**DATA SHEET**

**4116-24T11 Translator, S-band to L-band, Weather Resistant**

The 4116-24T11 Translator converts 2.2 - 2.4 GHz to 0.95 - 1.15 GHz. Front panel LEDs provide indication of DC Power, and PLL Alarm. The S-band to L-band gain is +30 dB, maximum. Connectors are Type N female for the L-band out, S-band in and S-band in Monitor and SMA female for the external 10 MHz reference input. Gain, mute, and internal 10 MHz frequency are controlled by the M&C (Ethernet and/or Status/Control). In AUTO, the 10 MHz reference stays in external if the external level is in the +2 to +8 dBm range. The 4116 is powered by a 100-240 ± 10% VAC power supply, and mounted in an 8”W X 6”H X 16”D Weather Resistant* enclosure.

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### Equipment Specifications

**Input Characteristics**
- Impedance/Return Loss: 50Ω/14 dB
- Frequency: 2.2 to 2.4 GHz
- Noise Figure, Max.: 15 dB at max gain
- Input Level range: -50 to -30 dBm

**Output Characteristics**
- Impedance/Return Loss: 50Ω/14 dB, Mute & UnMute
- Frequency: 0.95 to 1.15 GHz
- Output Gain Adj. Range: -20 to 0 dBm
- Output 1 dB compr. +10 dBm, max. gain
- Mute: +50 dB @ 0 dBm output

**Channel Characteristics**
- Gain at Fc: +30 ±3 dB max., (+30 to 0 dB variable in 0.5±0.5 dB steps)
- Input to Output Isolation: > 45 dB, min. at +20 dB gain
- Spurious, Inband: SIGNAL RELATED <-60 dBC in band, -55 dBm out; SIGNAL INDEPENDENT, <-60 dBm out
- Spurs, Out of band, ±3 dB manner:
  - LO <-60 dBm spurs, signal independent; 0.95-1.15 to 2.5 GHz out
  - LO <= -80 dBm at input and output
- Intermodulation: <-50 dBc for two carriers at 4 MHz spacing, each at -5 dBm out
- Frequency Response: ±1.0 dB, over RF band; ±0.5 dB, 40 MHz BW
- Frequency Sense: Non-inverting

**LO Characteristics**
- LO step size: None; Fixed translation
- Frequency Accuracy: ±0.05 ppm max over temp internal reference; ext. ref. input
- 10 MHz level @1 MHz input: +2 to +8 dBm in. Monitor Output = Input Level ± 1.0 dB, 50Ω

**Other**
- Size: 8”W X 6”H X 16”D Weather Resistant* Enclosure.
- Power: 100-240 ±10% VAC, 47 - 63 Hz, 25 watts maximum.

*Weather Resistant enclosures are designed to be water resistant for installation in an outdoor enclosure/antenna hut OR mounted outdoors on an antenna assembly at their specified temperature ranges. They are designed to be located “out in the elements” (water, sleet, snow, etc.) but they are not designed to be “submerged under” water.

If an extended temperature range is required, there is an Extended Temperature option (Option W21: -30°C to +60°C) available at an additional cost. Contact Cross for quote.