

## RCU100 series

### 1 for 1 Redundancy Switch Units



- RCU100** for use with;
  - L500 series** block down converters
  - IBU/ IBD series** block converters
- RCU100(Ka)** for use with;
  - IBU(Ka)/ IBD(Ka) series** block converters
- RCU101** for use with;
  - F1201/ F1202** fixed frequency L-Band converters
- RCU102** for use with;
  - F1200** fixed frequency L-Band up & down converter
- RCU103** for use with;
  - ILA series** line amplifiers








The **RCU100 series** 1+1 redundancy switch units are designed to provide redundancy for single-feed systems, maintaining maximum availability whilst allowing routine maintenance and repair work to be carried out on the standby unit without the normally associated down-time.

The **RCU100 series** maintains one converter/ amplifier on-line whilst the other is held in hot standby, allowing the user to select the on-line unit. The redundancy unit can be controlled from the front panel (local mode) or by the RS232/ 485 link to a host computer (remote mode). In remote mode, the on-line converter/ amplifier can be selected and monitored whilst keeping switch-over automatic in case of failure. Ethernet options are available.

In AUTO mode, the unit monitors the converter/ amplifier alarm signals via the interface connecting cables and if a fault condition develops within the on-line unit, the **RCU100 series** unit automatically switches traffic to the standby unit.

Factory alignment for the complete 1+1 system including Peak supplied high quality cables is recommended for this product to optimise gain flatness and other parameters. If bought as a complete set of equipment, factory alignment is automatically undertaken.

#### Peak Features

-  Standard 5MHz to 18GHz operation
-  Keys removable for security in any position
-  Dual mains input & redundant power supplies fitted as standard
-  Remote RS232/485 remote control fitted as standard (Ethernet option available)
-  Dual switching arrangement (L-Band and RF) minimises insertion loss
-  Transfer switching option for convenient off-line unit monitoring/ test
-  Optional, high quality, matched cable sets to interface to the Peak converter/ amplifier range



## RCU100 series – Typical Specification

The following gives the performance of the RCU units in isolation;

### IF, L-Band & RF Interfaces

Frequency	5MHz to 18GHz
Ka-band	to 31GHz
Connections	50Ω, SMA (f)
Option 6a;	50Ω, N-Type (f) 'system input'
Option 6b;	50Ω, N-Type (f) 'system output'
Ka-Band	50Ω, K-Type (f) or 2.92mm (f)

### Switch Element Parameters

Switching speed	<15ms
Type	Co-axial, latching
Option 13;	Transfer switching for convenient offline unit test/ monitoring
Main path	2 off
Standby path	2 off

Frequency Dependent Parameters		Single Switch Insertion Loss (maximum)	Switch Return Loss (typical)	Switch Isolation (typical)
L-Band Section	L-band	0.15dB	23dB	80dB
	S-band	0.15dB	23dB	80dB
RF Section	C-band	0.2dB	21dB	70dB
	X-band	0.3dB	18dB	65dB
	Ku-band	0.35dB	16dB	60dB
	DBS-band	0.4dB	15dB	60dB
	Ka-band	0.75dB	13dB	50dB

### Typical System Performance

The following gives the typical performance that can be expected from a factory aligned 1+1 system comprising Peak converters & using the high quality matched IF, L-Band & RF cable set (option 1);

Gain flatness	±0.5dB full band, ±0.25dB across any 40MHz in-band (C-band, with IBU600 converters)
Insertion loss	3dB (not including converter gain)
Switching speed	<150ms (from fault to switch completion)

### RCU100 Unit General

#### 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°C
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

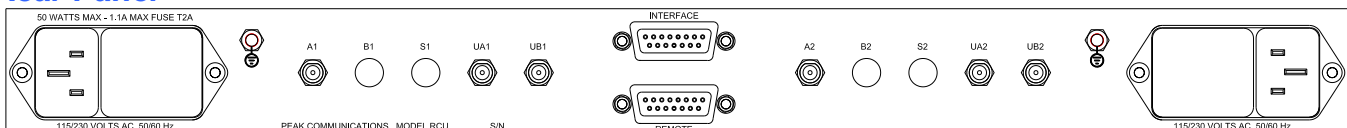
Rem/ Loc switch	2 position key switch, selects remote or local mode
Auto/ A/ B switch	3 position key switch, selects converter A or B to traffic manually, or automatic mode
Remote control Connector	RS232/ 485 port (internally user settable)
Option 9;	15-way, D-type Ethernet; embedded web server & SNMP network management support
Interface connector	15-way, D-type to redundant units

### Options

- 1a) High quality, matched L-Band, RF (C, X or Ku-Band) & control cables to interface to the IBU/ IBD/ L500 series converter products, when mounted adjacent to the RCU100 unit.
- 1b) See option 1a above but includes DBS-Band SHF cables.
- 1c) See option 1a above but includes Ka-Band SHF cables.
- 1d) High quality, matched IF, L-Band and control cables to interface to the F1201/ F1202 converter products, when mounted adjacent to the RCU101 unit.
- 1e) High quality, matched IF, L-Band & control cables to interface to the F1200 converter products, when mounted adjacent to the RCU102 unit.
- 1f) High quality, matched L-Band and control cables to interface to the ILA series line amplifier products, when mounted adjacent to the RCU103 unit.
- 2) Custom front panel overlay.
- 6a) N-Type (f), 50Ohm, 'system input' interface
- 6b) N-Type (f), 50Ohm, 'system output' interface
- 9) Ethernet interface with embedded web server & SNMP
- 13) Transfer switching for offline unit monitoring



### Rear Panel



Peak Communications reserves the right to alter the specifications of this equipment without prior notice. RCU100series-181218.

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