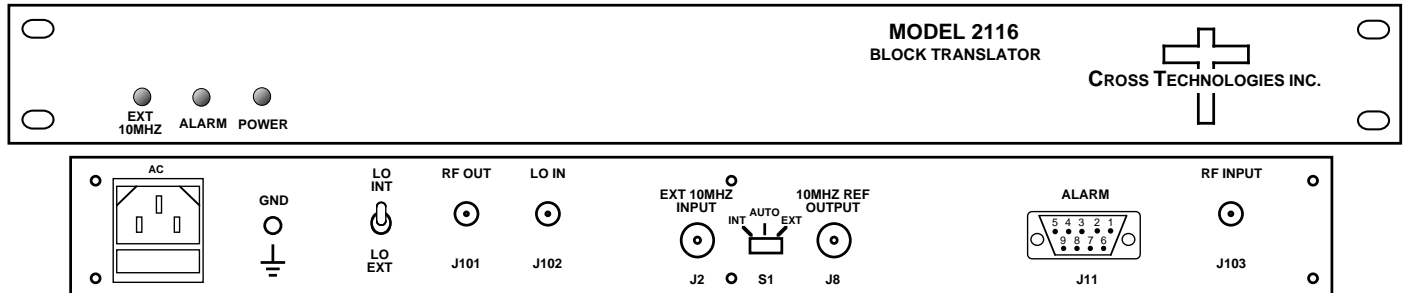


2116-288T190 Block Translator, 27.8 - 28.8 GHz to 18.0 - 19.0 GHz, 9.80 GHz LO

The 2116-288T190 Block Translator converts 27.8 - 28.8 GHz to 18.0 - 19.0 GHz with a local oscillator at 9.80 GHz. Front panel LEDs provide indication of DC Power, External 10 MHz, and PLL Alarm. The gain is -30 dB. Connectors are 2.92mm female for RF In, Super SMA female for 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 ± 3 dB, 10MHz reference signal is connected to the external reference input. **External LO option W89 allows an external 9.8 GHz LO at +14 dBm ± 2dB level**, switched by a SPDT toggle switch. It 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 Panels (Shown with Option W89)

EQUIPMENT SPECIFICATIONS*

Input Characteristics

Impedance / Return Loss 50Ω / 12 dB, typ., 10dB min.
 Frequency 27.8 to 28.8 GHz
 Input Level range -10 to 0 dBm
 Input 1 dB compression +10 dBm

Output Characteristics

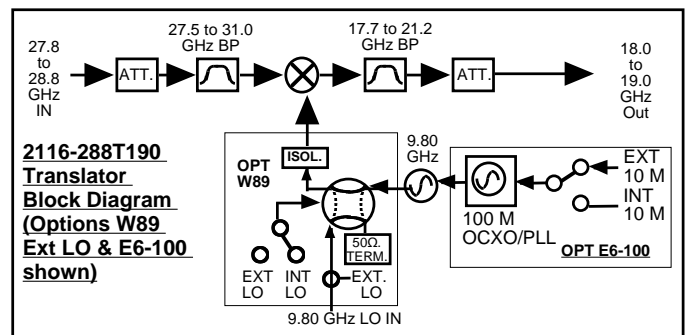
Impedance/Return Loss 50Ω / 15 dB, typ., 14dB min.
 Frequency 18.0 to 19.0 GHz
 Output Level Range -40 to -30 dBm
 Output 1 dB compression -20 dBm

Channel Characteristics

Gain -30 dB ±2 dB at Fc
 Input/Output Isolation >50 dB, min
 Intermodulation >50 dBC for two carriers each at -5 dBm in
 Spurious, Inband SIGNAL RELATED <-50 dBC, typ., -40 dBC max; SIGNAL INDEPENDENT <-80 dBm;
 Spurious, Out of band, 2XLO <-45 dBm, at 19.6 GHz at the output
 Frequency Response ±2.0 dB, over frequency band; ± 0.5 dB, 40 MHz BW
 Frequency Sense Non-inverting

LO Characteristics (Phase noise shown with Option E6-100)

LO Frequency 9.80 GHz
 Frequency Accuracy ± 0.05 ppm max over temp internal reference
 10 MHz In/Out Level +3 dBm ± 3 dB



Available Options

W6-100 Int 100MHz ref. locked to ext 10 MHz
 W41 -20 to +50 degrees C operation
 W89 - Ext. LO, switched & terminated

Contact Cross for other options

Phase Noise @ F (Hz) >	10	100	1K	10K	100K	1M	10M	100M
9.800 GHz dBC/Hz, W/E6-100	-45	-70	-85	-100	-100	-110	-130	-130
Ext 10 MHz Ref.	-127	-145	-150	-153	-153	-153	-153	-153

Ext LO Freq/Level, W89 9.80 GHz / +14 dBm, ± 2 dB

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 switch)
 10 MHz Reference 3-way Switch (selects INTERNAL, EXTERNAL, or AUTO mode)

Other

RF In / RF Out Con. 2.92 mm / Super SMA
 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.

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