

iSwitch

Orbital



At-the-Dish, Standalone Redundancy Controller

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No indoor controller required.

Accessible from the internet through your computer, laptop or smart phone. All monitoring and control can be accessed through the internet or:

- RS232
- RS485
- Ethernet
- One wire / 433 MHz

Add redundancy to any existing system without added coax, control cabling or rack space. Because of its size, the iSwitch can fit into a wider range of antenna systems.

LNB neutral

The same box can be used for:

- C, X, Ku or Ka
- BUC universal, remote redundancy
- BDCs

Multiple sensing options including:

- Current sensing window (automatic switch)
- System voltage monitoring
- BUC Inhibit on Switch
- Loss of Lock alarms

Our iSwitch module is an ODU controller for Redundant LNB or BUC systems.

The main advantage of this product is that it removes the need for a rackmount indoor controller (IDU), expensive installation and cabling. All M&C signals can be accessed via the internet on a computer or smart phone with associated app.

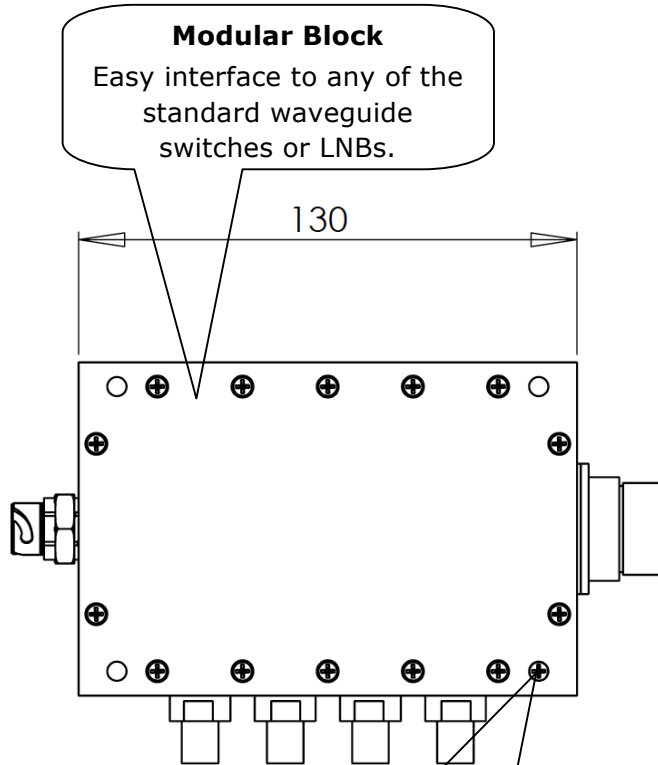


Technical Sales contacts:

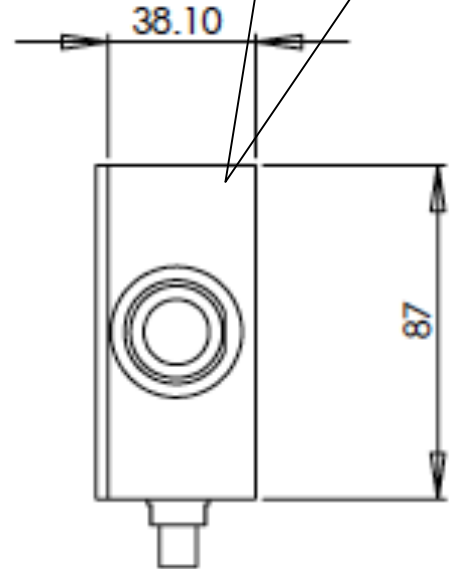
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Mechanical and Description



Unobtrusive size & weight
Allows installation on smaller VSATs.

