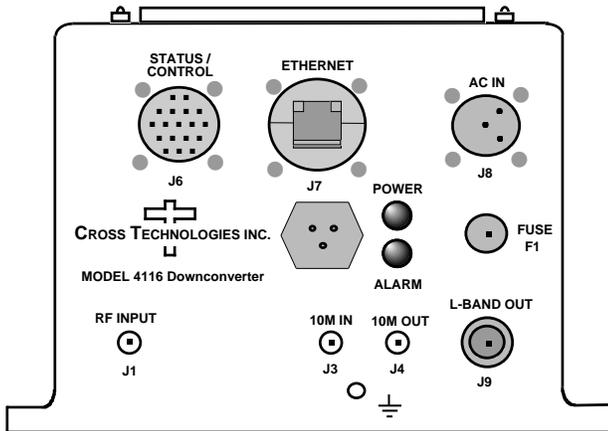


**4116-275 Ka-band Block Downconverter, Weather Resistant\***

The 4116-275 Ka-band Block Downconverter converts 27.5 - 28.5 GHz to 0.95 - 1.95 GHz. Front panel LEDs provide indication of DC Power and PLL Alarms. The L-band to RF gain is +30 dB. Connectors are 2.92 mm for RF In, SMA for external reference input and output, and Type N (all female) for L-band out. Gain and internal 10 MHz frequency are controlled by the Ethernet M&C. In AUTO, the 10 MHz reference stays in external if the external level is in the +2 to +8 dBm range. The unit is powered by a 100-240 ±10% VAC power supply, and is mounted in a 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) 27.5 to 28.5  
 Noise Figure, Max. 20 dB max gain  
 Input Level range -50 to -30 dBm

**Output Characteristics**

Impedance/Return Loss 50Ω/14 dB  
 Frequency 0.95 to 1.95 GHz  
 Output Level Range -20 to 0 dBm  
 Output 1 dB compression +10dBm, max gain

**Channel Characteristics**

Gain at Fc +30 ±3 dB, (+30 to 0 dB variable in **0.5± 0.5 dB** steps)  
 Image Rejection > 60 dB, min  
 Spurious, Inband SIG. REL. <-50dBc, -15 to 0dBm out; 2XFO <-45dBc; SIG. INDEP., <-60dBm; .95-1.95 GHz out, Gmax  
 Spurious, Out of band <-55 dBm, signal independent; 0.5-2.45 GHz out  
 Intermodulation <-50 dBc for two carriers at 4 MHz spacing, each at -5 dBm out  
 Frequency Response ±1.5 dB, over RF band; ± 0.5 dB, 40 MHz BW  
 Frequency Sense Non-inverting

**LO Characteristics**

LO Frequency 26.55 GHz  
 Frequency Accuracy ± 0.05 ppm max over temp internal reference; ext. ref. input

Phase Noise @ F (Hz) >	100	1K	10K	100K	1M
dBC/Hz	-60	-70	-80	-90	-100

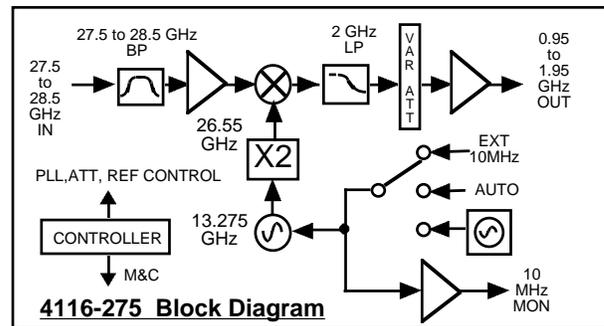
10 MHz level In/Mon +2 to +8 dBm in; Monitor Output = input level ± 1.0 dB, 50 ohms

**Controls, Indicators**

Gain, 10M Freq. Gain 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 Connector 2.92 mm (female), 50Ω  
 L-Band Connector Type N (female), 50Ω  
 10 MHz Connectors SMA (female), 50Ω  
 Ethernet Connector Standard RJ45 Weatherized Connector, RJF6G  
 Size 8" Wide X 6" High X 16" Deep Weather Resistant\* Enclosure  
 Power 100-240 ±10% VAC, 47 - 63 Hz, 25 watts max./ FCI Clipper Series CL1M1102 Connector



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