

RCU50R Series

1+1, 2+1 Remote Mounted BUC/BDC/LNB/LNA Redundancy Control



RCU50R for 1+1 control
RCU52R for 2+1 control



The **RCU50R** 1+1 & **RCU52R** 2+1 remote mounted units provide a fully outdoor BUC, BDC, LNB or LNA redundancy switching control & L-Band switching solution, which minimises cross-site control and drive cables, costs and complexity whilst improving antenna isolation. The units can also be configured for antenna selection switching (VHF and above).

The units are designed to drive and monitor remote mounted BUC's, BDC's, LNB's & LNA's (legacy systems or see Peak **PNB series** RF assemblies). 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 units.

For LNB's & LNA's, waveguide switch drive and monitoring are provided along with optional internal or external L-band coaxial switches (for non-ganged LNB WGS applications). For BUC's & BDC's, external SHF co-axial switch units can be provided.












The **RCU50R, 52R** units are designed for remote control via Ethernet, but are also offered with basic local controls. Remote control includes an embedded web-browser with SNMP network management support. In remote mode, the on-line unit can be selected and monitored whilst keeping switch-over automatic in case of failure.

Peak can offer dedicated indoor rack mounted user interface units (Ethernet based), see **FPC100** and outdoor AC to DC power supply units see **OPS series** (or recommendations for commercially available equivalents).

In AUTO mode, the unit monitors the alarm signals or DC current (with user settable alarm levels) and if a fault condition develops within the on-line unit, traffic is automatically switched to the standby unit.

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

-  External waveguide or co-axial switch control
-  Internal (or external) L-Band latching co-axial switching
-  Comprehensive remote control, plus local manual controls and indicators
-  Minimises capex through reduced cross-site control and drive cable costs
-  Improves electromagnetic antenna isolation
-  DC drive with current sensing and user settable alarm levels
-  Dual-Voltage & 22kHz tone capability for multi-range LNB switching
-  Compatible with most makes of outdoor units and waveguide switches for legacy system upgrades
-  Optional reference generation, external reference locking or 'pass-through'
-  Fibre-optic L-Band interfaces available
-  Compatible with Peak **PNB series** 1+1 & 2+1 outdoor RF assemblies



RCU50R, 52R Units – Typical Specification

External waveguide switch interface

Peak can supply waveguide switches etc. (please consult factory for details)

WGS Voltage Code 2; +12VDC
Code 4; +24VDC
Code N; None (for use with BUC, BDC & co-axial based LNA's)

Note: Other voltage options available, please consult the factory.

WGS type Pulsed, latching with indicators
Code P; Positive pulse
Code N; Negative pulse (may not require tell-backs)
Code x; None (when no WGS drive facility fitted)

Connection Circular multi-pole, weatherproof (mating part supplied)

L-Band switching

Type Code G; Ganged with waveguide switch
Code 2; External +12V
Code 4; External +24V
Code Is/d; Internal, latching, single or dual (for dual-range devices only)
Connection N-Type(f), 50Ohm (for internal switching only)

Primary unit interface (BUC/ BDC/ LNB/ LNA)

Many types of primary units are supported, for assistance with ordering please contact factory stating primary unit type & required configuration

Unit type Code U; BUC
Code D; BDC
Code L; LNB
Code A; LNA
Band Code S; S-Band
Code C; C-Band
Code X; X-Band
Code Ku; Ku-Band
Code D; DBS-Band
Code Ka; Ka-Band

Unit output Code S; Single range
Code V; Switched range (see 'unit voltage' below)
Code D; Dual simultaneous range

Unit alarms Fault detection method to trigger automatic switch-over
Code D; External dry contact closure
Code N; None, in which case current monitoring with user settable alarm levels will be provided

Unit Voltage Factory settable, regulated to $\pm 0.5V$ nominal
Code 2; +12VDC
Code 8; +18VDC
Code 4; +23VDC
Code 7; +27VDC (for some BUC & BDC units)
Note: Other voltage options available, please consult the factory.
Code X; Switched range (please state voltage requirements)
Note: For multi-range dual-Voltage & 22kHz tone switching, please consult the factory with LNB type.

