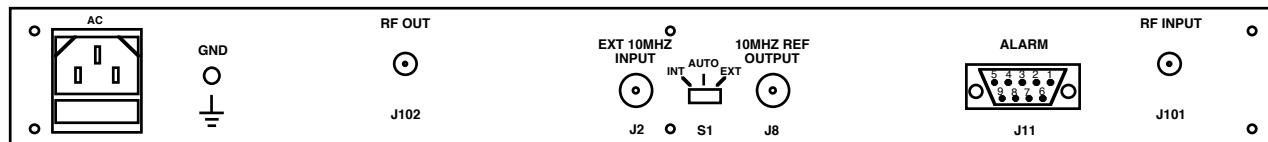


## 2116-84T78 Block Translator, 7.90 - 8.40 GHz to 7.25 - 7.75 GHz

The 2116-84T78 Block Translator converts 7.90 - 8.40 GHz to 7.25 - 7.75 GHz with a local oscillator at 0.65 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 ± 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 mounted in a 1 3/4" X 19" X 14" rack mount chassis.



**Front and Rear Panels**

### EQUIPMENT SPECIFICATIONS\*

#### Input Characteristics

Impedance / Return Loss 50Ω / 14dB min.  
 Frequency 7.90 to 8.40 GHz  
 Input Level range -30 to -10 dBm  
 Input 1 dB compression 0 dBm

#### Output Characteristics

Impedance/Return Loss 50Ω / 14dB min.  
 Frequency 7.25 to 7.75 GHz  
 Output Level Range -60 to -40 dBm  
 Output 1 dB compression -30 dBm

#### Channel Characteristics

Gain -30 dB ±2 dB at Fc  
 Input/Output Isolation >40 dB, min  
 Intermodulation >50 dBC for two carriers **each at -15 dBm in**  
 Spurious, Inband SIGNAL RELATED <-50 dBC, typ., **-40 dBC max**; SIGNAL INDEPENDENT <-80 dBm;  
 Spurious, Out of band, **LO** **<-45 dBm, at 7.15 and 7.80 GHz at the output**  
 Spurious, Out of band, **sig.** **<-20 dBc, Fc±1 GHz, <-40 dBc, Fc±2 GHz at the output**  
 Frequency Response ±2.0 dB, over frequency band; ± 0.5 dB, 40 MHz BW  
 Frequency Sense Non-inverting

#### LO Characteristics

LO Frequency 0.65 GHz  
 Frequency Accuracy ± 0.01 ppm max over temp internal reference; ext. ref. input  
 10 MHz In/Out Level +3 dBm ± 3 dB

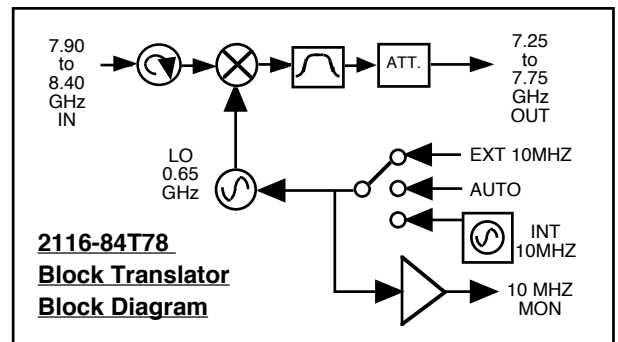
Phase Noise @ F (Hz) >	100	1K	10K	100K	1M
dBC/Hz	-70	-80	-85	-95	-110

#### 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), 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.



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