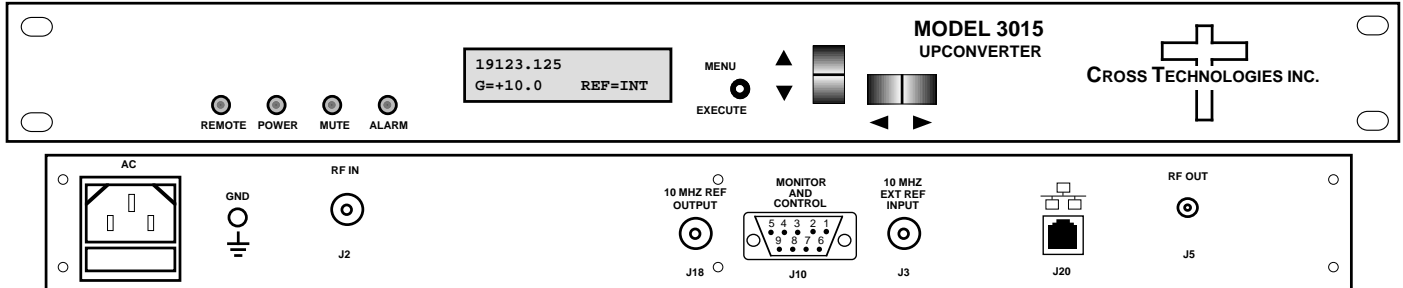


3015-1520-1200 Upconverter, 1200 ±50 MHz to 15.0 - 20.0 GHz

The 3015-1520-1200 Upconverter converts 1200 ±50 MHz to **15.0 to 20.0 GHz** in 125 kHz steps. The 1200 MHz is first converted to **7.0 GHz** and then to **15 to 20 GHz** with an **agile, high side LO** upconverter to obtain the wide tuning range. Synthesized local oscillators (LO) provide frequency selection. Multi-function switches select the RF frequency, gain, and other parameters. Front panel LEDs provide indication of DC power (green), PLL alarm (red), remote operation (yellow) or the TX carrier is muted (yellow). Variable attenuators for the IF input and output provide a gain range of **-5 to +20 dB** as adjusted by the front panel multi-function 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 and external 10MHz reference input and output, and **Super SMA** (female) for the RF output. The unit is powered by a 100-240 ±10% VAC power supply, and housed in a 1 3/4" X 19" X 18" rack mount chassis.



Front and Rear Panels (shown with Ethernet option)

EQUIPMENT SPECIFICATIONS*

Input Characteristics

Impedance/Return Loss **75Ω /14dB min.**
Frequency **1200 ± 50 MHz**
Input Level **-30 to -10 dBm**

Output Characteristics

Impedance/Return Loss **50Ω /14dB min.**
Frequency **15.0 to 20.0 GHz**
Output level **-15 to 0 dBm**
Output 1 dB compr. **+10 dBm**

Channel Characteristics

Gain Max/range (adj.) **20 ± 2 dB Max./ -5.0 to +20.0 dB, 0.5 dB ± 0.5 dB steps, at Fc**
Spurious, In Band **SIGNAL RELATED <-55/-50 dBc typical/max., in band, 0 dBm out, Gmax, 15-20 GHz**
Spurious, In Band **SIGNAL INDEPENDENT, <-60/-55 dBm typical/max., Gmax., 15-20 GHz**
Spurious, Out of band **< -50 dBm, at max. gain, DC - 14.9 GHz and 20.1 - 28 GHz**
Intermod **< -50 dBc for two carriers each at -5 dBm out, at max. gain**
Frequency Response **±3.0 dB, Fc=15.0-20.0 GHz; ±1.5 dB, Fc over any 1 GHz band; Fc ± 50 MHz, ± 1.0 dB**
Group Delay, max **2 ns parabolic; 2 ns linear; 1 ns ripple, Fc ± 50 MHz**
Frequency Sense **Non-inverting**

Synthesizer Characteristics

Frequency Accuracy **± 0.01 ppm max over temp internal ref.; external ref. input**
Frequency Step **125 kHz minimum**
External 10 MHz level **+3 dBm ± 3 dB, 50Ω**

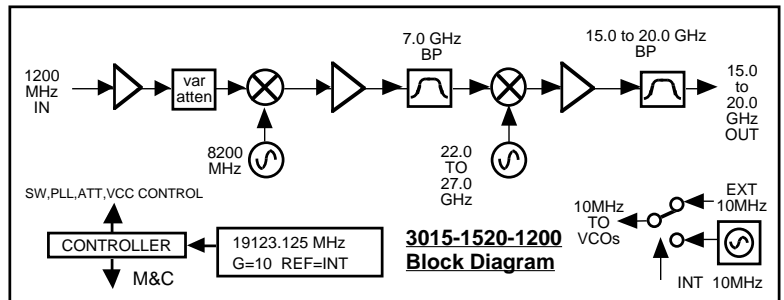
Phase Noise @ Freq	100 Hz	1kHz	10kHz	100kHz	1 MHz
dBc/Hz	60	70	80	90	100

Controls, Indicators

Freq/Gain Selection **Direct readout LCD; manual or remote selection**
Pwr; Alm; Remote; Mute **Green LED; Red LED; Yellow LED; Yellow LED**
Remote **RS232C, 9600 baud (RS422/485/opt.-Q, Ethernet/opt-W8,18,28)**

Other

RF, IF Connectors **Super SMA (female), BNC, 75Ω (female), (Others optional)**
10MHz Connectors **BNC (female) 75Ω, works for 50 or 75 ohms**
Alarm/Remote Conn. **DB9 (female) - NO or NC contact closure on Alarm**
Size **19 inch, 1RU standard chassis 1.75" high X 18.0" deep**
Power **100-240 ±10% VAC, 47-63 Hz, 60 watts max.**



Available Options

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

S - 50Ω SMA (RF), 50Ω BNC (IF)
SS - 50Ω SMA (RF), 50Ω SMA (IF)
Super SMA for > 18 GHz

Contact Cross for other options

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