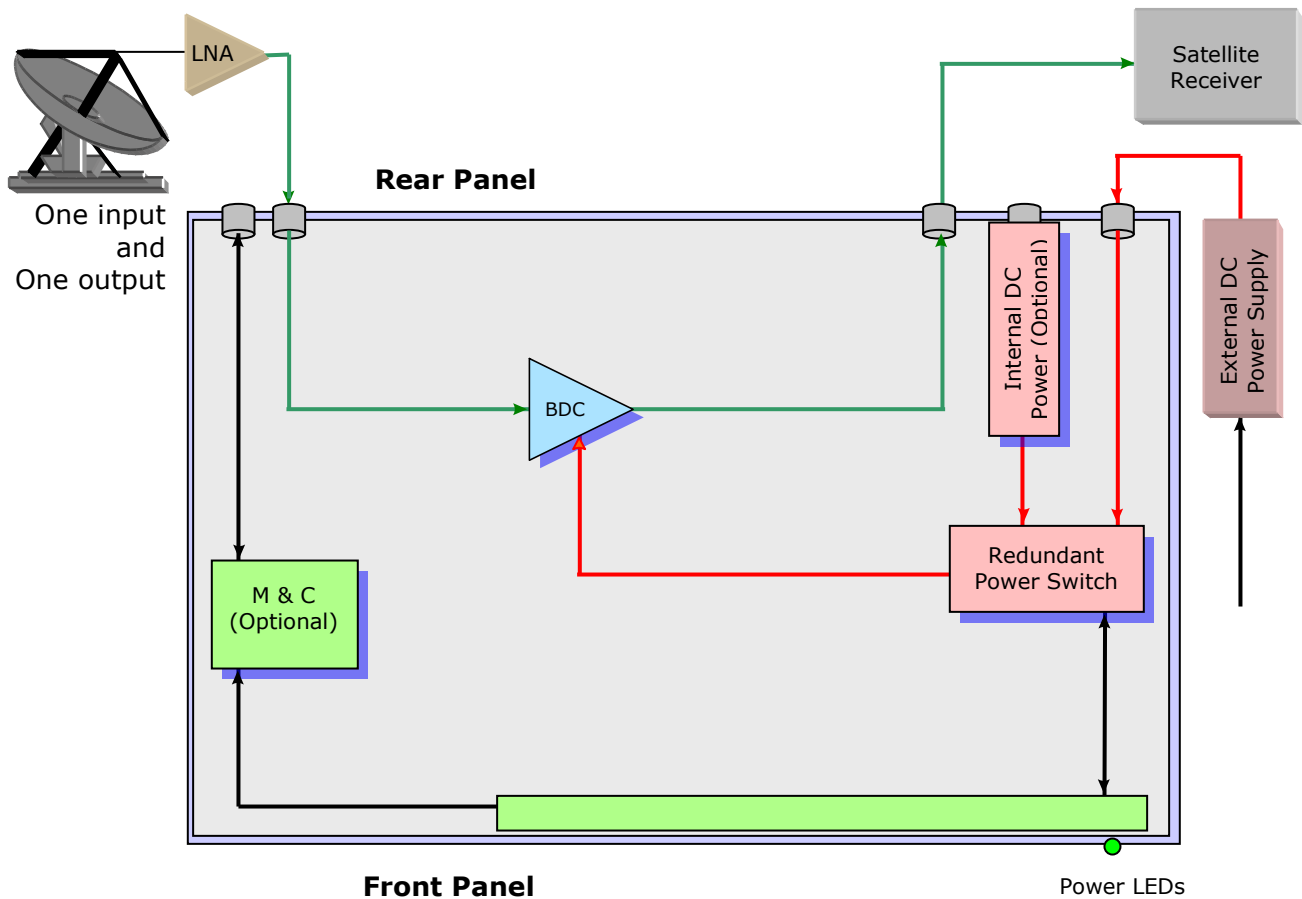




C-Band Rack system



Orbital Features:

Specifications

- 1 BDC: C-Band, PLL
- Available in a variety of BDC frequency ranges, gains, input and output connectors
- 1 unit high chassis
- Remote control and monitoring via Ethernet or RS232 connection as an option
- Redundant power supply that is outside of chassis for easy retrofit (option)

Functional

- Remote monitor and control (optional)
- External Reference is available as RMB1-CXISS or RMB1-CXESS
- Global power supply for use anywhere in the world

RMB1-CPSS: C-band rack system



ELECTRICAL

INPUT

Frequency: Various - see Orbital BDC brochures
Bandwidth: Various - see Orbital BDC brochures
Noise Figure: 7 dB typical
Ripple: ± 0.5 dB max / 27 MHz segment
Input VSWR: 1.5 : 1 typical

OUTPUT

Bandpass: Various - see Orbital BDC brochures
Output VSWR: 1.5 : 1 typical
Gain: 0 dB to 40 dB
LO Stability: ± 10 kHz max for PLL over entire frequency range
 ± 5 kHz max over +10 to +35 degrees Celsius
LO Phase Noise: -85 dBc/Hz @ 1 kHz max
Compression: +7 dBm minimum
3rd Order Intercept: +17 dBm minimum

POWER

Voltage: 90 - 264 VAC
Frequency: 47 - 63 Hz
Filtering: Transient, over and reverse voltage protected

MECHANICAL

Weight: TBD
Overall Dimensions: 19" x 1.75" x 20" maximum
Connectors (rear panel):
RF: SMA, N or F female
L-band: SMA, N or F female
External Reference (if required): BNC or SMA female

ENVIRONMENTAL

Operating Temperature: -40 to +55 degrees Celsius
Relative Humidity: Up to 100% condensation and frost

General Description:

The 1RU, 19 inch rack mount C-band block downconverter assembly translates RF inputs in the 3.4~4.2 GHz C band to IF outputs in L-band in two manually switchable bands.

The converters contain internal crystal controlled, high stability frequency references. All crystal oscillators are constantly powered up so there is no warm up time when switching to the BDC. A splitter provides signal to all three BDCs at once. Non-selected units will have their local VCO oscillators powered down to minimize spurious and in-band interference.

Orbital Design:

The single unit integrates one Block Down-Converter (BDC), into a single rack-mount chassis. There is a variety of choices for the BDC frequency range from 3.40 to 4.20 GHz as well as the India band of 4.50~4.80 GHz.

The External Reference version is available as model numbers:

RMB1-CXISS: for an internal or external 10 MHz source.
RMB1-CXESS: for an external-only 10 MHz source.

Internal/External Power supplies:

(Optional)

Power supplies, historically, have the lowest MTBF of the components in a system. The Orbital Internal / External power supply configuration was designed to provide inexpensive and rapid power supply replacement. A secondary benefit is the lower operating temperature of the external power supply thus extending its life.

The external power supply needs to be 24VDC, with a minimum current rating of 1.2 Amps. It is the main power supply. If it fails, the system switches to the internal power supply. This gives the customer time to replace the external power supply without any down time or without having to take the entire rackmounted chassis in for repair.

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