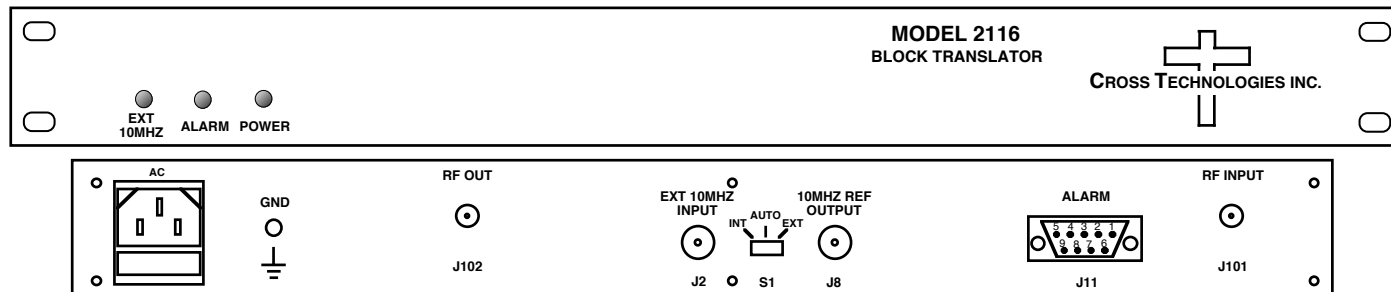


2116-140T120 Block Translator, 12.75 - 14.0 GHz to 10.70 - 12.0 GHz

The 2116-140T120 Block Translator converts 12.75 - 14.0 GHz to 10.70 - 12.0 GHz with a local oscillator at 2.05 GHz. Front panel LEDs provide indication of DC Power, External 10 MHz, and PLL Alarm. The gain is -30 dB. Connectors are SMA female for RF In and RF Out and BNC female for the external reference input and reference output. A three-way switch controls which 10 MHz reference is being used. When in the AUTO position, the internal reference is used unless a +3 dBm $\pm$ 3 dB, 10MHz reference signal is connected to the external reference input. The 2116 is powered by a 100-240 $\pm$ 10% VAC power supply, and mounted in a 1 3/4" X 19" X 14" rack mount chassis.



Front and Rear Panels

EQUIPMENT SPECIFICATIONS*

Input Characteristics

Impedance / Return Loss	50 Ω / 18dB min.
Frequency	12.75 to 14.0 GHz
Input Level range	-30 to -10 dBm
Input 1 dB compression	0 dBm

Output Characteristics

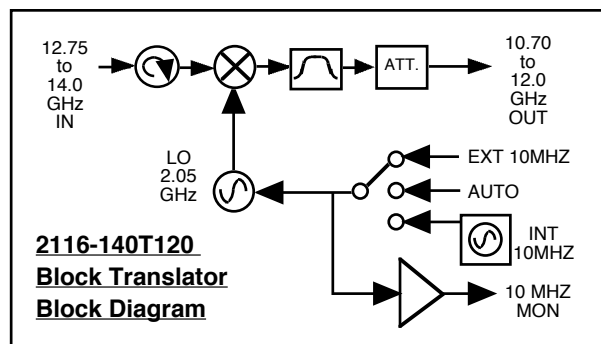
Impedance/Return Loss	50 Ω / 18dB min.
Frequency	10.70 to 12.0 GHz
Output Level Range	-60 to -40 dBm
Output 1 dB compression	-30 dBm

Channel Characteristics

Gain	-30 dB $\pm$ 2 dB at Fc
Input/Output Isolation	>40 dB , min
Spurious, Inband	SIGNAL RELATED -40 dBc max , <-50 dBc, typ.; SIGNAL INDEPENDENT <-80 dBm
2 Tone Intermod	>45 dBc, 50 dBc typ. for two carriers each at -15 dBm in
Spurious, Out of band, LO	<-45 dBm, at 10.25 and 12.30 GHz at the output
Spurious, Out of band, sig.	<-20 dBc, Fc$\pm$1 GHz, <-40 dBc, Fc$\pm$2 GHz at the output
Frequency Response	$\pm$ 2.0 dB, over frequency band; $\pm$ 0.5 dB, 40 MHz BW
Frequency Sense	Non-inverting

LO Characteristics

LO Frequency	2.05 GHz, fixed
Frequency Accuracy	$\pm$ 0.01 ppm max over temp internal reference; ext. ref. input
10 MHz In/Out Level	+3 dBm $\pm$ 3 dB



Phase Noise @ F (Hz) >	100	1K	10K	100K	1M
dBc/Hz	-70	-80	-85	-95	-110

Controls, Indicators

Power	Green LED
PLL Alarm	Red LED, External contact closure
Ext 10 MHz	Yellow LED, indicates external 10 MHz reference selected (rear panel DPDT switch)
10 MHz Reference	3-way Switch (selects INTERNAL, EXTERNAL, or AUTO mode)

Other

RF In, RF Out Con.	SMA (female), 50 Ω
10 MHz Connectors	BNC (female), 50 Ω /75 Ω
Alarm Connector	DB9 - NO or NC contact closure on Alarm
Size	19 inch standard chassis 1.75" high X 14" deep
Power	100-240 $\pm$ 10% VAC, 47 - 63 Hz, 45 watts max.

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