pushing these switches simultaneously allows selection of high side LO (C) or low side LO (Ku) and 70 or 140 MHz input. An alarm LED lights and an open drain FET closes to ground when the PLL is unlocked. A yellow LED indicates remote operation. The mixer output goes to a switched attenuator providing IF to RF gains of -25, -45, or -65dB. Power is provided by a wall-mount power supply and connectors are BNC female. The 2003 is housed in a bench-top chassis. An optional 1RU rack mount package (option -R) is available.



FRONT PANEL

EQUIPMENT SPECIFICATIONS*

Input Characteristics

Impedance / RL 75Ω / 15dB
 Frequency 70 or 140 MHz center
 Level -20 to -10 dBm
 1dB Compression +5dBm

Output Characteristics

Impedance / RL 75Ω / 10dB
 Frequency 950 to 1450 MHz
 Level selectable -35dBm, -55dBm, or -75dBm with -10dBm in

Channel Characteristics

Gain Selectable -25, -45 dB, -65 dB ±3 dB
 Spurious Response < -40 dBC max; -45 dBC typ (F_C ± 20 MHz)
 Frequency Sense Inverted (C) or Non-inverted (Ku)
 Frequency Response ±3 dB, 950 - 1450 MHz @ -25, -45 gain; ±0.5 dB, any 10 MHz increment

Synthesizer Characteristics

Frequency Accuracy ± 25 kHz maximum
 Frequency Step 1.0 MHz minimum
 Phase Noise < -80 @ 10kHz; < -90 @ 100kHz; < -100 @ 1MHz

Controls

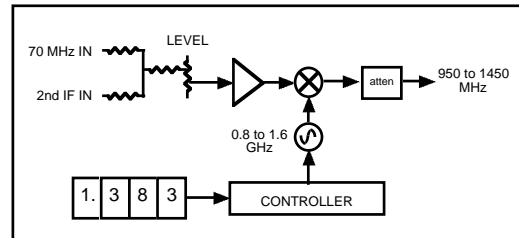
Frequency Selection Push-button switches with direct frequency readout
 Output Level Potentiometer and Toggle switch

Indicators

PLL Alarm Red LED (with FET open drain)
 Remote Yellow LED

Other

RF Connectors BNC (female)
 IF Connectors BNC (female)
 Size, Bench Top 4.7" wide X 1.75" high X 12.5" deep
 Size, (option -R) 19 inch standard chassis 1.75"high X 13.0" deep (rack mount option)
 Power 120 ± 10% VAC, 60Hz, 20 watts max, wall mount power supply



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