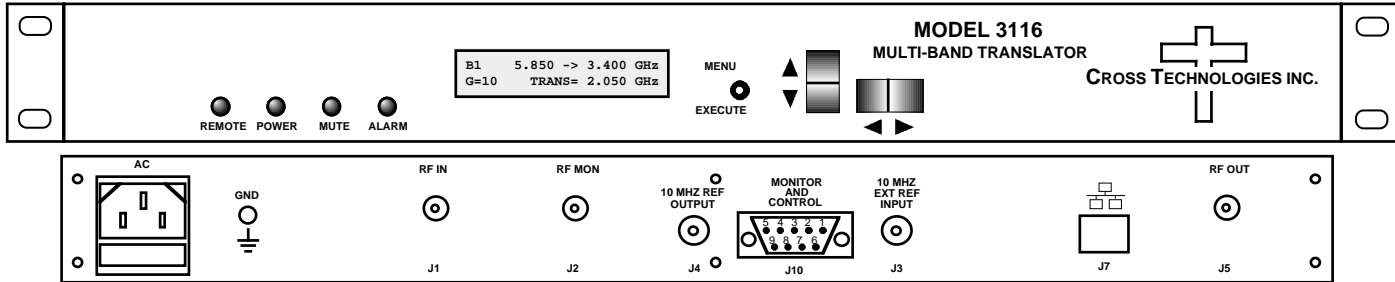


3116-T71 Multi-Band, Block Translator

The 3116-T71 Translator converts one of four input RF bands to one of four output RF bands in seven different translations. Front panel LEDs provide indication of DC Power, Remote, Mute 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 switches to internal when the external is below +1 dBm. Gain, band, LO frequency, and internal 10 MHz frequency are controlled by the Ethernet M&C or the Monitor/Control connector. The 3116-T71 is powered by a 100-240 ±10% VAC power supply and is in a 1.75" X 19" X 19" rack mount chassis.



3116-T71 FRONT AND REAR PANELS

EQUIPMENT SPECIFICATIONS*

Input Characteristics

Impedance/Return Loss **50Ω/12 dB, 14 dB typ**
 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, 14 dB typ**
 Frequency (GHz) SEE BAND CHART
 Output Level Range -60 to 0 dBm
 Output 1 dB compression **+8 dBm, +10 typ.**

Channel Characteristics

Gain, maximum +20 ±3 dB
 Gain Range; 1 dB Steps +20 to -40 dB;
 In to Out Isolation, Min. **>45dBC, >60 typ.**
 Spurious, Inband **>40 dBC, except 25 dBC (>30 dBC typ.) @ -10 dBm in** where harmonics of LO falls in-band (See Chart)
 Spurious, LO, out of band **<-60 dBm**
2 tone @-20dBm in ea **>45 dBC, 50 typ**
 Freq. Response, band ±2 dB
 Freq. Response, 40MHz ± 0.5 dB
 Frequency Sense Non-inverting

LO Characteristics

LO Frequency Band Specific
 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	SEE BAND CHART	100	110

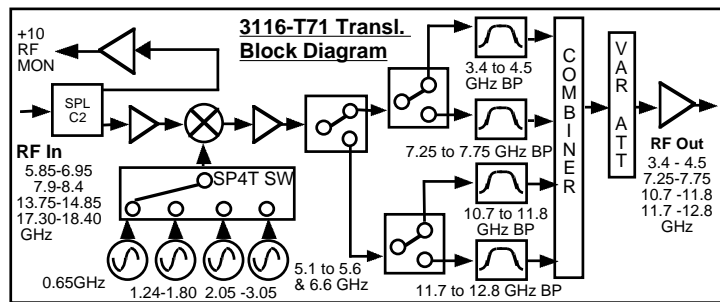
10 MHz In/Out Level **+5 dBm ±3 dB**; Manual Local/Remote; Auto, switches to internal when the external falls below +1 dBm

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, Mute Green LED, **Yellow 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 Conn. Ethernet, RJ45, Female; RS232C, DB9, Female
 Size 19 inch, 1RU standard chassis, 1.75" high X **19.0" deep**
 Power 100-240 ±10% VAC, 47-63 Hz, 30 watts max



BAND CHART-Frequencies, Translations, Phase Noise, Spurs

BAND NO.	IN RANGE (GHz)	OUT RANGE (GHz)	LO (GHz)	LO RANGE (GHz)	LO STEP (MHz)	PH NOISE @ 10 kHz	In-Band Fixed Spurs (25dBC @-10 In; 5dBC @ -30 In)
1	5.85-6.95	3.4-4.5	2.45	2.05-3.05	1	85dBC	2.05 to 2.25, Carrier related 20 dBC
2	7.90-8.40	7.25-7.75	0.65	0.65	FIXED	85dBC	None
3	13.75-14.85	10.7-11.8	3.05	2.05-3.05	1	85dBC	2.14 to 2.36; 2.675 to 2.95
4	13.75-14.85	11.7-12.8	2.05	2.05-3.05	1	85dBC	2.05 to 2.1; 2.34 to 2.565; 2.925 to 3.05
5	13.75-14.85	11.7-12.8	1.5	1.24-1.80	1	85dBC	1.24 to 1.40 ; 1.5 to 1.6 ; 1.75 to 1.8
6	17.3-18.4	10.7-11.8	6.6	6.6	FIXED	85 dBC	None
7	17.3-18.4	11.7-12.8	5.6	5.1-5.6	5	85 dBC	None

* 5 MHz steps; >75 dBC for 1 MHz steps

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