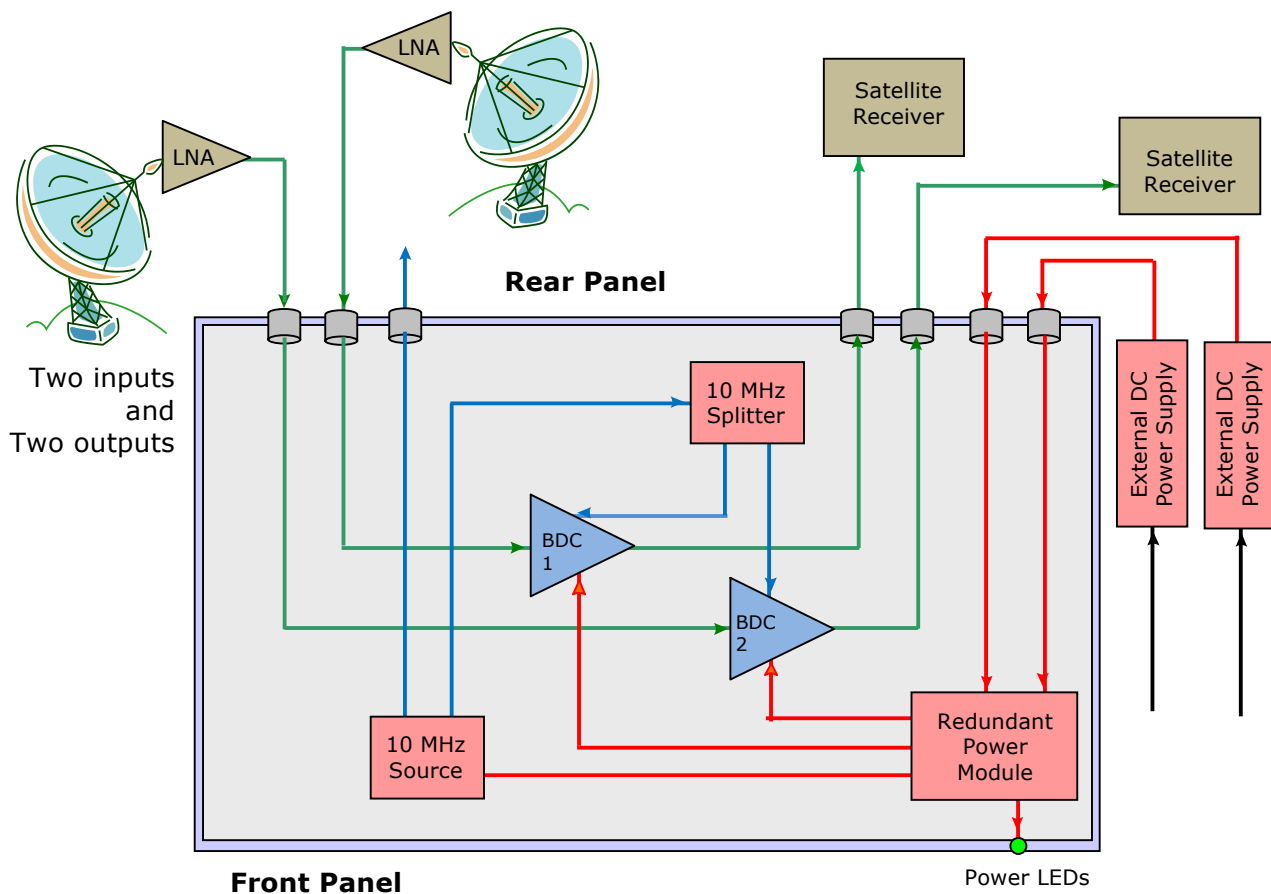




### C-Band external reference BDC Rack system



#### **Orbital Features:**

##### **Specifications**

- 2 BDCs: C-Band, External Reference. One internal 10 MHz reference source.
- 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

##### **Functional**

- Remote monitor and control (optional)
- Global power supply for use anywhere in the world

# RMB2-CXIR22: C-band external reference BDC rack system



## ELECTRICAL

### INPUT

Frequency:	Various - see Orbital BDC brochures
Bandwidth:	Various - see Orbital BDC brochures
Noise Figure:	7 dB typical
Ripple:	$\pm 0.5$ 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:	10 dB to 40 dB
LO Stability:	depends on external reference supplied
LO Phase Noise:	-85 dBc/Hz @ 1 kHz max
Compression:	+7 dBm minimum
3 <sup>rd</sup> Order Intercept:	+17 dBm minimum

### 10 MHz (Orbital MOS TCXO Oscillator)

Frequency:	10 MHz
Output Level:	+7 dBm
Stability:	$\pm 1.5 \times 10^{-7}$ , 0 to +40°C
Phase Noise:	1 kHz: -147 dBc/Hz

### 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:	0 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 polarities.

There is one input C-Band signal per polarity that connects to two C-Band external reference BDCs. The output of each BDC goes to two separate outputs. The 10 MHz signal is supplied internally and goes to each BDC. The redundant power supplies provide power to each BDC. Each BDC is always on and always selected.

## Orbital Design:

The single unit integrates two Block Down-Converters (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. There is no microprocessor, only a simply LED indicator for the power supplies.

## External Power supplies:

Power supplies, historically, have the lowest MTBF of the components in a system. The Orbital 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. If one fails, the system switches to the other power supply with the LEDs indicating the failure. This enables the customer time to replace power supplies without any down time or without taking the entire rackmounted chassis in for repair.

Internal Power supplies also available.

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