Unit current Please state maximum current (in mA) on order code

DC bias Code E; External supply, requiring bias-tee
Code Im; Internal, multiplexed onto L-Band
Code Is; Internal, separate connection; multipole (mating half supplied)
Code N; None, no DC bias provided

Reference generation

Type Internal, fed via a separate discrete TNC(f), 50Ohm connection, or via L-Band (primary unit & option dependant)
Code 1; 10MHz at 0dBm nominal
Code 5; 50MHz at 0dBm nominal
Code N; No internal reference generator

Stability:
Allan deviation $< 5 \times 10^{-12}$ over 1s
Ageing $< 3 \times 10^{-10}$ per day, $< 3 \times 10^{-9}$ per year
Temp stability $< 2 \times 10^{-9}$ over -10 to 50°C
External ref. input with automatic detection & locking facility
Code P; 10MHz at 0dBm nom., via TNC (f), 50Ω
Code N; not required

Mechanical

Dimensions 290 x 230 x 95mm (11.4 x 9.1 x 3.7inch)
Construction Die-cast Aluminium, weatherproof, IP66 rated
Weight Approx. 4kgs (9lbs)

Environmental

Operating temp -10°C to +50°C (less solar gain)
Option 13; -40°C to +50°C (less solar gain)
Humidity 0-100% condensing
EMC EN55022, part B & EN50082-1
Safety EN60950

Power Supply (dual input)

Voltage +24 to +27VDC
Note: For use with waveguide switches, supply Voltage must match switch Voltage (+12 or +24VDC).
Power 20 Watts nom (option dependent)
Connection Multi-pin circular, weatherproof (mating part supplied)

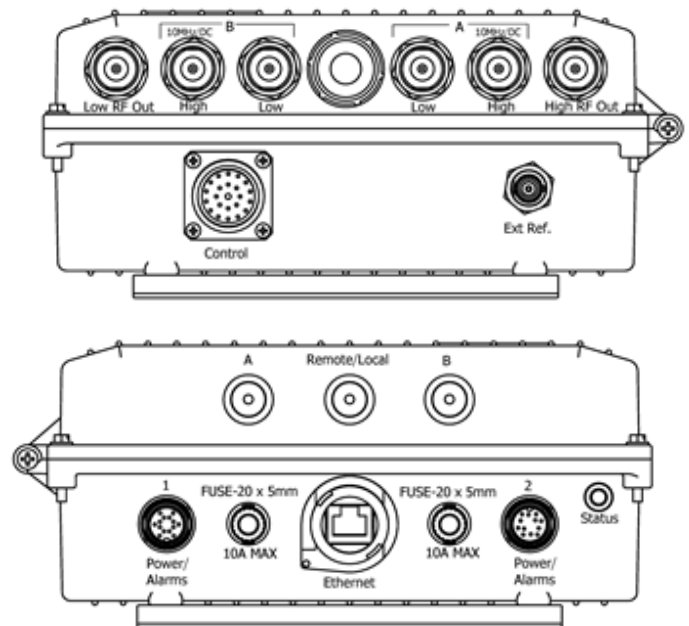
Control System

Alarms LED indicator & summary failure relay (form C)
Connection See power supply section
Local control Weatherproof switches with indicators for local /remote and source selection/ condition
Remote control Ethernet; embedded web server & SNMP network management support
Connection RJ45, weatherproof

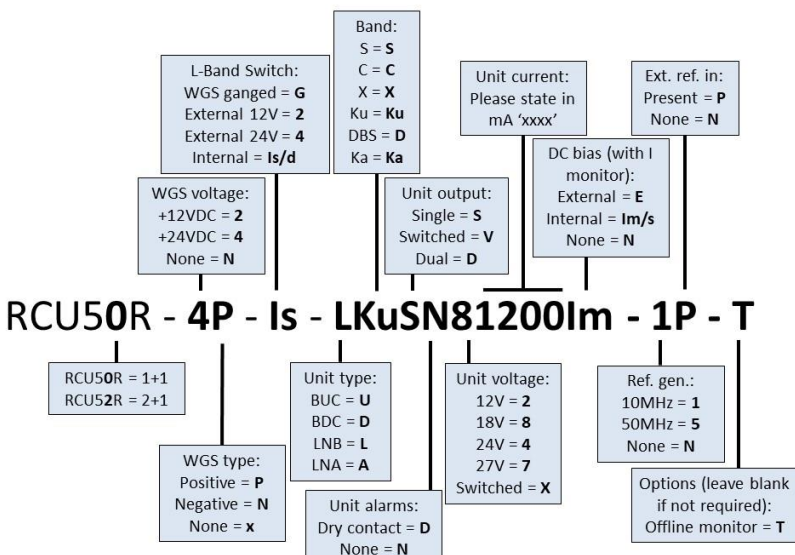
Options

- 1) Cable assembly (between RCU, primary units and waveguide switch)
- 13) Low temperature operation to -40°C
- 16) Factory pre-set IP address
- T Transfer switching for offline unit monitoring

Connection panel view (sample 1+1, dual range LNB controller shown, with reference & DC drive)



Ordering Code (for help or clarifications please contact the factory)



Peak Communications reserves the right to alter the specifications of this equipment without prior notice. RCU50Rseries-021222.

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