RCU50 Series

1+1 & 2+1 Redundancy Control for Remote BUC/ BDC/ LNB Units

RCU50, 52 for use with;
PBU/ PBD series block converters and general LNB units

RCU50(Ka), 52(Ka) for use with;
PBU(Ka)/ PBD(Ka) series block converters

The **RCU50** 1+1 & **RCU52** 2+1 redundancy control units are special versions of the versatile **RCU100/200** redundancy switch units and are presented in a 1U high 19-inch rack mount chassis. The **RCU50, 52** units are designed to power and monitor remote mounted low noise blocks (LNB's), low noise amplifiers (LNA's), block up converters (BUC's) or block down converters (BDC's) and drive remote mounted coaxial or waveguide switches. A range of 10MHz reference signal generation, locking and pass through options as well as DC supply can also be provided to drive the BUC/ BDC/ LNB/ LNA units.

The **RCU50, 52** units can be controlled from the front panel or by the RS232/ RS485 link to a host computer. In remote mode the active LNB/ LNA/ BUC/ BDC units can be selected and monitored while keeping switch-over automatic in case of failure. An internal L-band coaxial switch changes as the active converter unit is selected.

The front panel has manually activated lockable switches and indicator lights with legends for either LNB/ LNA/ BDC's or BUC's and should be specified accordingly at the time of order placement.
The flexibility of the design allows for customization, so please consult the factory if the features that you require are not shown on this data sheet.
Peak can supply external switches and cabling, for more details please consult the factory.

Peak Features

- Keys removable for security in any position
- Monitoring of off-line LNB/ BDC L-band output
- Spare drive input for off-line BUC, for test purposes
- Dual mains input & redundant power supplies fitted as standard
- Fully compatible with Peak PBU/ PBD block up/ down converters
- Compatible with most makes of LNB/ LNA/ BUC/ BDC for legacy system upgrades
- Remote control fitted as standard, with optional Ethernet remote
- Optional reference generation, external reference locking or 'pass-through' to LNB/ BUC/ BDC
- Compatible with Peak **PNB series** 1+1 & 2+1 outdoor RF assemblies

RCU50, 52 Units – Typical Specification

L-Band Interfaces

Connections	SMA (f), 50Ω
Option 12a;	F-Type (f), 75Ohm interfaces from LNB's
Option 12b;	F-Type (f), 75Ohm system output interface
Option 12c;	BNC (f), 75Ohm interfaces from LNB's
Option 12d;	BNC (f), 75Ohm system output interface
Monitor	Provides an L-band monitor for the off-line LNB/ BDC output
Spare BUC drive	Provides a spare L-band input to drive the off-line BUC (for test purposes)

External co-axial/ waveguide switch Interface

Connection	D-type, 15-way
Drive type	+12VDC pulsed, latching, and indicators
Option 10a;	+12VDC for waveguide switch
Option 10b;	+24VDC for waveguide switch

Note; waveguide switch type to be provided to assess current requirement.

Drive length	Dependent upon customer cable type
Switch	Optional supply of external switches (please consult factory for details)

Single Switch Insertion Loss (Typical)

L-Band	0.15dB
C-Band	0.2dB (Option 6)
X-Band	0.3dB (Option 6)
Ku-Band	0.35dB (Option 6)
DBS-Band	0.4dB (Option 6)
Ka-Band	0.5dB (Option 6)

BUC/BDC/LNB/LNA DC drives

DC supply	Factory settable, typically +22.5V regulated at 0.65A nom. (+27V@1.5A nom. for Ka-Band)

Note; for higher current or dual-Voltage capability, please consult factory.

Connection	D-Type connection
Option 8;	Fed on L-band interface

Internal reference generator for LNB/BUC/BDC (Option 4)

Internal reference generator, fed to BUC/ BDC/ LNB's via L-band interfaces (option 4b provides the reference output as a separate discrete connection). Includes an external reference input connection with automatic detection & locking facility.