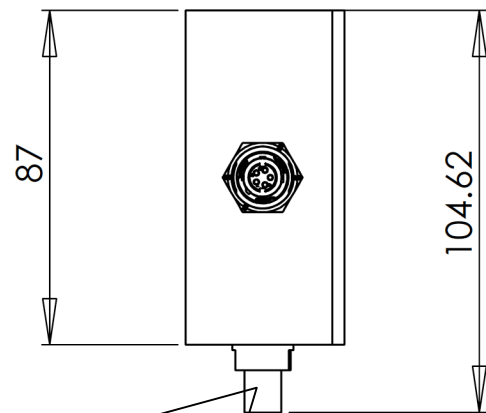
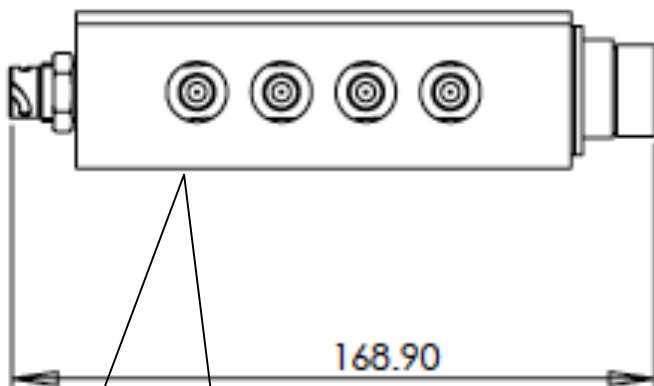


Flexible Mounting Options

Can be mounted as close to or as far from the feed as required.

IP 67 Ingress Protection Rating

6 - Totally protected against dust
7 - Protected against the effect of immersion between 15cm and 1m



Efficient Power Management

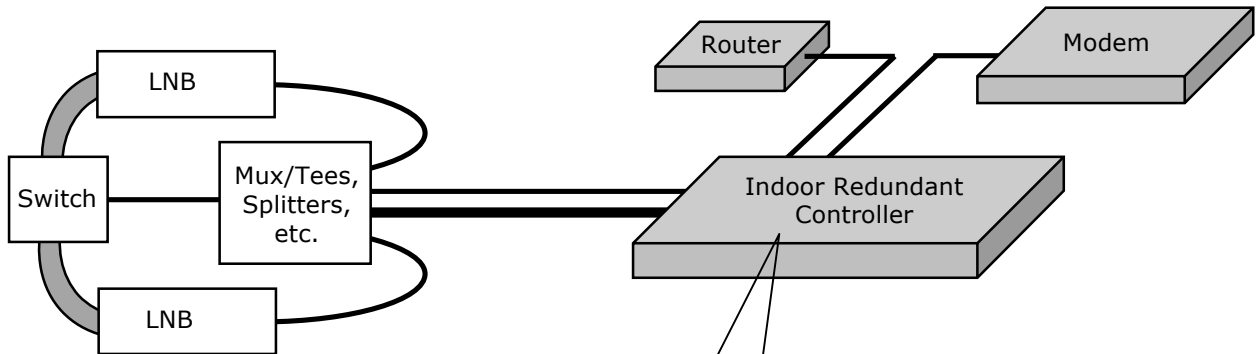
ensures that the DC is capable of going up a standard coax cable. No separate monster cable required to power the waveguide switch.

Data Channel

Multiplexed with all the control and monitoring signals directly onto the IFL cable. One of our MT433 modules can be utilized at the modem end to extract the data signal for processing.

Conventional Redundancy Switch Design vs iSwitch

Conventional Design example



Space Saving

The iSwitch uses about as much space as a small brick, replacing the indoor controller.

