RCU50R Series

1+1, 2+1 Remote Mounted BUC/LNA/LNB 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, LNA or LNB redundancy switching control & L-Band switching solution, which minimises across-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, LNA's & LNB's (for legacy RF 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, LNA & LNB units.

Waveguide switch drives and monitoring are provided along with optional internal or external L-band coaxial switches (for non-ganged BUC/LNB WGS applications).

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 BUC/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 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, **s**ingle or **d**ual (for dual-range devices only)
Connection	N-Type(f), 50Ohm (for internal switching only)	

Primary unit interface (BUC/ 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 L;	LNB
	Code A;	LNA
Band	Code S;	S-Band
	Code C;	C-Band
	Code X;	X-Band
	Code K;	Ku-Band
	Code D;	DBS-Band
	Code A;	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 ±0.5V nominal	
	Code 2;	+12VDC
	Code 8;	+18VDC
	Code 4;	+23VDC
	Code 7;	+27VDC (for some BUC 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 BUC/LNB types.	
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, $<3 \times 10^{-8}$ 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)

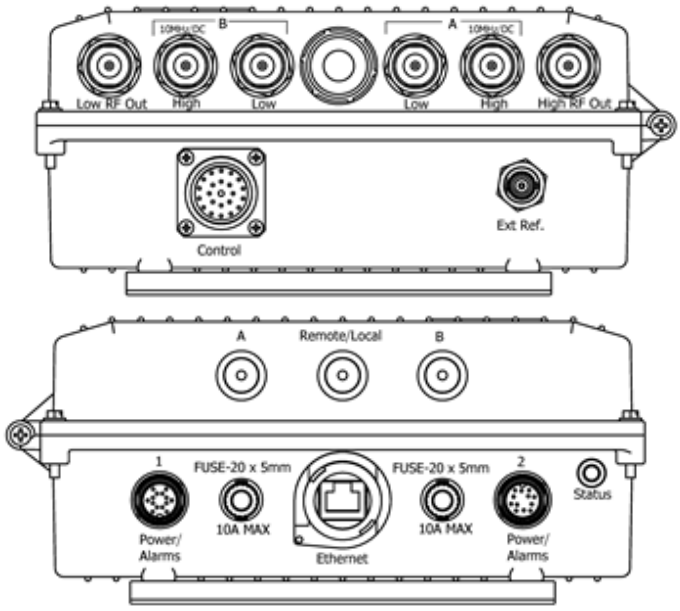
Control System

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

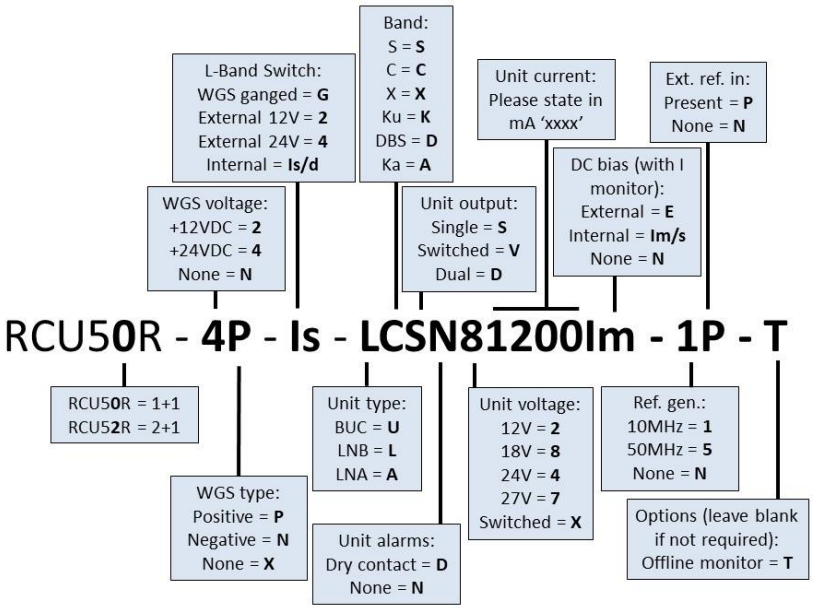
Options

1) Cable assembly (between RCU, primary units and waveguide switch)
13) Low temperature operation to -40ºC
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)



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