



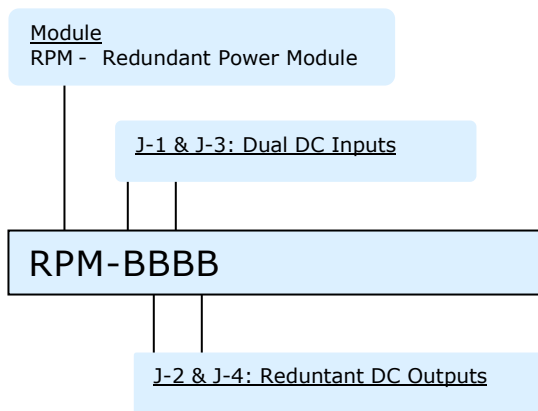
System Interface Products

RPM – Redundant Power Module Dual Output



Redundant Power Inputs, Dual Power Outputs

How to order a RPM – Redundant Power Module



Connectors available:

J1, J2, J3, J4: DC Input/Output

B - BNC (preferred) N - N
F - F

BNC-to-pigtail adapters and BNC-to-binding post adapters sold separately. See SIP price list for part number and price.

Modems and receivers often cut costs in the design of their power supplies. LNBS, especially external reference units can put too much of a load on a cheap power supply causing premature failure. By taking the powering function away from modems and receivers, the user can add the quality and margin needed in the power supply for reliable and consistent system operation.

As well, powering the BUC or LNB independently makes for much easier splitting or combining of L band signals, and keeps the system fully operational while adding or removing modems.

Orbital Design:

While modern power supplies are sophisticated designs with superlative performance, they remain the device with the shortest MTBF. To mitigate this threat, Orbital Research introduces the RPM (Redundant Power Module), to provide one for one (1:1) DC power redundancy. This simple low cost module provides an extremely reliable passive method of providing automatic backup power for the majority of satellite system devices. It has two inputs, one for each power supply, and simply takes the power supply with the higher voltage. So if one fails, the RPM automatically switches to the other supply. The RPM also has dual outputs so you can supply two separate devices, such as a BUC/LNB combo in a VSAT, or both polarities for LNBS. Since the RPM uses our standard SIP chassis, it integrate easily into stacks, plates or rackmountable chassis with our other modules.

Attention:

The RPM does not sum the two input power supplies to produce a combined output. Only one PS is supplying current at any given time.

Orbital Features:

Functional

- Will operate with Orbital SIP modules, LNBS, BDCs, BUCs, Rxs and Modems
- O ring sealed connectors and Hylomar sealed enclosure

Structural

- The system mounts on the back of the rack, out of the way. This makes this product ideal for flyaway systems.
- Since it is integrated into the Bias Tee, you do not need multiple boxes, and you get an L band filter as well.
- Diode protection to prevent accidentally applying reverse polarity DC.
- Solid billet milled box and lid.
- Allodyne finish, MIL SPEC C-5541 CAT-3.

Orbital Benefits:

- Lower cost, higher quality with a one-box solution
- No labor to source, assemble, and test a "kluge"
- Custom design variations available
- Custom labeling requirements welcome

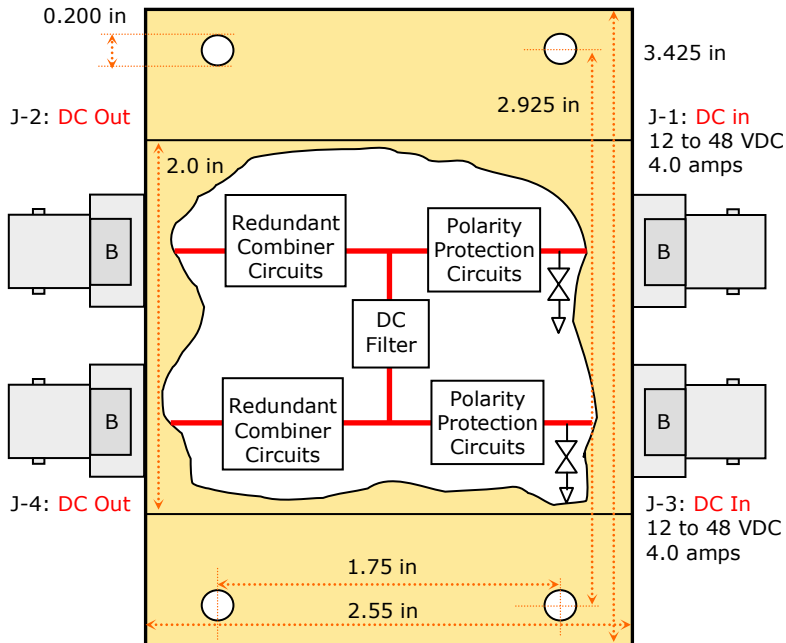
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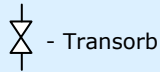
SIP: RPM – Redundant Power Module Specifications

