



RSSLNA1:2-Ku 1:2 Ku LNA Redundancy System

Redundant Ku Band 1:2 LNA system - Description

General Description :

The Orbital LNA redundant switch system was designed to minimize system outage using dual waveguide – coaxial switches to provide a spare LNA in the event of a failure. Various configurations of systems are available utilizing field proven, high performance L, S (L&S band systems have all coaxial), C, X & Ku band LNAs in the 1:1 & 1:2 configurations.

The outdoor unit features a slim, streamline outdoor unit mounted on a 19" rail for easy installation. Mounted LNAs allow easy swap out using industry standard LNAs.

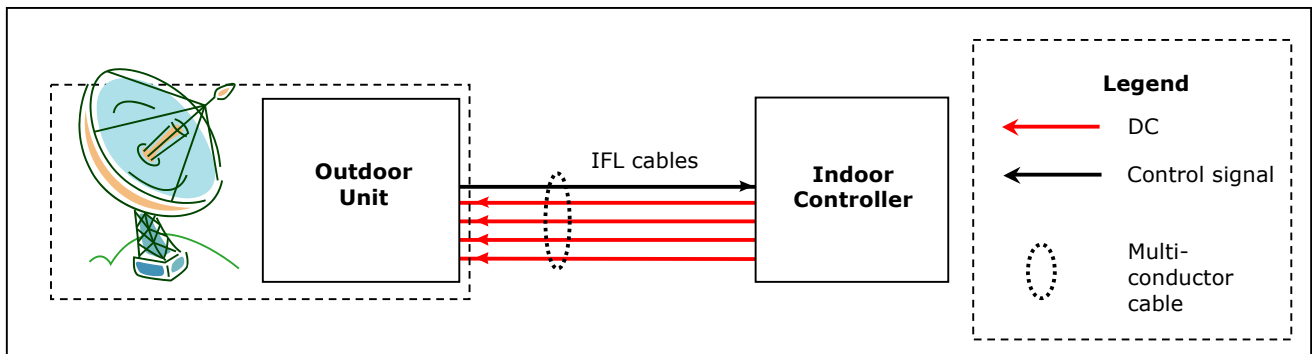
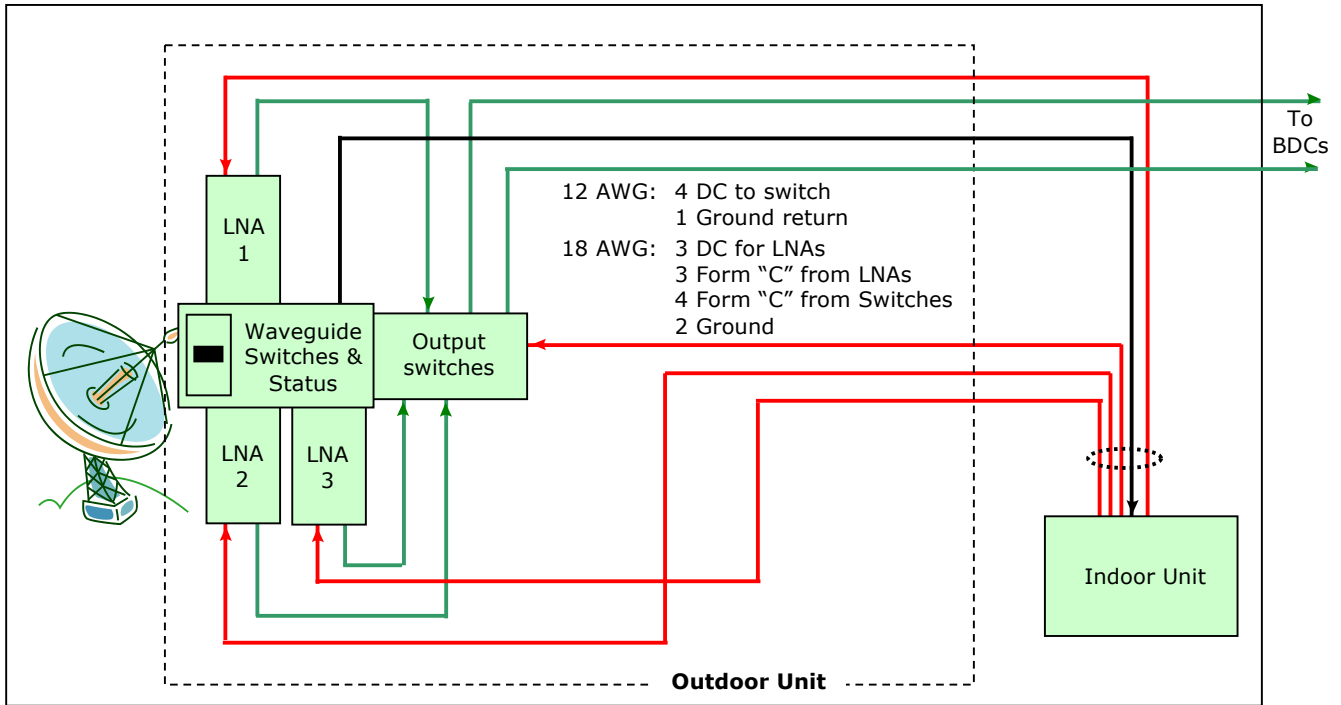
The indoor unit is a 1RU-19" with a simple LED display to quickly observe the LNA status, and control buttons to make any required changes to the system quickly and efficiently. LNA redundancy is automatic (current sensing) or can be manually selected. Power supply redundancy is built in & automatic. Remote M&C is through serial port RS232 standard & optionally through Ethernet. There is also a Parallel control interface for status output & to take external control inputs.