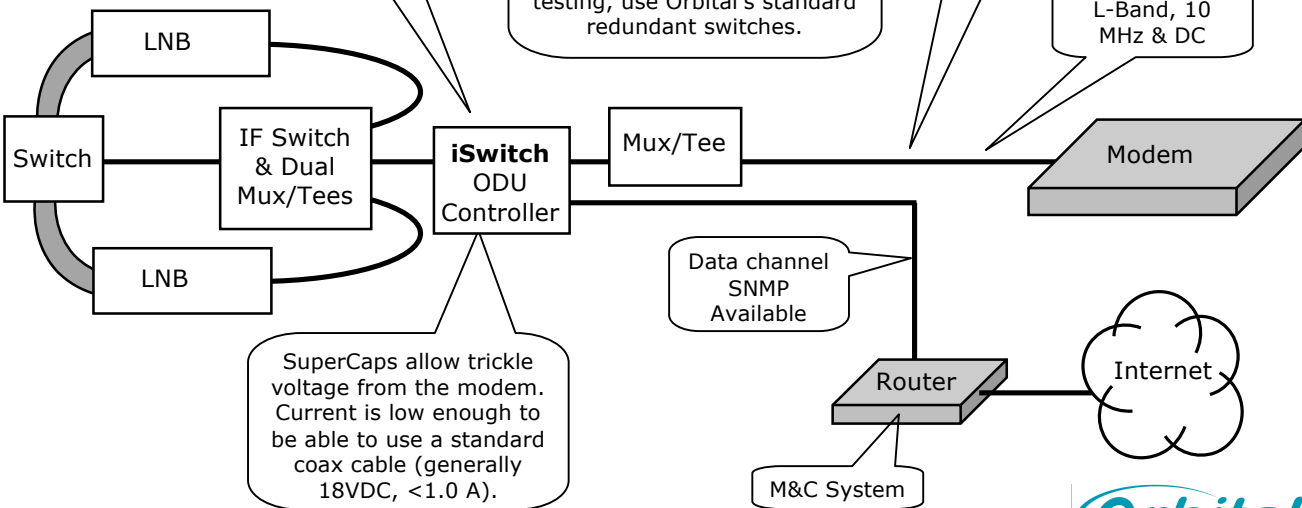
No Indoor Controllers

The iSwitch replaces the indoor controller and can interface with modem, computer or smart phone device directly or through the internet.

1 or 2 cable IFL

The iSwitch IFL only needs the one (existing) coax to carry the L-Band, 10MHz and monitor & controller signals, and DC (for LNBS, iSwitch, waveguide switch).

The iSwitch monitors the current window of both on-line and off-line LNBS. For BITE and offline thread testing, use Orbital's standard redundant switches.

