4116-41-213 Ka-band Block Downconverter, Weather Resistant*

The 4116-41-213 Ka-band Block Downconverter converts 17.7 - 21.2 GHz to 0.95 - 1.95 GHz in four selectable fixed bands. Front panel LEDs provide indication of DC Power and PLL Alarms. The RF to L-band gain is +20 dB. Connectors are Super SMA for RF In, RF Monitor and IF Monitor; SMA for external reference input and output, and Type N (all female) for L-band out. Gain, band select, 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 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.

Option W21 - Extended Temperature option (-30 to +60°C operating, -40 to -60°C storage) available at an additional cost Contact Cross for quote.

**EQUIPMENT SPECIFICATIONS**

Input Characteristics
- Impedance/Return Loss 50Ω/14 dB
- Frequency (GHz): BAND1 17.7 to 18.7, BAND2 18.3 to 19.3, BAND3 19.2 to 20.2, BAND4 20.2 to 21.2
- Noise Figure, Max.: 20 dB at max. gain (Gmax)
- Optimum Input Level: -45 to -10 dBm
- Non-damage input: 0 dBm at max. gain

Output Characteristics
- Impedance/Return Loss 50Ω/14 dB
- Frequency: 0.95 to 1.95 GHz
- Output 1 dB compr.: +15 dBm min. at max. gain

Channel Characteristics
- Gain at Fc: +20 ±2 dB, (+20 to 0 dB variable in 0.5 ± 0.5 dB steps)
- Image Rejection: > 60 dB, min.
- Spurious, Inband: < -50dBc, -15 to 0 dBm out; 2XFO < -45dBc; SIG. INDEP. < -60dBm; 95.1-95.9 GHz out, Gmax
- Spurious, Out of band: < -55 dBm, sig. indep. < -50 dBm, LO: < -45 dBc sig; 0.5-95.9, 1.95-2.45 GHz out; -15 to 0 dBm out, Gmax
- Intermodulation: < -50 dBc for two carriers at 4 MHz spacing, each at -5 dBm out, Gmax
- Frequency Response: ±2 dB, over RF band; ±0.5 dB, 40 MHz BW (also for monitors)
- Frequency Sense: Non-inverting
- RF, IF Monitor Gain: +5 ± 2 dB above RF In for RF (17.7-21.2 GHz) and IF (13.75-15.15 GHz) monitors
- RF, IF Mon P1dB out: +0 dBm for RF (17.7-21.2 GHz) and IF (13.75-15.15 GHz) monitors

LO Characteristics
- LO Frequency: Band Specific, fixed frequency
- Frequency Accuracy: ± 0.05 ppm max over temp internal reference; external reference input
- 10 MHz level in/Mon: +2 to +8 dBm in; Monitor Output = input level ± 1.0 dB, 50 ohms

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

**Other
- 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 Operating; -30 to +60 degrees C Non-operating; 95% relative humidity, non-condensing; Specifications subject to change without notice

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