RCUH100 series
1 for 1 Redundancy Switch Units with full User Interface and Remote Control

RCUH100 for use with;

    L500 series Block DownConverters

    IBU/ IBD/ IBUH/ IBDH series Block converters

RCUH100(Ka) for use with;

    IBU(Ka)/ IBD(Ka)/ IBUH(Ka)/ IBDH(Ka) series Block converters

RCUH101 for use with;

    F1201/ F1202 Fixed frequency L-Band converters

RCUH102 for use with;

    F1200 Fixed frequency combined L-Band Up & DownConverters

RCUH103 for use with;

    ILA/ ILAH series Line amplifier products

RCUH104 for use with;

    P7xxx series Agile/ synthesised frequency converters

RCUH105 for use with;

    P7000 series Agile/ synthesised frequency combined L-Band Up & DownConverters

The **RCUH100 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 **RCUH100 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 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.

In AUTO mode, the unit monitors the converter/ amplifier alarm signals and if a fault condition develops within the on-line unit, the **RCUH100 series** 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

- Dual mains input & redundant power supplies fitted as standard

- Full user interface and remote control fitted as standard (Ethernet optional)

- Dual switching arrangement (IF/ 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

RCUH100 series - Typical Specification

The following gives the performance of the RCUH 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
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/ IBUH600 converters)
Insertion loss	3dB (not including converter gain)
Switching speed	<150ms (from fault to switch completion)

RCUH100series 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^{0}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

Remote control		RS232/ 485 port
	Option 9 ;	Ethernet; embedded web server & SNMP network management support
Converter alarms		PSU fail, LO lock fail & Amplifier fail
Connector		15-way, D-type

Options

1a) High quality, matched L-Band, RF (C, X or Ku-Band) and control cables to interface to the IBU/ IBD/ IBUH/ IBDH/ L500 series converter products, when mounted adjacent to the RCUH100 unit
1b) See option 1a above but includes DBS-Band SHF cables
1c) See option 1a above but includes Ka-Band SHF cables
1d) Cable set for F1201/ F1202 & RCUH101 unit
1e) Cable set for F1200 & RCUH102 unit
1f) Cable set for ILA & RCUH103 unit
1g) Cable set for P7xxx series & RCUH104 unit
1h) Cable set for P7000 & RCUH105 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