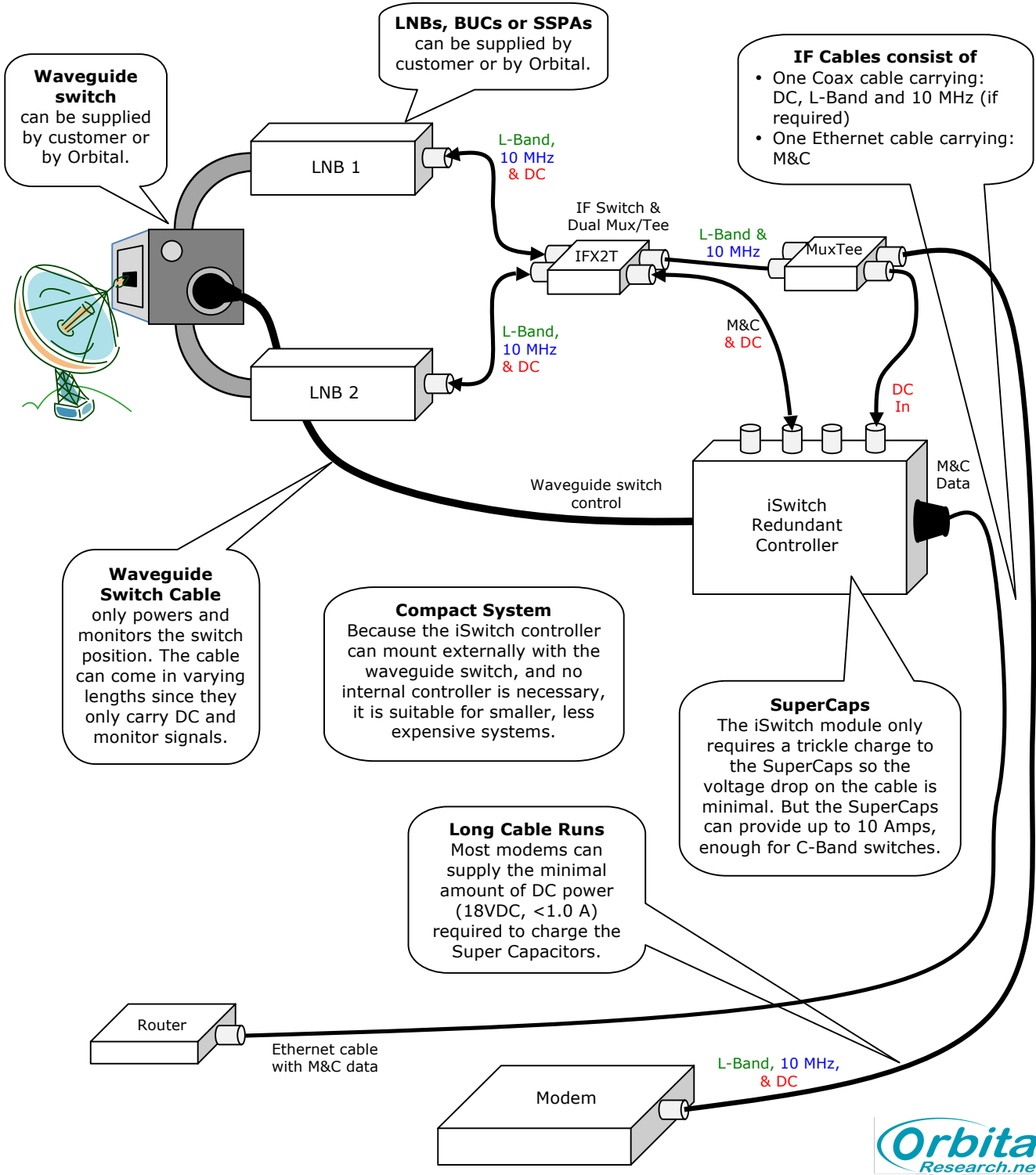


iSwitch Design example

Wired Diagram – Basic Version

This example shows the iSwitch and ancillary components for a 1:1 external reference LNB redundancy system.

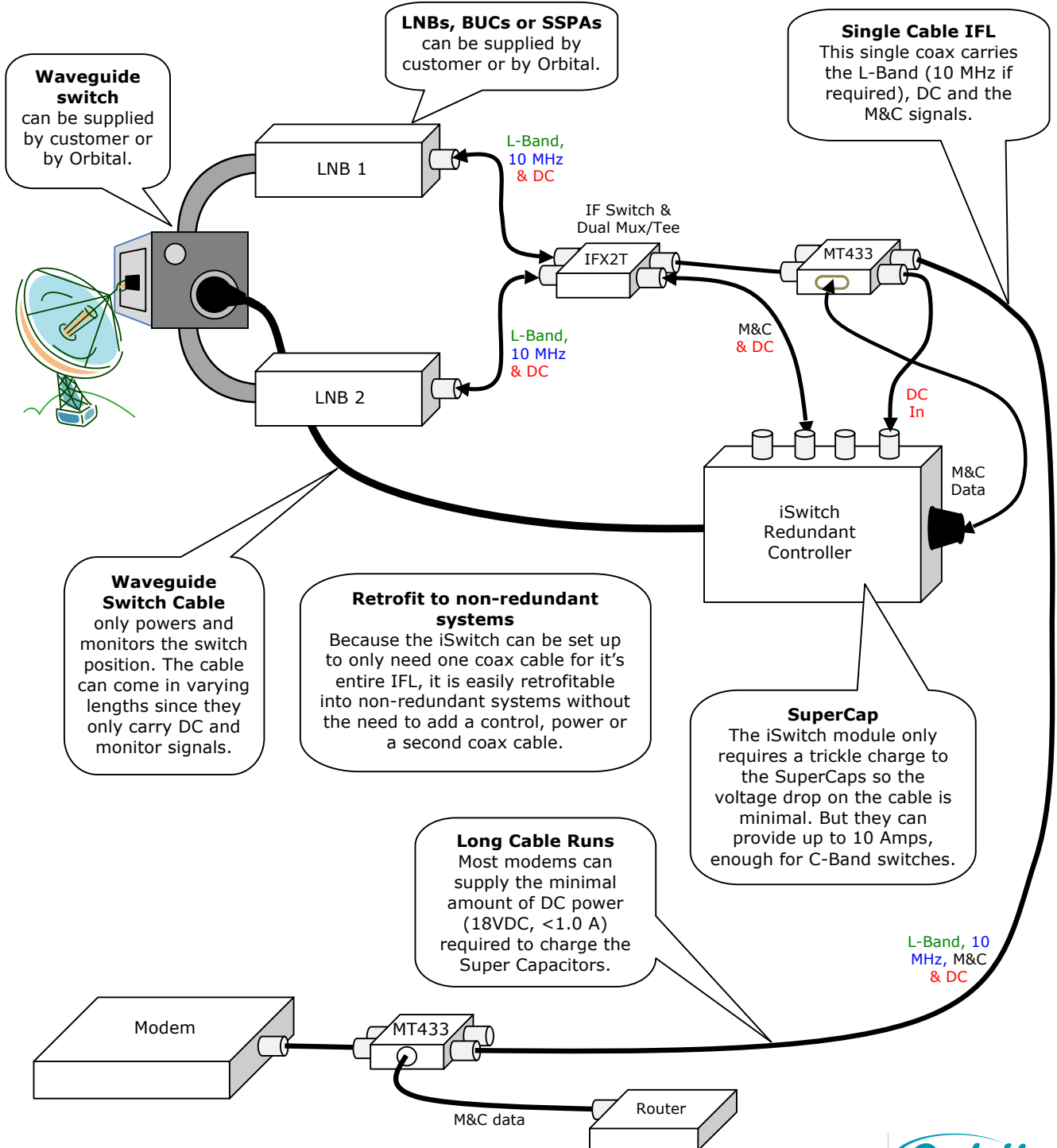
This Basic version has a coax cable (carrying DC, 10 MHz & L-Band signals) plus a second Ethernet cable (M&C signals) as the IFL.



