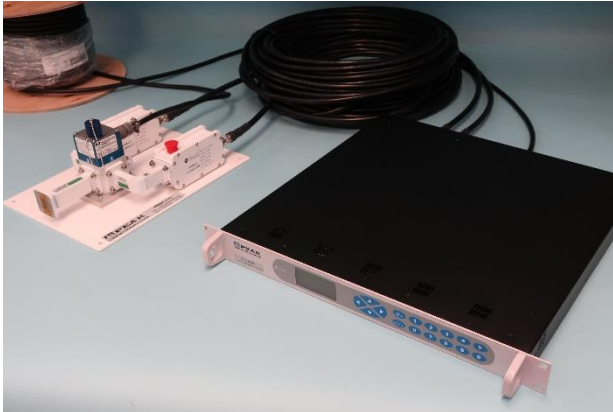


## RCUH50 Series

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



- RCUH50, 52** for use with;  
**PBU/ PBD series** block converters and general LNB units (L-Band interface on unit)
- RCUH50C, 52C** for use with;  
**PNB series** RF systems with remote system interfaces (no internal L-Band switching)
- RCUH50(Ka), 52(Ka)** for use with;  
**PBU(Ka)/ PBD(Ka) series** block converters











The **RCUH50** 1+1 & **RCUH52** 2+1 redundancy control units are special versions of the versatile **RCUH100/200** redundancy switch units and are presented in a 1U high 19-inch rack mount chassis. The **RCUH50, 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 **RCUH50, 52** units can be controlled from the front panel user interface (local mode) or remotely via the RS232/ 485 or optional Ethernet link to a host computer (remote mode). In remote mode, the on-line unit can be selected and monitored whilst keeping switch-over automatic in case of failure. An internal L-band coaxial switch changes as the active converter unit is selected.

In AUTO mode, the unit monitors the converter/ amplifier alarm signals and if a fault condition develops within the on-line unit, the RCUH50 series automatically switches traffic to the standby unit.

Customization available, 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

-  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
-  Remote control fitted as standard, with optional Ethernet remote
-  Optional reference generation, external reference locking or 'pass-through' to LNB/ BUC/ BDC
-  Compatible with most makes of LNB/ BUC/ BDC for legacy system upgrades
-  L-Band variable attenuator options available
-  Dual-Voltage & 22kHz tone capability for multi-range LNB switching
-  Compatible with Peak **PNB series** 1+1 & 2+1 outdoor RF assemblies



## RCUH50, 52 Units – Typical Specification

### L-Band Interfaces

Connections	SMA (f), 50Ω
Option 12a;	F-Type (f), 75Ω interfaces from LNB's
Option 12b;	F-Type (f), 75Ω system output interfaces
Option 12c;	BNC (f), 75Ω interfaces from LNB's
Option 12d;	BNC (f), 75Ω system output interfaces
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
Option 8b;	Multi-pin circular, (mating part supplied if not ordered with option 1)
Drive type	+12VDC pulsed, latching, and indicators
Option 10a;	+12VDC@3A for WR137/112/75/42 waveguide switch
Option 10b;	+24VDC@2A for WR137/112/75/42 waveguide switch
Option 10c;	+24VDC@3A for WR229/430 waveguide switch

Note: If taken with RCUH52 units, increases chassis depth to 534mm

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)
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Note: For higher current or multi-range dual-voltage & 22kHz tone switching, please consult the factory with LNB type.

Connection	D-Type connection
Option 8;	Fed on L-band interface
Option 8b;	Multi-pin circular, (mating part supplied if not ordered with option 1)
Option 8c;	Separate co-axial connections

### 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 and 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°C

### 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 RCUH52 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 RCUH52 unit.

Output	10MHz at 0dBm nominal on L-Band
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### Electronically Variable L-Band Attenuation (Option 11)

Attenuators can be fitted to either the common L-Band 'system interface' for general gain control, or to each of the individual L-Band paths to the outdoor environment for balancing cross site path losses.

Attenuation range	30dB nominal
Step size	
Option 11a;	0.5dB
Option 11b;	0.1dB
Control	Local & remote

### Mechanical

Width	19", standard rack mount
Height	1U (1.75")
Depth	420mm (16.5"), plus connectors
RCUH52 Option 10;	534mm (21"), plus connectors
Weight	4.0kgs (8.8 lbs)
Construction	Aluminium chassis

### Environmental

Operating temp	0 to +50°C
Option 6e;	-40 to +50°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

Remote control	RS232/ 485 port
Option 9;	Ethernet; embedded web server & SNMP network management support.
Interface connector	15-way, D-type to redundant units and external switch
Option 8b;	Multi-pin circular, (mating part supplied if not ordered with option 1)
Option 7;	HPA summary alarm inputs for 'chain redundancy' control applications

### Options

- 1) Cable assembly for use between RCUH50 and outdoor BUC/ BDC units (includes L-Band and control cables, plus RF cables if option 6 is ordered)
- 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°C for remote mounted co-axial switch
- 7) HPA summary alarm inputs for 'chain redundancy' applications (BUC system).
- 8) BUC/ BDC/ LNB DC drives via L-Band interfaces
- 8b) BUC/ BDC/ LNB/ LNA DC & external switch drives via multi-pin circular connector for across-site umbilical cable termination
- 8c) BUC/ BDC/ LNB /LNA DC drives via separate coaxial connections
- 9) Ethernet interface with embedded web server & SNMP
- 10a) +12VDC@3A external waveguide switch drive
- 10b) +24VDC@2A external waveguide switch drive
- 10c) +24VDC@3A external waveguide switch drive
- 11a) Attenuator with local & remote control, 30dB stepped 0.5dB
- 11b) Attenuator with local & remote control, 30dB stepped 0.1dB
- 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 device

**Rear panel view** (sample unit shown populated for RCUH50)

