CROSS TECHNOLOGIES, INC.

DATA SHEET

REV_F 10/05/15

2116-14T12 Block Translator, 14.0 - 14.5 GHz to 11.7 - 12.2 GHz

The 2116-14T12 Block Translator converts 14.0 - 14.5 GHz to 11.7 - 12.2 GHz with a local oscillator at 2.3 GHz. Front panel LEDs provide indication of external 10 MHz (yellow), PLL alarm (red), and DC power (green). The gain is -30 dB to Output #1 and -50 to Output #2. Connectors are SMA female for RF and BNC female for the 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 100-240 ±10% VAC power supply, and housed in a 1 3/4" X 19" X 14" rack mount chassis.

Front Panel

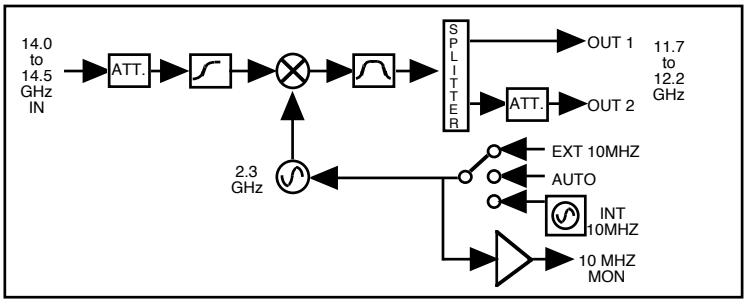
EQUIPMENT SPECIFICATIONS*

Input Characteristics

Impedance / Return Loss	50Ω / **15 dB, typ., 14dB min.**
Frequency	14.0 to 14.5 GHz
Input Level range	-30 to 0 dBm
Input 1 dB compression	**+10 dBm**

Output Characteristics

Impedance/Return Loss	50Ω / **15 dB, typ., 14dB min.**
Frequency	11.7 to 12.2 GHz
Output Level Range (#1)	-60 to -30 dBm
Output Level Range (#2)	-80 to -50 dBm



Block Diagram

Channel Characteristics

Gain	-30 dB ±2 dB (Output #1); -50 dB ±2 dB (Output #2)
Input/Output Isolation	60 dB, min
Intermodulation	< -50 dBC for two carriers each at -13 dBm in
Spurious	< -45 dBC
Frequency Response	±1.5 dB, over frequency band; ± 0.5 dB, 40 MHz BW
Frequency Sense	Non-inverting

LO Characteristics

LO Frequency	2.3 GHz
Frequency Accuracy	± 0.01 ppm max over temp internal reference; ext. ref. input
10 MHz In/Out Level	+3 dBm ± 3 dB

Phase Noise @ F (Hz) >	*100*	*1K*	*10K*	*100K*	*1M*
dBC/Hz	*-70*	*-80*	*-90*	*-100*	*-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 Connectors	SMA (female), 50Ω
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" deep
Power	100-240 ±10% VAC, 47 - 63 Hz, 45 watts max.

Available Options
Connectors/Impedance
NN - 50Ω N-type (RF)

*0˚C to 50˚C; Specifications subject to change without notice

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