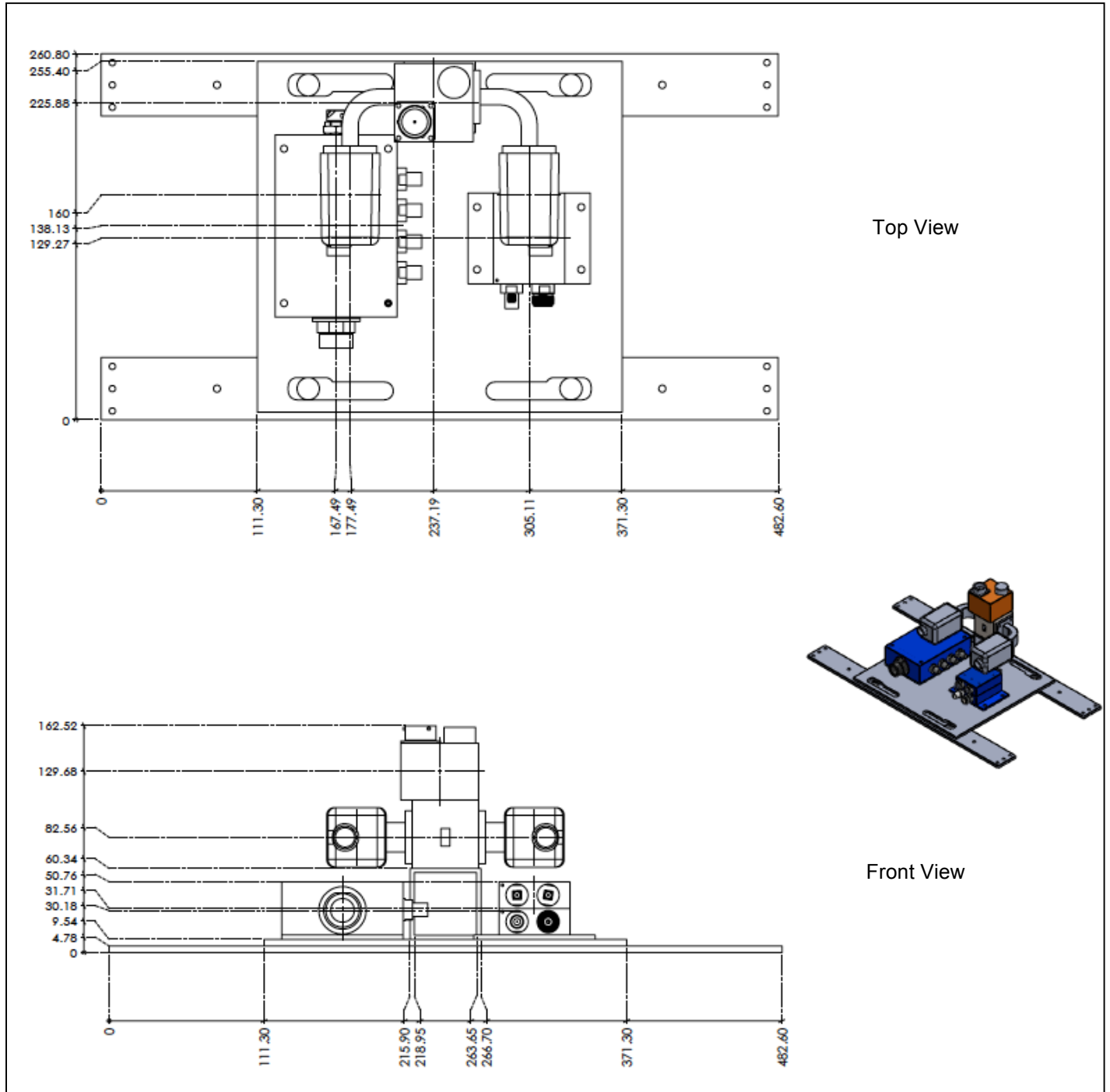
Wired Diagram – 1 cable IFL Version

This example shows the iSwitch and ancillary components for a 1:1 external reference LNB redundancy system.

