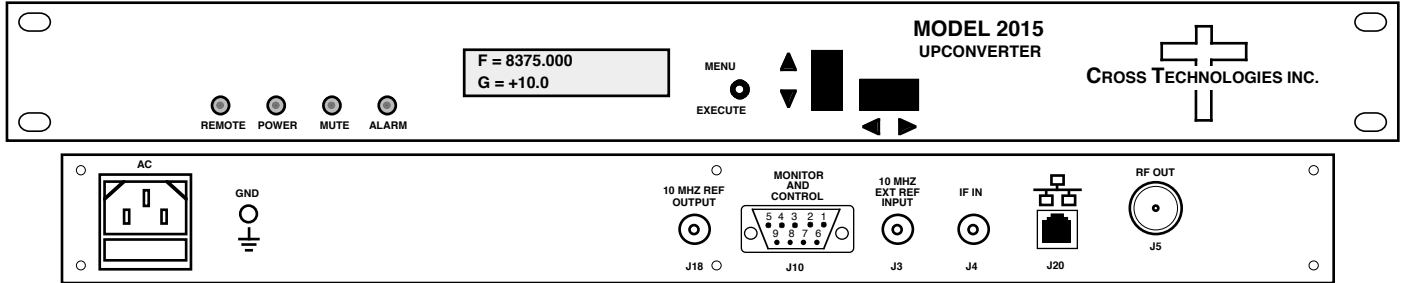




## 2015-8085 Upconverter, 70 ± 18 MHz to 8.0 - 8.5 GHz

The 2015-8085 Upconverter converts 70 ± 18 MHz to 8.0 to 8.5 GHz in 125 kHz steps. Synthesized local oscillators (LO) provide ±0.01 ppm stability frequency selection. Push button switches select the RF frequency, gain, and other parameters. Front panel LEDs provide indication of DC power (green), remote operation (yellow), PLL alarm (red), and TX MUTE (yellow). Variable attenuators for the IF input and RF output provide a gain range of +10 to +30 dB as adjusted by the front panel pushbutton switches. Remote operation allows selection of frequency and gain. Parameter selection and frequency and gain settings appear on the LCD display. Connectors are BNC female for IF input and 10MHz reference input and output, and Type N female for the RF output (other connector configurations available). It is powered by a 100-240 ±10% VAC power supply; and housed in a 1.75" X 19" X 16" rack mount chassis.



**Front and Rear Panels**

### EQUIPMENT SPECIFICATIONS\*

#### Input Characteristics (IF)

Impedance/Return Loss 75Ω/18 dB  
 Frequency 70 ± 18 MHz  
 Input Level -30 to -10 dBm

#### Output Characteristics (RF)

Impedance/Return Loss 50Ω/14 dB min.  
 Frequency **8.0 to 8.5 GHz**  
 Output level -20 to 0 dBm  
 Output 1 dB compr. +10 dBm, at Fc, Gmax.

#### Channel Characteristics

Gain Max/range (adj.) +30 ±2 dB Max.; +10 to +30 dB range; 1 ±1 dB steps, at Fc  
 Frequency Response ±2.0 dB, 8.0-8.5 GHz; ± 0.8 dB, 36 MHz BW  
 Spurious Response <-50 dBc carrier and non-carrier related  
 Intermodulation <-50 dBc for two carriers at Fc±2 MHz, each at -8 dBm out  
 Group Delay, max 0.015 ns/MHz<sup>2</sup> parabolic; 0.05 ns/MHz linear; 1 ns ripple  
 Frequency Sense Non-inverting

#### Synthesizer Characteristics

Frequency Accuracy ±0.01 ppm internal reference; External reference input  
 Frequency Step 125 kHz minimum; **1 kHz steps option X1006**  
 10 MHz In/Out Level 3 dBm ± 3 dB

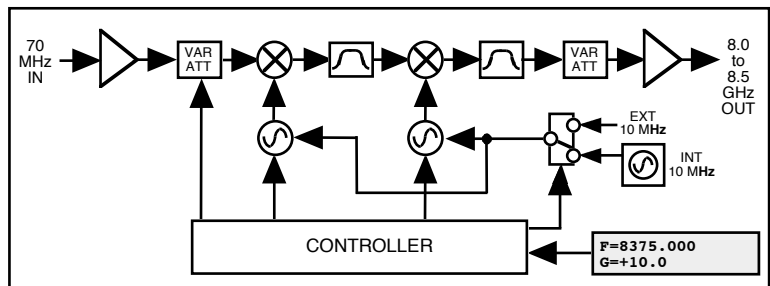
Phase Noise @ Freq	100 Hz	1kHz	10kHz	100kHz	1 MHz
dBc/Hz	-60	-70	-80	-95	-105

#### Controls, Indicators

Freq/Gain Selection direct readout LCD; pushbutton switches or remote selection  
 Pwr; Alarm; Rem; Mute Green LED; Red LED; Yellow LED; Yellow LED  
 Remote RS232C, 9600 baud (**RS485, Ethernet Optional**)

#### Other

RF/IF Connector Type N (female), 50Ω / BNC (female), 75Ω, Others optional  
 10 MHz Connectors BNC (female), **75Ω, works with 50 or 75 ohms**  
 Alarm/Remote Conn. DB9 - NO or NC contact closure on Alarm  
 Size 19 inch, 1RU standard chassis 1.75"high X 16.0" deep  
 Power / Temp Range 100-240 ±10% VAC, 47-63 Hz, 45 watts max /



**Block Diagram**

#### Available Options

W31 - Ext. Temp 0C to +50C  
 X1006 - 1 kHz frequency step  
 Z 5 - Attenuator 0.5 ± 0.5dB Steps

#### Remote M&C Interfaces:

Q - RS485/422  
 W8 - Ethernet; w/Web Browser (WB)  
 W18 - Ethernet; w/WB & SNMP  
 W28 - Ethernet; w/TCP/IP, Telnet  
 W828 - W8 + W18 + W28

#### Connectors/Impedance

STD. -50Ω Type N (RF), 75Ω BNC (IF)  
 M - 50Ω Type N (RF), 50Ω BNC (IF)  
 S - 50Ω SMA (RF), 50Ω BNC (IF)  
 S7 - 50Ω SMA (RF), 75Ω BNC (IF)  
 SS - 50Ω SMA (RF), 50Ω SMA (IF)

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