Options :

The outdoor unit can be made available with following options

- Transmit Reject Filter
- Offline Input & Output
- Input Waveguide/Coaxial Test couplers
- Output coaxial Test couplers
- Custom configurations
- M&C via Ethernet

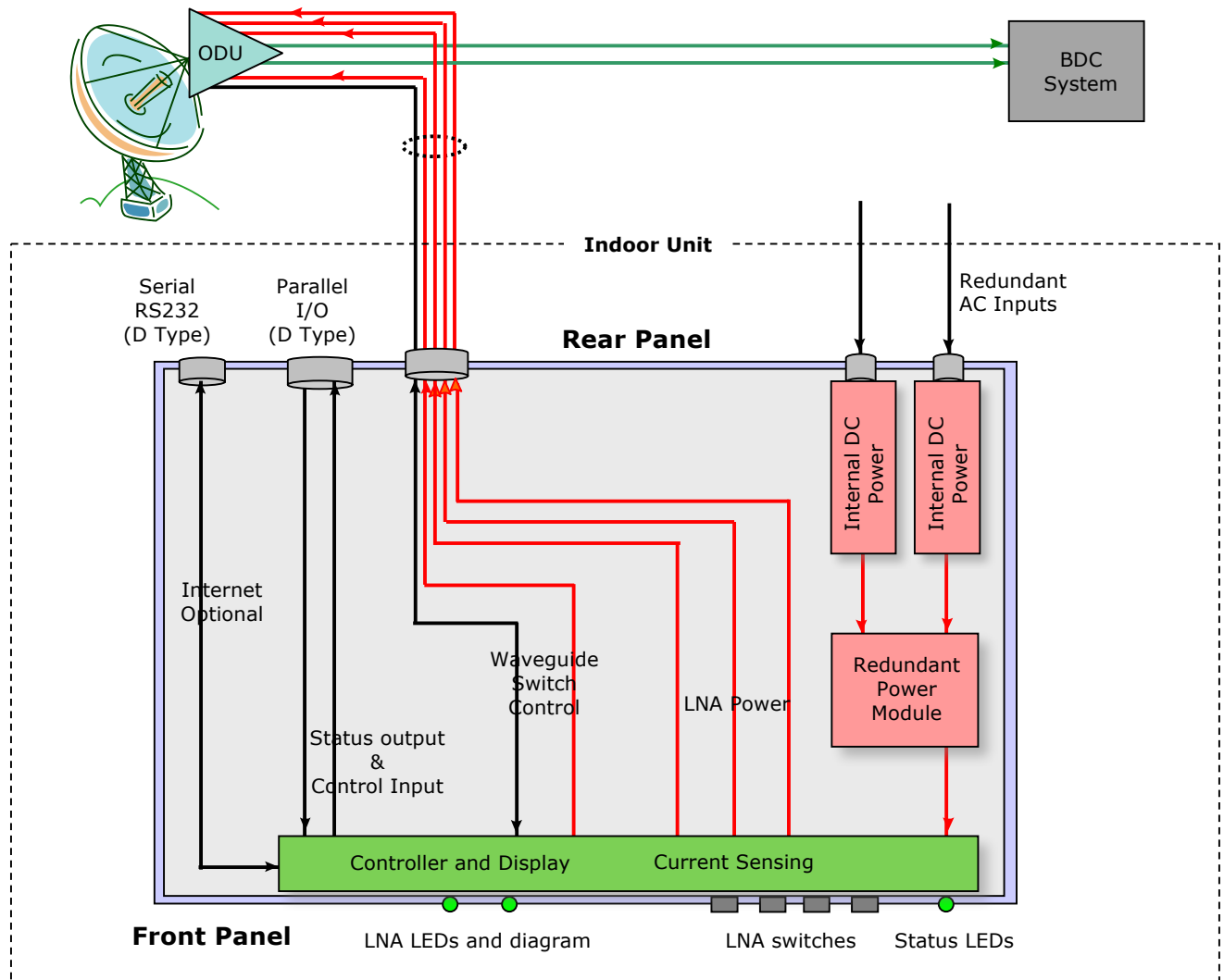
Redundant Ku Band 1:2 LNA system - ODU



Orbital ODU Features:

- Uses standard LNAs from any manufacturer. LNAs can be included and tested in the system
- The Outdoor Unit is mounted on one rail.
- Both IDU and ODU are pre-assembled. Just connect the cables and waveguide. Mount the ODU, and plug the redundant power supplies in.

Redundant Ku Band 1:2 LNA system - IDU



Orbital IDU Features:

- 1 unit high chassis. Simple LED display for monitoring. No cumbersome LCD menu to work through
- Two power supplies are inside controller. Unit automatically detects faults. Global power supplies to use anywhere in the world.
- Manual or automatic switching between LNAs.
- C and Ka-Band versions also available
- 1:1 versions available
- LNB versions also available



RSSLNA12-Ku LNA Redundant system - Specifications

ELECTRICAL

INPUT (Outdoor unit)

Interface: WR-75
 Frequency Range: 10.70 to 12.75 GHz
 Noise Temperature: 70 K @ 23 deg C
 VSWR: 1.30 : 1 max

OUTPUT (Outdoor unit)

Interface: N(f) connector
 VSWR: 1.30 : 1 max
 Gain: 60 dB min. @ +25°C
 Gain Flatness (over 40 MHz): ±0.5 dB
 Over full band: ±1.7 dB
 Compression: +10 dBm min
 3rd Order Intercept point: +20 dBm min
 Input Voltage range: +12 to +24 VDC
