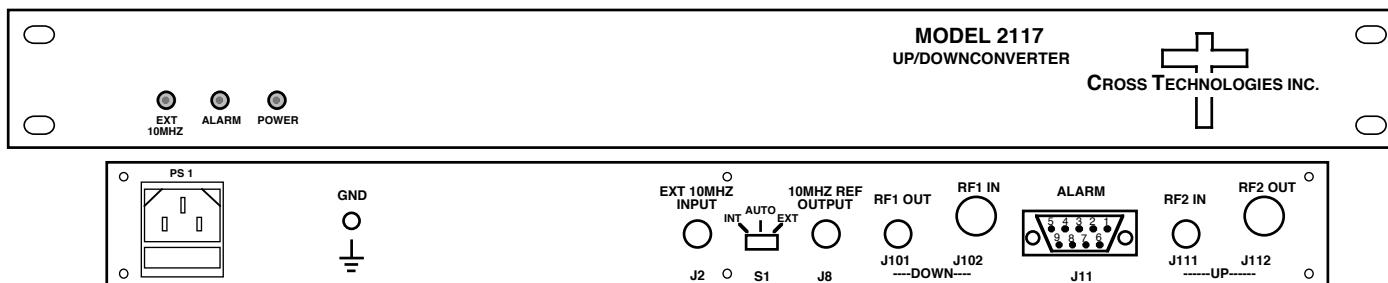


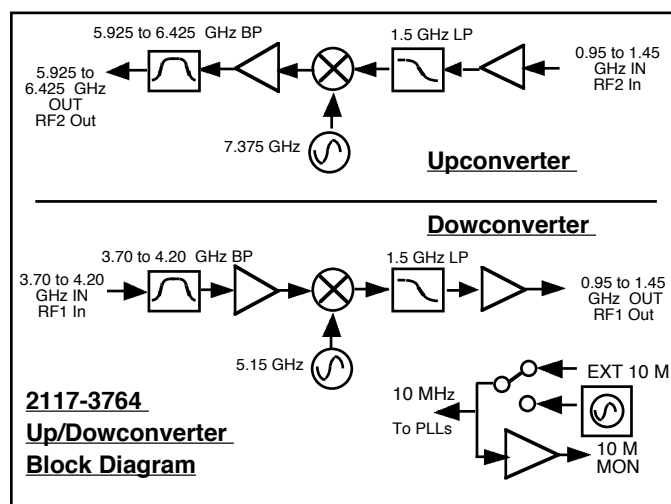
## 2117-3764 Up/Downconverter, 5.925-6.425 GHz Up, 3.70-4.20 GHz Down

The 2117-3764 Up/Downconverter converts **0.95 - 1.45 GHz to 5.925 - 6.425 GHz** and **3.70-4.20 GHz to 0.95 - 1.45 GHz**, with **inverting spectrums**. Front panel LEDs provide indication of DC Power, External 10 MHz, and PLL Alarm. The gain is **+20 dB for the upconverter and +35 dB for the downconverter**. Connectors are **Type N female for the RF output and input, BNC female for the L-band input and output** and external reference input and reference output. A three-way switch controls which 10 MHz reference is being used. In the AUTO position, the internal reference is used unless a +3 dBm ± 3 dB, 10MHz reference signal is connected to the external reference input. The 2117 is powered by a 100-240 ± 10% VAC power supply, and in a 1 3/4" X 19" X 19" rack mount chassis.



**Front and Rear Panels (SHOWN WITH OPTIONS SS, R)**

EQUIPMENT SPECIFICATIONS*		
Input Characteristics	UP, C	DOWN, C
Impedance/Return Loss	50Ω/14 dB	50Ω/14 dB
Frequency	0.95-1.45 GHz	3.70-4.20 GHz
Noise Figure, Max.	20 dB @ max gain	12 dB @ max gain
Input Level range	-40 to -20 dBm	-55 to -35 dBm
Output Characteristics		
Impedance/Return Loss	50 Ω /14 dB	50 Ω /14 dB
Frequency (GHz)	5.925-6.425 GHz	0.95-1.45 GHz
Output Level Range	-20 to 0 dBm	-20 to 0 dBm
1 dB comp, max gain	+10 dBm	+10 dBm
Mute @ 0 dBm out	>50 dB	N/A
Channel Characteristics		
Gain, max. at Fc	+20 ±1 dB	+35 ±2 dB
Gain, range, 0.5±0.5 dB step	FIXED GAIN	FIXED GAIN
Image Rejection	>60 dBC	>60 dBC
Spurious, Inband, sig. rel.	<-50 dBC, 0dBm	<-50 dBC, -5dBm
Spurious, Inband, sig. ind.	<-50 dBC, Gmax	<-50 dBC, Gmax
Spurious, Out of band	<-50 dBC, Gmax	<-50 dBC, Gmax
2 tone 4MHz del, -10ea	<-50 dBC, Gmax	<-50 dBC, Gmax
Frequency Resp. band	±2 dB	±2 dB
Frequency Resp. 40 MHz	± 0.5 dB	± 0.5 dB
Frequency Sense	Inverting	Inverting



### LO Characteristics

LO Frequency Downconverter - 5.15 GHz; Upconverter - 7.375 GHz  
Frequency Accuracy ± 0.01 ppm max over temp internal reference; ext. ref. input

Phase Noise @ F (Hz) >	100	1K	10K	100K	1M
dBC/Hz	-70	-80	-85	-100	-110

10 MHz level +3 dBm, ± 3 dB, 75 ohms, External In or Internal out

### Controls, Indicators

INT/AUTO/EXT Switch Selects internal or external 10 MHz (rear panel DP3T switch)  
Ext 10 MHz Yellow LED, indicates external 10 MHz reference selected  
PLL Alarm Red LED, **External contact closures for Band 1 and Band 2**  
Power Green LED

### Other

RF In/Out, L-BAND Con. N-type (female), 50Ω / BNC (female), 50Ω  
10 MHz connectors BNC (female), 75Ω connector; works with 50Ω or 75Ω  
Alarm Connector DB9 - NO or NC contact closure on Alarm  
Size 19 inch standard chassis 1.75" high X 14" deep  
Power 100-240 ± 10% VAC, 47 - 63 Hz, 50 watts maximum

### Available Options

P48 = 48V DC Power Supply  
R = Redundant AC Power Supply  
**Available Connector Options**

NF = 50Ω N-type (RF), 75Ω F-type (L-Band)  
N = 50Ω N-type (RF), 75Ω BNC (L-Band)  
NN = 50Ω N-type (RF), 50Ω N-type (L-Band)  
SS = 50Ω SMA (RF), 50Ω SMA (L-Band)

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