This 1 Cable IFL version has the coax cable carrying all the signals: DC, 10 MHz, M&C and L-Band.



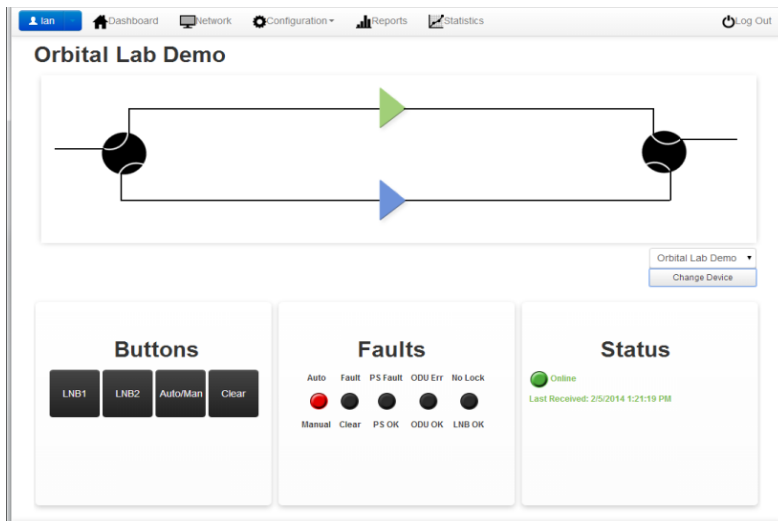
Mechanical Drawings



Typical Ku LNB iSwitch setup
for the Basic version.

Cloud Control

Cloud based Network Management

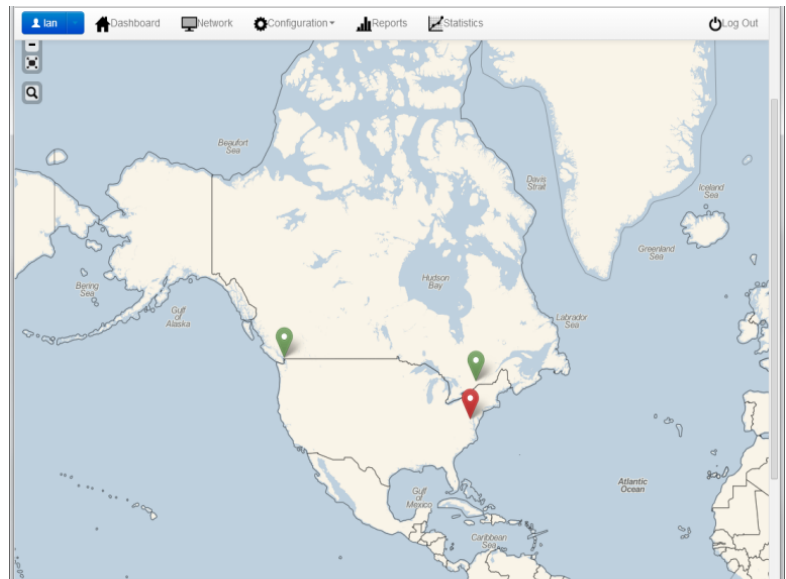


Cloud based Remote Monitoring

- Full Access and control of controller
- Database stores all messages from controller
- Graph and chart any reported parameter
- Alerts on any reported parameter
 - Send via e-mail, text message or voice phone call
- Switch paths
- Change fault thresholds
- View history

Key Features

- Direct mimic of Front Panel
- Compatible with most Smart Phones
- Monitor, control & interrogate system from anywhere
- Database continuously logs data – easy to catch glitches and transient faults



Features

Super Caps store charge at dish in order to switch waveguide so modem is not required to provide large currents.

Super Caps can supply up to 10 Amps (good for WR229 switches)

Super Cap Voltage Monitored
Super Caps can switch the waveguide switch more than 50 times on a single charge (depending on the waveguide type).
Alarm if Super Caps aren't charging or over discharge.

Loss of Lock Alarm is possible using customized Orbital LNBS.