 Group Delay: Linear: 0.01 ns/MHz
 Parabolic: 0.001 ns/MHz² max
 Ripple: 0.1 ns peak to peak max.

POWER (Indoor controller)

Voltage: 87 - 265 VAC
 Frequency: 47 - 63 Hz
 External PS conn.: BNC
 Filtering: Transient, over & reverse voltage protected

General Description:

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The indoor unit is 1RU-19" with a simple LED display to quickly observe the LNA status, and control buttons to make any required changes to the system quickly and efficiently. LNA redundancy is automatic (current sensing) or manually selected. Power supply redundancy is automatic. Remote M&C through ethernet.

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.

MONITOR AND CONTROL

Controller monitors unit current. Alarm is generated if current goes outside of the allowed tolerance window.

Push Buttons	LEDs
Chain A Toggle	Automatic / Manual
Chain B Toggle	Summary Fault / Clear
Automatic/Manual	PS Fault / Clear
Alarm Reset	ODU Fault / Clear
	LNA Fault / Clear

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MECHANICAL

	Outdoor Unit	Indoor Unit
Weight:	TBD	TBD
Overall Dimensions:	TBD	19" x 1.75" x 20" max (standard 19" rackmountable)
Input Connector:	WR-75	F, N or SMA
Output Connector:	N	F, N or SMA

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ENVIRONMENTAL

	Outdoor Unit	Indoor Unit
Operating Temp:	-40 to +60°C	0 to +55°C
Relative Humidity:	<100%	<95% non-condensing

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