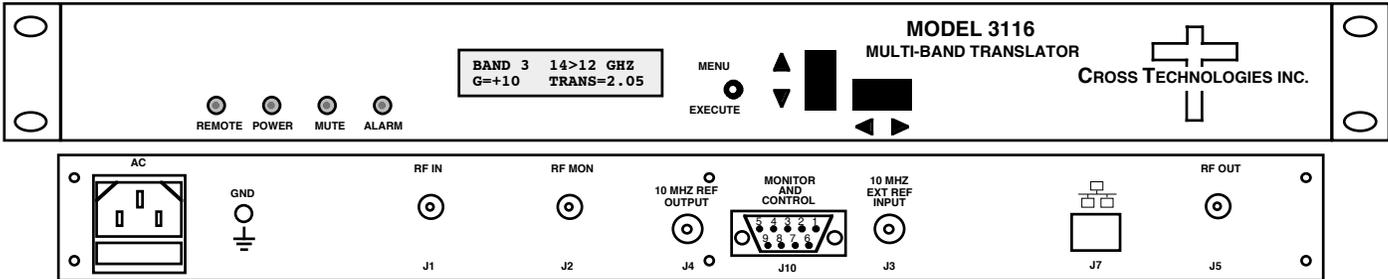


3116-T31-148 Multi-Band, Block Translator

The 3116-T31-148 Translator converts one of three input RF bands to one of three output RF bands in three different translations. **Dual Conversion frequency translation is used for all inputs to minimize spurious.** Front panel LEDs provide indication of DC Power, and PLL Alarm. The RF to RF gain is +20 dB, maximum. Connectors are SMA female for the RF out, RF in and RF in Monitor and BNC female for the external reference input and reference output. **In AUTO, the 10 MHz reference stays in external if the external level is in the +2 to +8 dBm range.** Gain, band select, LO frequency, and internal 10 MHz frequency are controlled by the Ethernet M&C or via the Monitor/Control connector. The 3116-T31-148 is powered by a 100-240 ±10% VAC power supply; and housed in a 1.75" X 19" X 17" rack mount chassis.



3116-T31-148 FRONT AND REAR PANELS

EQUIPMENT SPECIFICATIONS*

Input Characteristics

Impedance/Return Loss 50Ω/12 dB
 Frequency (GHz) SEE BAND CHART
 Noise Figure, Max. 20 dB at max gain
 Input Level range -30 to -10 dBm

Output Characteristics

Impedance/Return Loss 50 Ω /10 dB
 Frequency (GHz) SEE BAND CHART
 Output Level Range -60 to 0 dBm
 Output 1 dB compression **+10 dBm @ Max. Gain**

Channel Characteristics

Gain, maximum +20 ±3 dB
 Gain Range; Steps +20 to -40 dB; **1±1 dB**
 In to Out Isolation, Min. **>45dB, -60 typ.**
Spurious, Inband, @in-Level **<40 dBC @ -10dBm in, 0 dBm out**
Spurious, out of band Fc±2GHz **<-50 dBC @ -10dBm in, 0 dBm out**
 Intermod., 2 tone, **-5dBm ea out** **<45 dBC, @ Max. Gain**
 Freq. Response, band ±2 dB
 Freq. Response, 40MHz ± 0.5 dB
 Frequency Sense Non-inverting
RF Monitor **+10 ± 2 dB above input level**

LO Characteristics

LO Frequency Band Specific, **fixed frequency**
 Frequency Accuracy ± 0.01 ppm max over temp internal reference; ext. ref. input

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

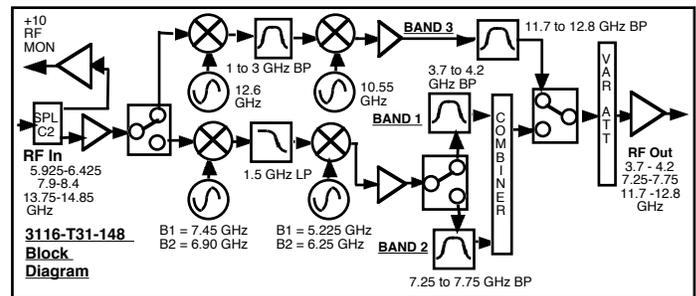
10 MHz In/Out Level +4 dBm ± 3 dB; Manual Local/Remote; Auto, switches to internal when the external falls below +1 dBm

Controls, Indicators

Gain, Band, 10M Freq. Gain, band select, and internal 10 MHz frequency via Ethernet M&C or Monitor/Control connector.
 PLL Alarm Red LED, External contact closure
 Power Green LED
 Remote Ethernet and RS232C, 9600 baud (RS485 Optional)

Other

RF In, Out, Mon. Conn. SMA (female), 50Ω
 10 MHz connectors BNC (female), 75 ohms; Works with 50Ω
 Monitor/Control Connector **RS232C/485, DB9, Female; Ethernet, RJ45, Female, w/Web Browser & SNMP User interfaces.**
 Size 19 inch, 1RU standard chassis 1.75" high X 17.0" deep
 Power 100-240 ±10% VAC, 47-63 Hz, 30 watts max



BAND CHART-Frequencies, Translations, Phase Noise

BAND NO.	IN RANGE (GHz)	OUT RANGE (GHz)	TRANS. (GHz)	# CONV (MHz)	PH NOISE @ 10 kHz
1	5.925-6.425	3.7-4.2	2.225	DUAL	80
2	7.90-8.40	7.25-7.75	0.65	DUAL	80
3	13.75-14.85	11.7-12.8	2.05	DUAL	80

*+10 to +40 degrees C Operating; **-30 to +60 degrees C Non-operating**; 95% relative humidity, non-condensing; Specifications subject to change without notice