Output	10MHz at 0dBm nominal on L-Band
Option 4b;	10MHz at 0dBm nominal on BNC (f), 50Ω
Stability;	
Allan deviation	$<5 \times 10^{-12}$ over 1s
Ageing	$<3 \times 10^{-10}$ per day, $<3 \times 10^{-8}$ per year
Temp stability	$<2 \times 10^{-9}$ over -10 to 50^0C

External Reference 'Pass Through' (Option 5)

For situations where an external reference signal is available on the system L-Band input (BUC systems) or output (BDC/ LNB systems). Internally splits the reference signal and passes it to the BUC/ BDC/ LNB units via the L-Band interfaces.

Note; for RCU52 2+1 system, L-Band input source from channel 'A' only.

Input	10MHz at +3dBm min on L-Band
Option 5a;	10MHz at +3dBm min on BNC (f), 50Ω

Note; +5dBm min for RCU52 unit.

Output	10MHz at 0dBm nominal on L-Band

Mechanical

Width	19", standard rack mount
Height	1U (1.75")
Depth	420mm (16.5"), plus connectors
Weight	4.0kgs (8.8 lbs)
Construction	Aluminium chassis

Environmental

Operating temp	0 to $+50^0$C
Option 6e;	-40 to $+50^0$C (for co-axial switch, option 6)
EMC	EN 55022, part B & EN 50082-1
Safety	EN 60950

Power Supply (dual, redundant)

Connection	IEC (dual feed cables provided)
Voltage	90-264VAC
Frequency	47-63Hz
Power	50 Watts max.

Control System

Rem/Local switch	2 position key switch, selects remote or local mode
Auto/A/B switch	3 position key switch, selects converter A or B to traffic manually, or automatic mode

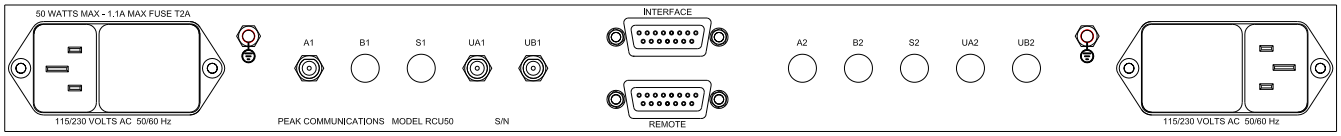
Note; for 2+1 systems, Auto/A/C & Auto/B/C switches are provided.

Remote control	RS232/ 485 port (internally user settable)
Option 9;	Ethernet; embedded web server & SNMP network management support.
Interface connector	15-way, D-type to redundant units and external switch
Option 7;	HPA summary alarm inputs for 'chain redundancy' control applications

Options

1) Cable assembly for use between RCU50 and outdoor units (includes L-Band, RF and control cables, as necessary)
2) Custom front panel overlay
4) Internal reference generator to drive BUC/BDC/LNB's via the L-Band interface
4b) External reference output as a BNC interface
5) External reference pass-through on L-Band system
5a) External reference pass-through with BNC input
6) **PBR50, 52** remote mounted co-axial SHF switching in a weatherproof housing for use with BUC's
6e) Low temperature operation to -40^0C for remote mounted co-axial switch
7) HPA summary alarm inputs for 'chain redundant' applications (BUC system).
8) BUC/ BDC/ LNB DC drives via L-Band interfaces
9) Ethernet interface with embedded web server & SNMP
10a) +12VDC external waveguide switch drive
10b) +24VDC external waveguide switch drive
12a) F-Type (f), 75Ω LNB L-Band input interfaces
12b) F-Type (f), 75Ω L-Band system output interface
12c) BNC (f), 75Ω LNB L-Band input interfaces
12d) BNC (f), 75Ω L-Band system output interface
14) Additional switching for simultaneous output dual-range devices

Rear panel view (sample)



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