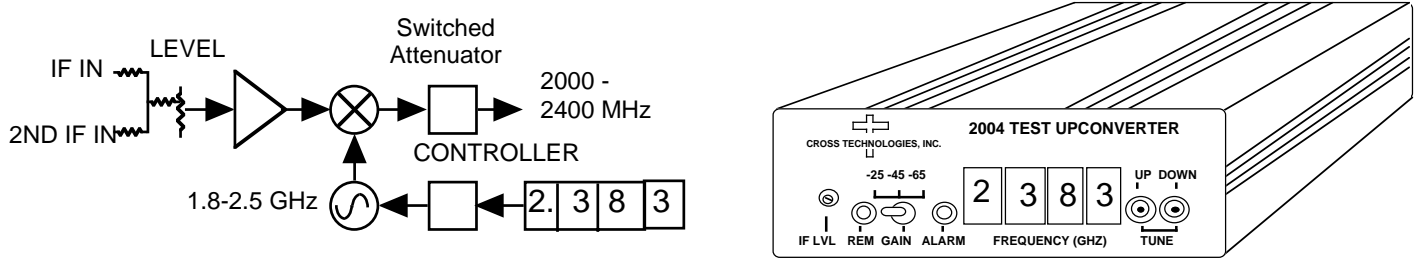


## MODEL 2004-10, -11 AGILE, 2.0 - 2.4 GHZ UPCONVERTER

The 2004-10, for loop-back applications, converts a 70 or 140 MHz IF signal to 2000 to 2400 MHz in 1MHz steps with a high side or low side 1.8 to 2.54 GHz LO. The IF input is mixed with a synthesized 1.8 to 2.54 GHz local oscillator signal. Up and down tune push buttons control the output frequency displayed on the LED indicators. Pushing these switches simultaneously allows selection of high side LO (C) or low side LO (Ku) and 70 or 140 MHz input. PLL alarm lights red LED when the PLL is unlocked and goes to an open drain FET output. Yellow LED indicates remote operation. An output switched attenuator provides IF to RF gains of -25dB, -45dB, or -65dB. Powered by a wall power supply; connectors are BNC female. Rack mount **option -R**. The 2004-10 without the wall power supply is a **2004-11**.



**FIGURE 1.1 2004-10 Agile Upconverter Block Diagram and Front Panel**

### 2004 FRONT PANEL

**EQUIPMENT SPECIFICATIONS\***

**Input Characteristics**

Input Impedance/RL	75 Ω /15db
Frequency	70 or 140 MHz center
Input Level	-10 to -20 dBm
Input 1dB/3RD ORDER	+5/+15 dBm

**Output Characteristics**

Impedance/RL	75 Ω /10db
Frequency Band	2.0 - 2.4 GHz, (70 or 140 MHz IF, high or low side LO)
Level	selectable -35dBm, -55dBm, or -75dBm with -10dBm in

**Channel Characteristics**

Gain	Selectable -25, -45 dB ±4 dB, -65 dB ±6 dB
Spurious Response	NA; output not filtered
Frequency Response	±4 dB, 2.0 - 2.4 GHz, @ -25, -45 gain; ±0.7 dB, any 10 MHz increment

**Synthesizer Characteristics**

Frequency Accuracy	± 50 kHz maximum
Frequency Step	1.0 MHz minimum
Phase Noise	Suitable for 128 kB/s QPSK with 1/2 rate FEC

**Controls**

Frequency Selection	PB switches w/direct frequency readout
Output Level	Potentiometer and Toggle switch

**Indicators**

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

**Other**

RF, IF Connectors	BNC, female
Size, Bench Top	4.7" wide X 1.75" high X 12.5" deep
Size, Rack Mount (-R)	19 inch standard chassis 1.75"high X 13.0" deep (Optional)
Power	100-240 ± 10% VAC, 60Hz, 20 watts max, wall mount power supply

\*Specifications subject to change without notice.