

**2116-126 Block Downconverter, 12.25 - 12.75 GHz**

The 2116-126 Downconverter converts 12.25 - 12.75 GHz to 0.95 - 1.45 GHz with a local oscillator at 11.3 GHz . Front panel LEDs provide indication of DC Power, External 10 MHz, and PLL Alarm. The gain is +35 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 2116 is powered by a 90-260 VAC power supply, and mounted in a 1 3/4" X 19" X 14" rack mount chassis.



**2116-126 Downconverter**

**EQUIPMENT SPECIFICATIONS\***

**Input Characteristics**

Impedance/Return Loss	50Ω/14 dB
Frequency	12.25 to 12.75 GHz
Noise Figure, Max.	20 dB max gain
Input Level range	-55 to -35 dBm
Input 1 dB compression	-25 dBm

**Output Characteristics**

Impedance/Return Loss	50Ω /14 dB
Frequency	0.95 to 1.45 GHz
Output Level Range	-20 to 0 dBm
Output 1 dB compression	+10 dBm

**Channel Characteristics**

Gain	+35 dB ±2 dB
Image Rejection	> 60 dB, min
Spurious, In Band	SIGNAL RELATED<-60 dBC in band, 0 dBm out; SIGNAL INDEPENDENT,<-60 dBm
Spurious, Out of Band	<-50 dBm
Intermodulation	<-55 dBC for two carriers each at -10 dBm out
Frequency Response	±1.5 dB, 950 -1500 MHz out; ± 0.5 dB, 40 MHz BW
Frequency Sense	Non-inverting

**LO Characteristics**

LO Frequency	11.3 GHz
Frequency Accuracy	± 0.01 ppm max over temp internal reference; ext. ref. input
10 MHz level	3 dBm, ± 3 dB, 75 ohms, External In or Monitor out
Phase Noise	@ Freq   100Hz 1kHz 10kHz 100kHz 1MHz
	dBC/Hz   < -70 < -80 < -90 < -100 < -110

**Controls, Indicators**

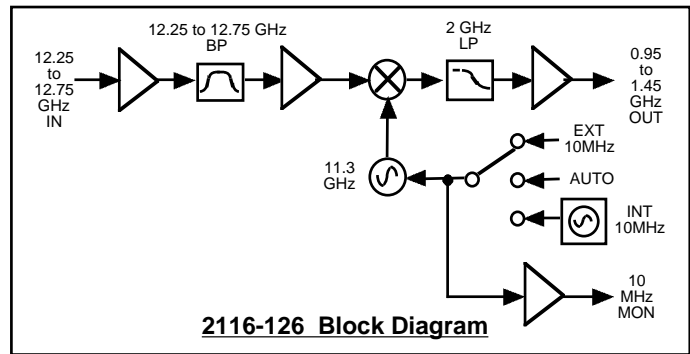
PWR	Green LED
PLL Alarm	Red LED, External contact closure
Ext 10 MHz	Yellow LED, indicates external 10 MHz reference selected (rear panel DPDT switch)

**Other**

RF Connector	Type-N (female) - (50Ω SMA (female) optional)
IF Connector	SMA (female) - (75Ω BNC (female), 75Ω Type F (female), or 50Ω Type-N (female) optional)
10 MHz connectors	BNC (female), 50Ω/75Ω
Alarm Connector	DB9 - NO or NC contact closure on Alarm
Size	19 inch standard chassis 1.75" high X 14.0" deep
Power	90 - 260 VAC, 47 - 63 Hz, 45 watts max.

**Options**

Connectors	Contact Cross Sales for option numbers
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\*+10 to +40 degrees C; Specifications subject to change without notice