The 4116-T51 Translator converts one of three input RF bands to one of three output RF bands. Front panel LEDs provide indication of DC Power, and PLL Alarm. The RF to RF gain is +20 dB, maximum. Connectors are Type N female for the RF out, RF in and RF in Monitor and SMA female for the external reference input and reference output. Gain, band select, and internal 10 MHz frequency are controlled by the Ethernet M&C or via the Status/Control connector. The 10 MHz reference switches to internal when the external falls below +1 dBm. 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.

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.

**EQUIPMENT SPECIFICATIONS**

**Input Characteristics**
- Impedance/Return Loss: 50Ω/14 dB
- Frequency (GHz) BAND 1: 5.85 to 6.95
- Frequency (GHz) BAND 2&3: 13.75 to 14.85
- Frequency (GHz) BAND 4&5: 17.3 to 18.4
- Noise Figure, Max: 20 dB at max gain
- Input Level range: -30 to -10 dBm
- Input dB compression: 0 dBm

**Output Characteristics**
- Impedance/Return Loss: 50Ω/14 dB
- Frequency (GHz) BAND 1: 3.4 to 4.5
- Frequency (GHz) BAND 2&4: 10.7 to 11.8
- Frequency (GHz) BAND 3&5: 11.7 to 12.8
- Output Level Range: -60 to 0 dBm
- Output dB compression: +10 dBm

**Channel Characteristics**
- Gain: +20 ±3 dB max., (+20 to -40 dB variable in 1 dB steps)
- Input to Output Isolation: > 60 dB, min
- Spurious, Inband: < -50 dBC in band, -15 to 0 dBm out
- Spurious, LO: < -60 dBm LO
- Intermodulation: < -50 dBC for two carriers each at -5 dBm out
- Frequency Response: ±2 dB, over RF band; ± 0.5 dB, 40 MHz BW
- Frequency Sense: Non-inverting

**LO Characteristics**
- LO Frequency Band Specific
- Frequency Accuracy: ± 0.05 ppm max over temp internal reference; ext. ref. input
- 10 MHz level In/Mon: Input=+2 to +8dBm in; Monitor. Output = Input Level ± 0.5dB, 50 ohms

**Controls, Indicators**
- Gain, Band, 10M Freq: Gain, band select, and internal 10 MHz frequency via Ethernet M&C or Status/Control Connector.
- PLL Alarm: Red LED, External Contact Closure
- Power: Green LED

**Other**
- RF In, Mon. Connector: Type N (female), 50Ω
- RF Out Connector: Type N (female), 50Ω
- 10 MHz Connectors: SMA (female), 50Ω
- Status/Control Connector: Multipin MS3112E14-18S Weather Resistant Connector
- Size: 8"W X 6"H X 16"D Weather Resistant Enclosure
- Power: 100-240 ±10% VAC, 47 - 63 Hz, 20 watts max. / FCI Clipper Series CL1M1102 W/R* Connector

**+0 to +50 degrees C; Specifications subject to change without notice**

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