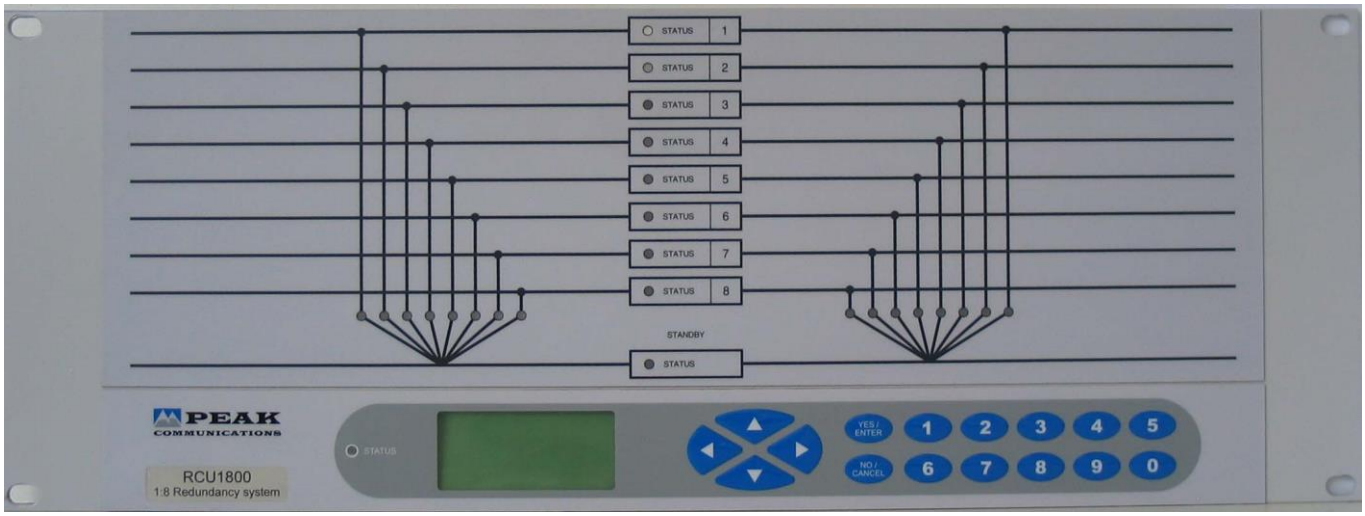
RCU1000 Series

1+1 to 8+1 Redundancy Switching Units for the P7xxx series of Agile Frequency Converters



The redundancy switch unit can monitor and control up to 8 **P7xxx** series converters plus 1 standby to provide full system redundancy. The **RCU1000 series** automatically configures the standby converter's frequency and gain settings to that of any defective channel. Channel priority can be preset to ensure that high priority traffic is maintained. The **RCU1000 series** also incorporate input and output switching to fully isolate individual channels to ensure that any defective converter can be replaced without any disruption to signal transmission.

The **RCU1000 series** are 4U high 19" rack mount units with a full front panel system mimic, graphics display module and membrane keyboard which provide clear, intuitive controls and monitoring. The **RCU** can be controlled from the front panel or by the RS232/ 485 link to a host computer (Ethernet interface option available). In remote mode all units can be monitored while keeping switch-over automatic in case of failure.

Peak Features

- IF and RF switching for isolation of individual channels
- Automatic setting of frequency and gain on standby converter
- Full remote control
- Expandable up to 8+1 configuration
- Full mimic monitoring of system status
- Dual redundant power supplies
- User adjustable gain offset for standby channel optimisation

Ordering information

RCU units can be configured for switching of up to 8 channels. The RCU can be populated with any number of switches and can be expanded at a later date. To order a fully populated 1 for 8 RCU unit use type number RCU1800, for a 1 for 4 use RCU1400 etc

RCU1000 Series - Typical Specification

IF Interface

Frequency range	50 to 180MHz
Connectors	BNC (f), 50Ω
Option 1;	BNC (f), 75Ω
Return loss	15dB min
Isolation	70dB min
IF insertion loss	0.3dB nominal
Standby in to stby out;	0.3dB+0.3dB per channel

L-Band Interface (For L-band Converters)

Frequency range	950-2150MHz
Connectors	SMA (f), 50Ω
Option 1b;	N-Type (f), 50Ω
Return loss	>16dB (with SMA connections)
Isolation	100dB min
L-Band insertion loss	0.6dB nominal
Standby in to stby out;	0.6dB+0.3dB per channel

RF Interface (For SHF Converters)

Frequency range	to 18GHz
Connectors	SMA (f), 50Ω
Option 1c;	N-Type (f), 50Ω
Return loss	>13dB (with SMA connections), band specific
Isolation	70dB min
SHF insertion loss	<3dB, band specific
Standby in to stby out;	3dB+1dB per channel, band specific

Performance

Switchover time	<500ms

Mechanical

Width	19”, standard rack mount
Height	4U (7”)
Depth	420mm (16.5”), plus connectors
Construction	Aluminium chassis
Weight	8kgs (17.6lbs)

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	50W max

Control System Interfaces

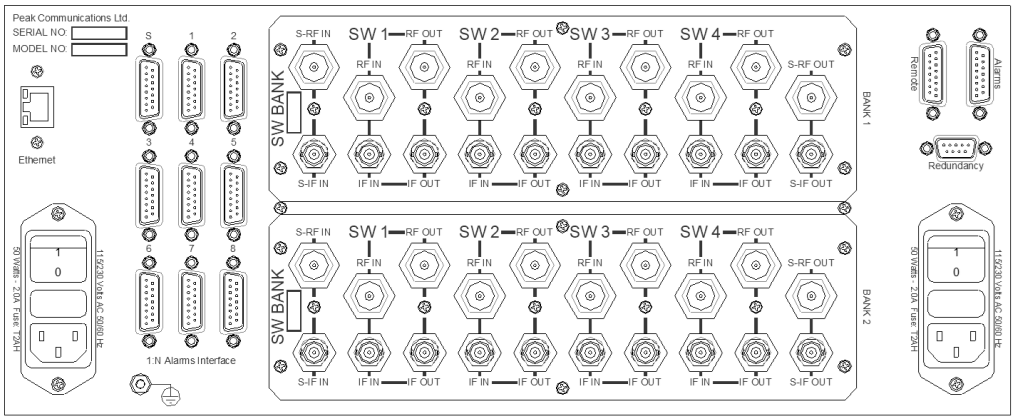
Remote control	RS232/485 serial interface, 15-Way, D-Type
Option 9;	Ethernet; embedded web server & SNMP network management support.
Converter alarm	From P7xxx summary alarm (form C) input
Alarm outputs	RCU1000 alarm (form C) P7xxx summary alarm (form C)

Options

1) 75Ω IF interface
1b) N-Type, 50Ω L-Band interfaces
1c) N-Type, 50Ω SHF interfaces to 18GHz
2a) High quality, matched IF, L-band/ RF (C, X or Ku-Band) and control cable set (to interface to the Peak P7xxx series agile converter range, when mounted adjacent to the RCU1000 unit (with typically on-line converters above and redundant unit below the RCU1000)
2b) See option 2a above but includes DBS-Band SHF cables
9) Ethernet interface with embedded web server & SNMP

Note; the addition of options can modify the typical specification, for details please consult the factory

Rear panel View (RCU1800), showing N-Type connector option



PEAK COMMUNICATIONS