

RCU100 series 1 for 1 Redundancy Switch Units



RCU100 for use with;

- L500 series** Block DownConverters
- IBU/ IBUH/ IBD/ IBDH series** Block Converters

RCU100(Ka) for use with;

- IBU(Ka)/ IBUH(Ka)/ IBD(Ka)/ IBDH(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 & DownConverter

RCU103 for use with;

- ILA/ILAH 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
Connections	Ka-band to 31GHz
	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
RF Section	S-band	0.15dB	23dB	80dB
	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) 15-way, D-type
	Option 9; 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/ IBUH/ IBD/ IBDH/ 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

