



# DATA SHEET

12/20/06

## 2116-6T4 Test Translator, 5.845 - 6.425 GHz to 3.62 - 4.20 GHz

The 2116-6T4 Test Translator converts 5.845 - 6.425 GHz to 3.62 - 4.20 GHz with a local oscillator at 2.225 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 N-type 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 90-260 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  
 Frequency 5.845 to 6.425 GHz  
 Input Level range -10 to -30 dBm  
 Input 1 dB compression 0 dBm

#### Output Characteristics

Impedance/Return Loss 50Ω /15 dB  
 Frequency 3.62 to 4.20 GHz  
 Output Level Range (#1) -40 to -60 dBm  
 Output Level Range (#2) -60 to -80 dBm

#### 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 -10 dBm  
 Frequency Response ±1.5 dB, over frequency band; ± 0.5 dB, 40 MHz BW  
 Frequency Sense Non-inverting

#### LO Characteristics

LO Frequency 2.225 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

@ Freq	100Hz	1kHz	10kHz	100kHz	1MHz
dBC/Hz	< -70	< -80	< -90	< -100	< -110

#### Controls, Indicators

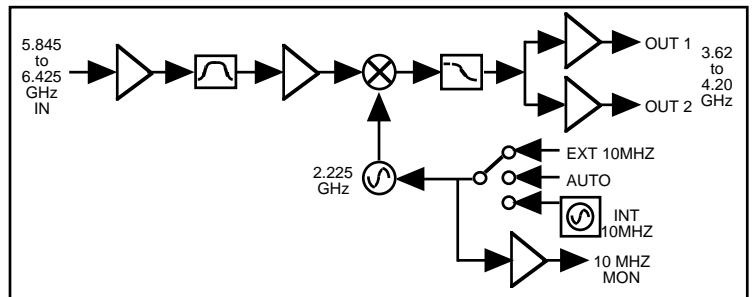
Power Green LED  
 PLL Alarm Red LED, External contact closure  
 Ext 10 MHz Yellow LED, indicates external 10 MHz reference selected (rear panel DPDT switch)  
 10 MHz Reference 3-way Switch (selects INTERNAL, EXTERNAL, or AUTO mode)

#### Other

RF Connectors N-type (female)  
 10 MHz Connectors BNC (female), 50Ω/75Ω  
 Alarm Connector DB9 (female) - NO or NC contact closure on Alarm  
 Size 19 inch standard chassis 1.75" high X 14" deep  
 Power 90 - 260 VAC, 47 - 63 Hz, 45 watts max.

#### Available Options

Connectors/Impedance  
 SS - 50Ω SMA (RF)



**Block Diagram**

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