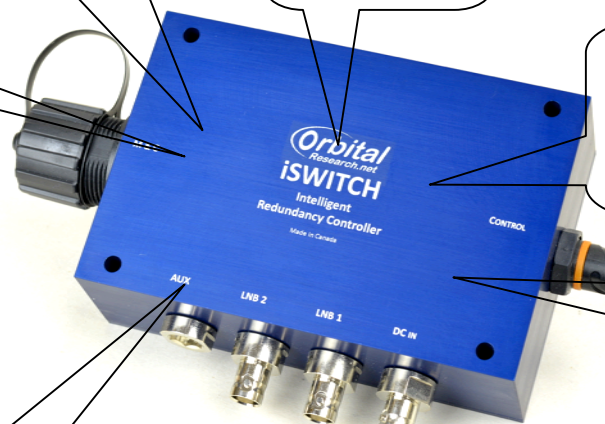
Low Current draw (<200 mA) even during switching.

BUC Redundancy
The iSwitch can also be used for redundant BUCs. To prevent short circuiting, BUC transmit power is inhibited prior to switch.
Low power BUCs and low cost BUCs can be easily integrated.

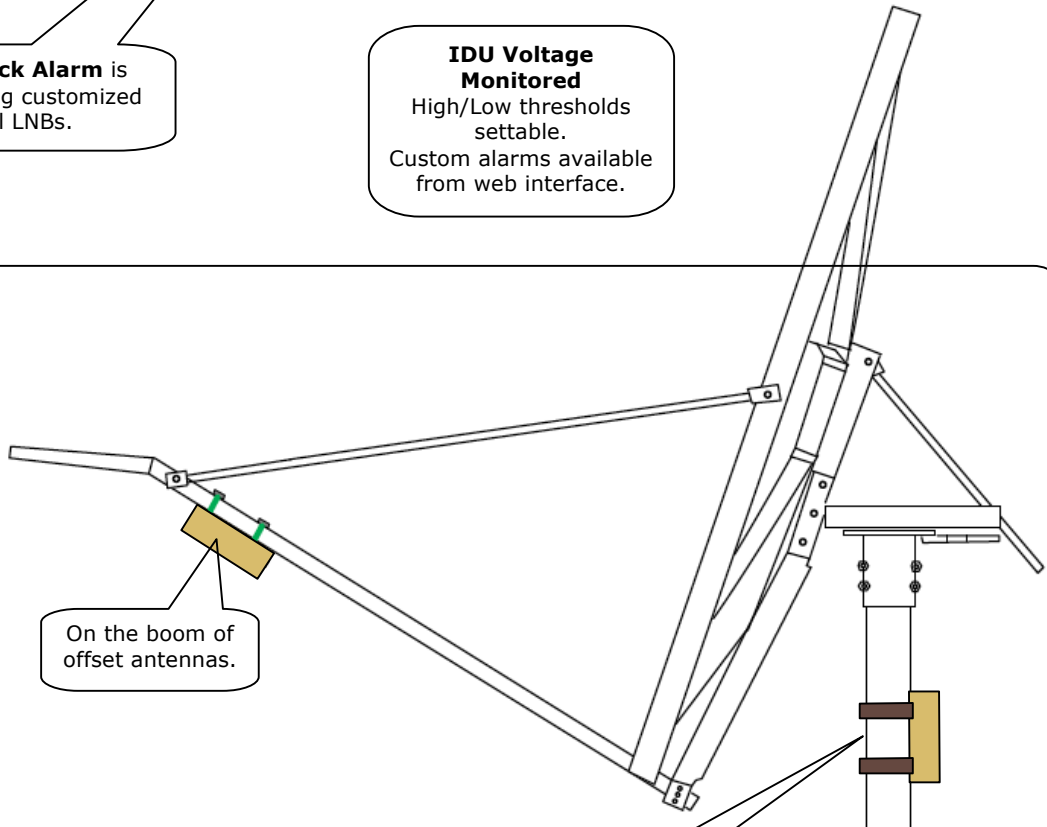
Current Draw Monitoring
Current window used for fault detection.
Automatically shuts down short-circuited LNBS.
Open circuit detection

One Cable Coax
No need for separate power or signal cable. All signals can be multiplexed onto 1 coax cable.

IDU Voltage Monitored
High/Low thresholds settable.
Custom alarms available from web interface.



Mounting Options.



On the boom of offset antennas.

King post mounted on small dishes.

In the Hub of a Cassagrain or Gregorian Antenna

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