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Orbital Redundant Systems

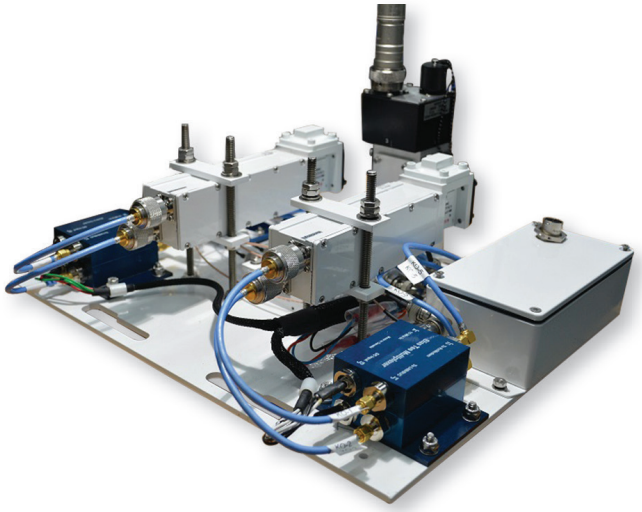
Description

Orbital Research's line of redundant switch systems are designed for satellite operators who require high operational availability and low down time. Orbital's systems are configured in 1:1 and 1:2 variants and can be used for LNA, LNB, BDC and BUC systems.

Key features:

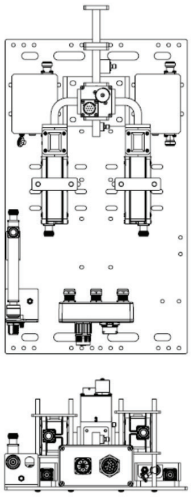
- Automatic or manual switching
- Intuitive Indoor Unit operation
- Local or remote operation
- High availability for increased network reliability
- Mounting flexibility – antenna hubs, boom arms or pole mounts
- Various value-added options – input and output couplers, transmit reject filters, 10 MHz reference backup, remote band switching, off-line device testing, shrouds for weather protection
- Standardized cable lengths of 30m, 50m and 100m available
- Customized systems

The Orbital redundant switch features a slim, streamlined outdoor unit mounted on a 19" rail for easy installation. Orbital's custom mount system allows for easy swap-out of industry standard LNBs, LNAs or BDCs. Each system comes with coax cable for the L-Band signals, and control cables which carry the DC, 10 MHz and monitor/control signals. The indoor unit is 1RU-19" with a simple LED display to quickly observe the ODU status. Control buttons allow operators to make any required changes to the system quickly and efficiently. Device redundancy is automatic (current sensing) or manually selected. Power supply redundancy is automatic.

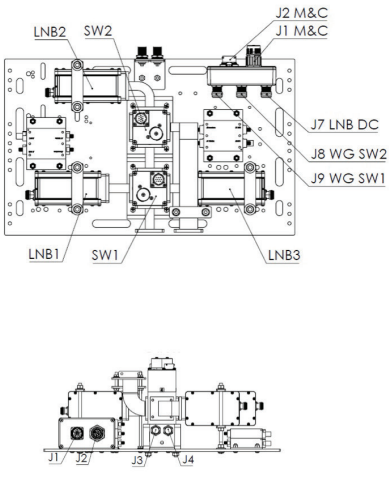


Mechanical Diagram

1:1 ODU Mechanical Diagram



1:2 ODU Mechanical Diagram



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Specifications

SYSTEMS

1:1 Redundancy – Automatic fail-over to stand-by unit in the event of the failure of the primary.

1:2 Redundancy – One stand-by unit backing up either Primary 1 or Primary 2 units. Perfect for systems with two polarizations.

BANDS

L, S, C, X, Ku, Ka, and Q – other bands available

PROTECTED EQUIPMENT

Low Noise Amplifiers – LNAs

Low Noise Block Converters – LNBs

Block Down Converters – BDCs

Block Up Converters – BUCs

MOUNTS

Hub Mount – rear of antenna

Boom Mount

Pole Mount

Rack Mount

OPTIONS

Input Cross Guide Couplers

Output Coax Couplers

Transmit Reject Filters

Isolators

Off-Line Device Access – for non-interruptible testing

10 MHz Reference Automatic Back-Up

Remote Band Switching – TTL or Voltage controlled devices

Outdoor Unit Shrouds – for enhanced weather protection

Internal or external reference on referenced devices

Modem DC and/or 10 MHz Blocking

ENVIRONMENTAL

Operating Temp	-40°C to +60°C
Humidity - Outdoor Unit	< 100% condensing
Humidity - Indoor Unit	< 95% non-condensing
Standards	RoHS and REACH

POWER

Redundant external power supplies with automatic fail-over and alarm

MECHANICAL

Indoor Unit	19” x 1.75” x 20”

Orbital Design

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

1:2 Indoor Unit with Band Switching

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