Orbital Redundant Power Module Mechanical Dimensions + Functional Block Diagram Viewed from the top



Electrical Specifications

Input DC Voltage: Passive Device. No power required.
Power Capacity: 12 to 48 VDC - 4.0A



Environmental Specifications

Operating Temp: -40 to +60° Celsius
Relative Humidity: Up to 100% condensation and frost

Mechanical Specifications

Measurements: Tolerance ± 0.005 in.
Size (case): 3.425l x 2.55w x 0.88h in.
Size (with conn): 3.425l x 3.8w x 0.88h in.
Weight: 5 oz
Paint / Colour: Gold Allodyne finish
MIL SPEC C-5541 CAT-3
Mounting holes: 0.200" (5mm)
Accepts standard rackmounting screws: 10/32 or 10/34

Switching Power Supply (optional)

See PS1 or PS2 brochure for ordering information

Applications

LNB Power Used with our MuxTees, the RP module makes sure that the LNB is always on. Even if a modem or power supply goes down, the system stays up.

BUC Power Likewise, the BUC is no longer dependent on the modem for DC power, or on a single thread power line.

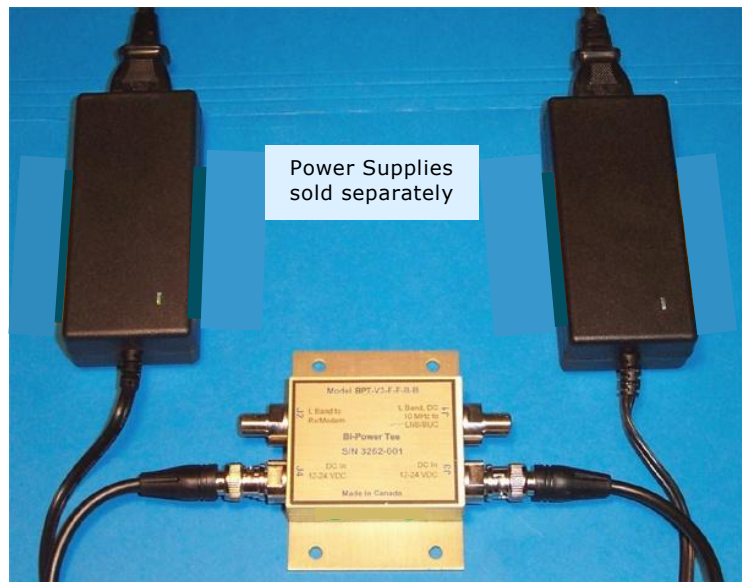
BUC/LNB With dual outputs, the dual power supplies can redundantly supply both the LNB and the BUC from this one box. (PS you do need two of our Mux Tees).

Dual LNBs Similarly, both polarities can be powered redundantly from one box with its dual outputs.

Modems The power supplies in modems often cannot power higher wattage BUCs, but with this box, you can add higher wattage power supplies AND achieve redundancy.

Master Osc Keeping the master 10 MHz Osc powered at all times is crucial. This box prevents system loss of lock from a single power supply failing.

Generic BU Any device that accepts an external DC input from 2 to 48 VDC, can use this device to make two power supplies function as a redundant power system.



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