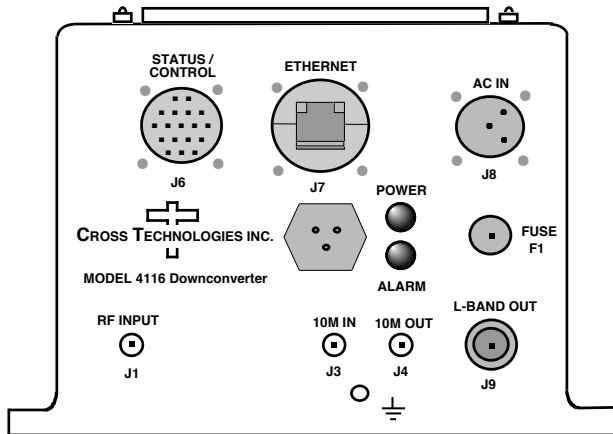


4116-253 Ka-band Block Downconverter, Weather Resistant*

The 4116-253 Ka-band Block Downconverter converts 25.3 - 26.3 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 $+30 \pm 3$ dB maximum and is adjustable in 0.5 ± 0.5 dB steps. 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 $\pm 10\%$ 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) 25.3 to 26.3
 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 compr. +10dBm, max gain, **Gmax**

Channel Characteristics

Gain at Fc +30 ± 3 dB, (+30 to 0 dB variable in **0.5 \pm 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, **0.5-0.94 GHz and 1.96 - 2.45 GHz; at Gmax**
 Intermodulation <-50 dBc for two carriers at 4 MHz spacing, each at -5 dBm out; **at Gmax**
 Frequency Response ± 1.5 dB, 950 -1950 MHz out; **± 1.0 dB, 1150 -1550 MHz out (25.5 - 25.9 GHz In)**
 Phase Linearity ± 5 degrees max. from linear phase, **1150 -1550 MHz out (25.5 - 25.9 GHz In)**
 Frequency Sense Non-inverting

LO Characteristics

LO Frequency 24.35 GHz
 Frequency Accuracy ± 0.01 ppm max over temp internal reference; ext. ref. input
 10 MHz level In/Mon +2 to +8 dBm in; Monitor Output = input level ± 1.0 dB, 50 ohms

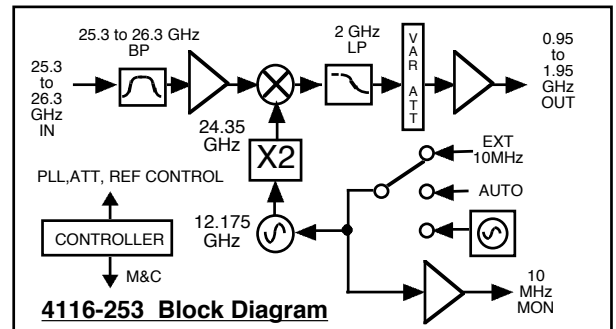
Phase Noise @ F (Hz) >	100	1K	10K	100K	1M	10M-40M
dBC/Hz	-65	-75	-80	-95	-110	-120

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 $\pm 10\%$ VAC, 47 - 63 Hz, 25 watts max./ FCI Clipper Series CL1M1102 Connector



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

Request A Quote