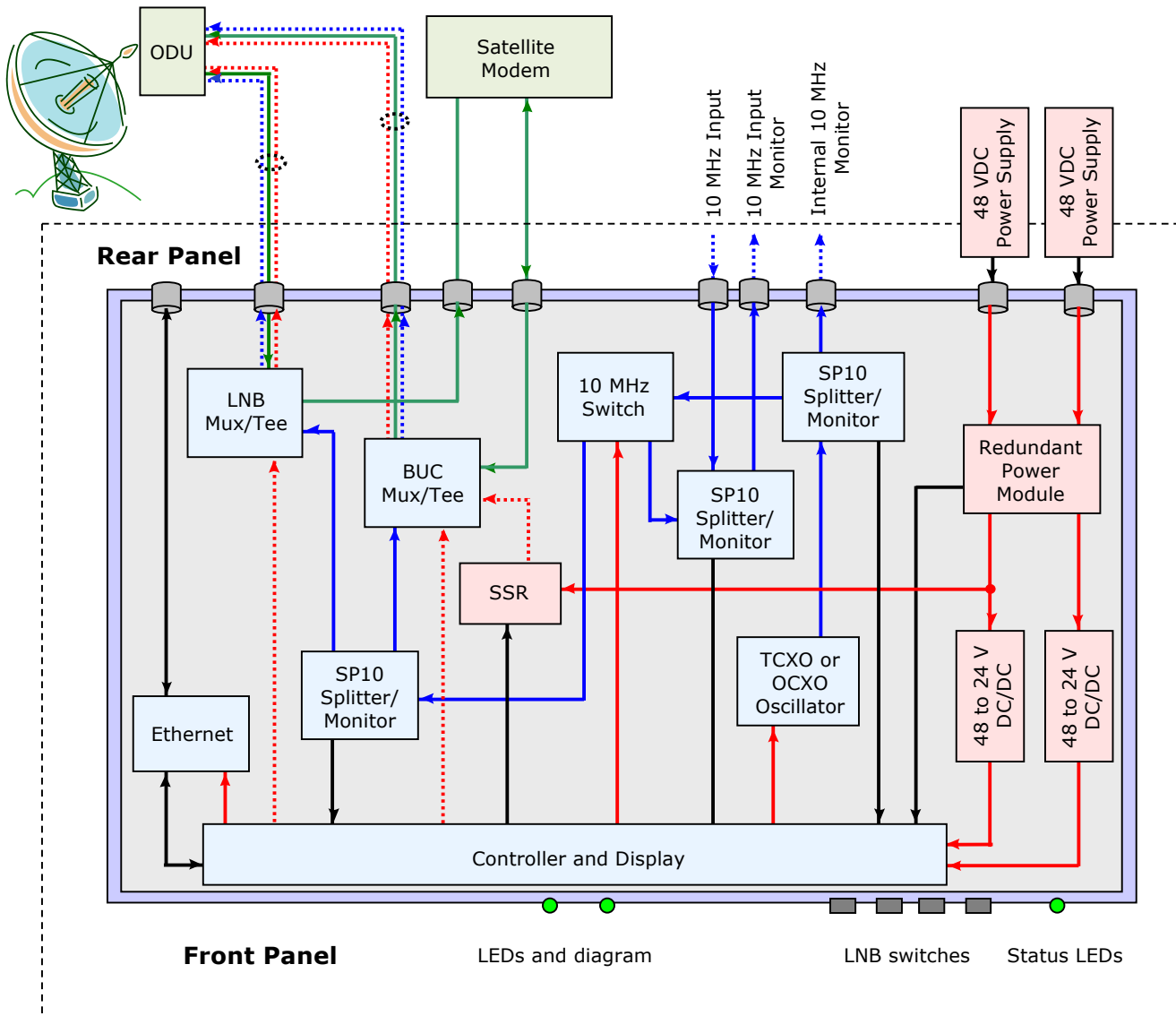




# LNB/BUC 10 MHz & DC Source

LNB/BUC system to supply 10 MHz and Redundant power to the L-Band signal

## 1 RU 19: Rackmount Unit



### **Orbital Features:**

- Thermal fuses automatically reset.
- Detection of overcurrent conditions and external power supply failure.
- Detection of failure or over/under voltage of the internal DC/DC 24 VDC supply
- Loop out monitor for external reference, and monitor port for internal reference.

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# RSSL1:1-KuXER: Ku LNB Redundancy System - Specifications

## ELECTRICAL

### L-Band

Frequency Range: 900 to 2100 MHz  
Impedance: 50 ohms, N (f)  
Insertion loss: 1 dB  
Band Flatness: 1.0 dB p-p max  
VSWR: 1.3 : 1 max

### 10 MHz

OCXO 10 MHz internal or external  
Phase Noise: -158 dBc/Hz @ 1 kHz  
-160 dBc/Hz @ 10 kHz  
Stability:  $\pm 0.5 \times 10^{-8}$ , 0 to +50°C  
Aging:  $\pm 1 \times 10^{-9}$  per day after 30 days  
Output Level: up to +2 dBm. Configured at time of order.

### Power

Voltage: 90 - 264 VAC  
Frequency: 47 - 63 Hz  
External PS conn.: TBD  
Filtering: Transient, over and reverse voltage protected

## General Description:

The Orbital Rackmountable 10 MHz & DC supply, provides an internal OCXO 10 MHz source for LNB and BUC if needed. Can also use an external 10 MHz source.

Using dual external 48 VDC power supplies, this unit supplies 24 or 48 VDC to a BUC if needed. It also supplies 24 VDC to an LNB if needed.

The Rack mountable unit is 1RU-19" with a simple LED display to quickly observe the 10 MHz and DC status, and control buttons to make any required changes to the system quickly and efficiently. Power supply redundancy is automatic. Remote M&C is via ethernet.

## Orbital Design:

As always, Orbital products are simple, market focused designs of an open architecture type to allow for custom requirements. This design uses Orbital modules to allow for custom features required by the customer, along with a universal front panel and controller board. The controller is a universal design that allows for customer feature changes.

## MONITOR AND CONTROL

<u>Push Buttons</u>	<u>LEDs</u>
Auto/Manual mode	48 V Supply
BUC Supply (48V, 24V or off)	24 V Supply
LNB Supply (on/off)	10 MHz Reference Status
10 MHz reference (Ext/Int/off)	10 MHz Reference Level (above/below threshold)

## 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 supplies thus extending their lives.

The power supplies need to be 48 VDC, with a minimum current rating of 5 Amps. If one fails, the system switches to the other power supply. This gives the customer time to replace the power supply without any down time or without having to take the entire rack mounted chassis in for repair.

As an option, one or both power supplies can be placed inside the chassis at an additional cost.

## MECHANICAL

Weight: TBD  
Overall Dimensions: 19" x 1.75" x 18" max  
Input Connector: WR-75  
Output Connector: F, N or SMA

## ENVIRONMENTAL

Operating Temp: 0 to +50°C  
Relative Humidity: <95% non-condensing

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