RCUH021 series

1+1 IF /L-Band Redundancy Switch Unit for 3rd Party Products (Modulators etc.)

RCUH021 single channel 1+1 switch
RCUH021D dual channel 1+1 switch

The **RCUH021 series** redundancy switch units are designed to operate with third party modulators, up converters, IRD’s, down converters, antenna feeds etc., maintaining maximum availability whilst allowing routine maintenance and repair work to be carried out on the standby unit without the normally associated down-time. They include latching switches which maintain the RF path configuration in the event of a power failure, rather than pin diode switches which are common in lower grade designs.

In AUTO mode, the unit monitors the unit alarm signals and if a fault condition develops within the on-line unit, automatically switches traffic to the standby unit.

Optional RF input power detection along with user settable threshold levels provides further enhancements and ultimate system versatility.

The redundancy unit is ideal for unmanned facilities and 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).

**Peak Features**

- L-Band or optional IF operation
- Dual mains input & redundant power supplies fitted as standard
- Full user interface and remote control fitted as standard (Ethernet optional)
- Summary alarm inputs & optional RF level detection with user settable threshold
- Transfer switching option for convenient off-line unit monitoring/ test
- Optional, high quality matched cable sets to interface to third party units
**RCUH021 series – Typical Specification**

### Switch Performance
- **Switch type**: Latching
- **Switching speed**: 150ms (from fault detection)
- **Frequency**: 950-2150MHz
- **Option 3**: 70/140MHz (50-180MHz)
- **Insertion loss**: 2.5dB ±1dB nom
- **Gain flatness**: ±1dB across full band
- **Isolation**: 80dB typ. (between any two input ports)
- **Input power**: +10dBm max.
- **Output return loss**: 15dB

### RF Power Detection (Option 6)
- Input signal power detection, supporting user settable threshold ‘high’ & ‘low’ power alarms, adjustable via front panel & remote control and summarised with discrete alarm inputs to trigger automatic switching.
- **Input level range**: -50 to 0dBm, adjustable
- **RF Interfaces**
  - **Input connections**: SMA (f), 50Ω
  - **Option 1a**: BNC (f), 50Ω
  - **Option 1b**: N-Type (f), 50Ω
  - **Option 1c**: BNC (f), 75Ω
  - **Output connections**: SMA (f), 50Ω
  - **Option 1d**: BNC (f), 50Ω
  - **Option 1e**: N-Type (f), 50Ω
  - **Option 1f**: BNC (f), 75Ω

### DC Blocking (Option 8)
- Provides DC blocking facility for switch inputs

### Transfer Switching (Option 13)
- Transfer switching for convenient offline unit test/monitoring

### Output ‘Monitor’ (Option 2a, 2b)
- Connected directly to front panel (Option 2a) or rear panel (Option 2b) to provide an appropriately terminated monitor port.
- **Level**: -20dBc ±3dB

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**Electronic Variable Attenuation (Option 10)**

- **Attenuation range**: 30dB
- **Step size**: 0.1dB or 0.5dB
- **Control**: Electronically variable via local front panel & remote control

**Note**: attenuator typically fitted to common output. Input power, Noise Figure & Flatness degraded with this option, please contact factory for details.

### Mechanical
- **Width**: 19”, standard rack mount
- **Height**: 1RU (1.75”)
- **Depth**: 420mm (16.5”), plus connectors
- **Construction**: Aluminium chassis
- **Weight**: Approx. 4kgs (8.8lbs)

### Environmental
- **Operating temp**: -10°C to +50°C
- **EMC**: EN55022 part B & EN50082-1
- **Safety**: EN60950

### Power supply (dual redundant)
- **Connection**: IEC (dual feed cables provided)
- **Voltage**: 90-264VAC
- **Frequency**: 47-63Hz
- **Power**: 30 Watts max.

### Control System Interface
- **Remote Control**: RS232/RS485 port
- **Option 9**: Ethernet; embedded web server & SNMP network management support
- **Discrete ‘alarms’ interface’**: PSU failure
- **Alarm inputs**: Summary alarm input via D-Type connections

### Options
- **1a)**: Input’s BNC (f), 50Ω connections
- **1b)**: Input’s N-Type (f), 50Ω connections
- **1c)**: Input’s BNC (f), 75Ω connections
- **1d)**: Output’s BNC (f), 50Ω connections
- **1e)**: Output’s N-Type (f), 50Ω connections
- **1f)**: Output’s BNC (f), 75Ω connections
- **2a)**: Output front panel monitor port
- **2b)**: Output rear panel monitor port
- **3)**: IF 70/140MHz
- **4)**: High quality, matched IF/ L-Band and control cables to interface to the third-party products, when mounted adjacent to the unit
- **5)**: DC & 10MHz pass-through (L-Band only)
- **6)**: RF power detection
- **8)**: DC blocking for switch inputs
- **9)**: Ethernet interface with embedded web server & SNMP
- **10a)**: Electronic attenuator, 0-30dB (0.5dB steps), at IF/ L-Band
- **10b)**: Electronic attenuator, 0-30dB (0.1dB steps), at IF/ L-Band
- **13)**: Transfer switching for offline unit monitoring

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

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**Rear Panel – shows dual channel version**

Peak Communications reserves the right to alter the specifications of this equipment without prior notice. RCUH021series-170718.

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