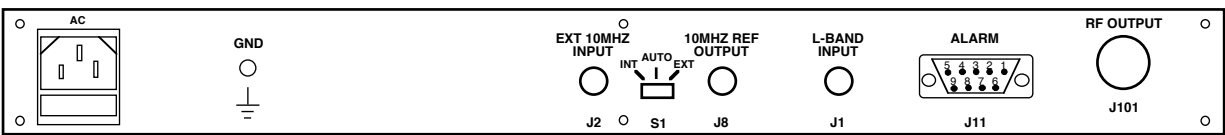


2115-7172-2021 Block Upconverter, 2.025 - 2.120 to 7.145 - 7.240 GHz

The 2115-7172-2021 Block Upconverter converts 2.025 - 2.120 GHz to 7.145 - 7.240 GHz (non-inverted) with low phase noise and flat frequency response. Frequency translation is via a 5.120 GHz local oscillator. Front panel LEDs provide indication of DC Power, External 10 MHz, and PLL Alarm. The gain is +20 dB. Connectors are Type N female for the RF and BNC female for the L-Band and external reference input and reference output. A three-way switch controls which 10 MHz reference is being used. In the INT position, the internal reference is used, in the EXT position, the external reference is used, and 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 2115 is powered by a 100-240 ±10% VAC power supply, and mounted in a 1 3/4" X 19" X 14" rack mount chassis.



Front and Rear Panel

EQUIPMENT SPECIFICATIONS*

Input Characteristics (L-Band)

Impedance/Return Loss 50Ω / 14dB
 Frequency 2.025 to 2.120 GHz
 Noise Figure, Max. 15 dB max gain, Fc
 Input Level range -40 to -20 dBm, Fc

Output Characteristics (RF)

Impedance/Return Loss 50Ω / 14dB
 Frequency 7.145 to 7.240 GHz
 Output Level Range -20 to 0 dBm, Fc
 Output 1 dB compression +10 dBm, Fc

Channel Characteristics

Gain +20 dB ±1 dB, at Fc
 Image Rejection > 60 dB, min
 Spurious, Inband SIGNAL RELATED<-45 dBc, <-50 dBc typ. in band, 0 dBm out; SIGNAL INDEPENDENT,<-60 dBm
 Spurious, Out of Band <-45 dBm (6.5-7.145 GHz and 7.240-8.0 GHz Out)
 Intermodulation <-55 dBc for two carriers at Fc ± 2 MHz, each at -10 dBm out
 Frequency Response ±1.5 dB, 7.145 - 7.240 GHz out; ± 0.5 dB, 40 MHz BW
 Frequency Sense Non-inverting

LO Characteristics

LO Frequency 5.120 GHz
 Frequency Accuracy ± 0.01 ppm max over temp internal reference; external reference input
 10 MHz In/Out level 3 dBm ± 3 dB

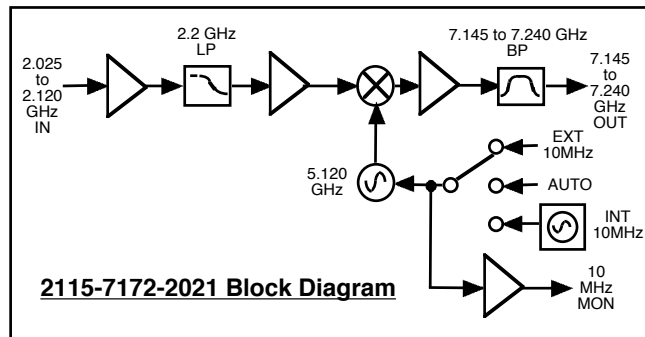
Phase Noise @ F (Hz) >	100	1K	10K	100K	1M
dBc/Hz	-70	-80	-85	-100	-110

Controls, Indicators

Ext 10 MHz Yellow LED, indicates external 10 MHz reference selected (rear panel DPDT switch)
 Power Green LED
 PLL Alarm Red LED, External contact closure

Other

RF, L-band Connector N-type (female), 50Ω, BNC (female), 50Ω
 10 MHz Connectors BNC (female), 75Ω Connector; **Works for 50Ω or 75Ω**
 Alarm Connector DB9 - NO or NC contact closure on Alarm
 Size 19 inch standard chassis 2.00" high X 14.00" deep
 Power 100-240 ±10% VAC, 47 - 63 Hz, 45 watts max.



2115-7172-2021 Block Diagram

Available Options

Connectors/Impedance
 N - 50Ω N-type (RF), 75Ω BNC (L-Band)
 NN - 50Ω N-type (RF), 50Ω N-type (L-Band)
 NS - 50Ω SMA (RF), 50Ω N-type (L-Band)
 S - 50Ω SMA (RF), 50Ω BNC (L-Band)
 S7 - 50Ω SMA (RF), 75Ω BNC (L-Band)
 SS - 50Ω SMA (RF), 50Ω SMA (L-Band)

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