



# Swift Series DC to 40 GHz 1+1 Redundancy Switch Module with standby for Frequency Converters

**Typical applications:**

- Teleports & Earth Stations
- Satellite Operations
- Government & Defence applications
- Telemetry, Tracking & Command
- High Resilience applications

The swift switch 1+1 redundancy module is for use in the 1U Genus chassis, specifically for Falcon frequency converter configurations. In 1+1 redundancy configuration, the chassis has capacity for up to two hot-swap frequency converter modules and 1 redundancy switch module.

**Resilience** from dual redundant hot-swap power supplies & field replaceable CPU & HMI

**Local control & monitoring** via HMI high resolution touchscreen

**Field replaceable Internal 10MHz reference source** and external reference inject port with auto detection

**Compact** housed in a 1U high chassis with capacity for 1 redundancy switch and 2 converter modules

**Flexible Module Configurations** including interchangeable frequency range options. User selectable via HMI or web browser

**Remote control & monitoring** via RJ45 Ethernet port with SNMP & web browser interface

**Redundancy configurations** 1+1 redundant configuration

**Hot Swap & replaceable** RF Frequency Converter & redundancy switch modules

### Chassis - Specification

Dimensions / Weight / Colour	1U high x 550mm deep x 19" wide / <10 kg / RAL9003—White (Semi-matte)
Capacity	Total of 17 module slots. Note that 1 slot may be used for fan (if required) and 1 slot may be used for 10 MHz EXT inject module (if required). Note actual modules may require >1 slot. Refer to required module spec table.
Temperature	Operating: 0°C to +45°C / Storage: -20°C to +75°C
Location / Humidity / Altitude	Indoor use only / 20 to 90% non-condensing / 10,000 feet AMSL (Operational) 30,000 feet AMSL (Storage) Above Mean Sea Level
Control & Monitoring	Local: HMI touch screen Remote: Ethernet via RJ45, 10BaseT/100 BaseTx. TCP/IP, SNMP V3 & HTTPS & Web browser interface HMI and CPU field replaceable. Each module independently monitored and reported.
MTTR	20 minutes (15 minutes to retrieve spare part and 5 mins to replace) Applies to LRUs only and assumed in house stock
AC Input / Consumption	85-264Vac 50/60Hz / 150W
PSU Redundancy	Dual redundant and alarmed Diode OR. Hot swappable
Input & Output ports	Dependant upon module fitted





**Swift Redundancy Switch Module**

Compact form factor allowing multiple modules to be housed in 1U chassis. Each module uses 4 slots in the chassis.

Swift Redundancy Switch Module - RF Parameters			
Model Numbers		SWF-G1S-QX-108A	
Size		6 slots wide.	
Redundancy		1+1	
Frequency Range	Input / Output	DC to 40 GHz	
	Output / Input	DC to 6 GHz	
Insertion Loss (40 GHz Path) (Excludes all linking cables external from the module)	≤ 2.5 GHz	≤ 1.0 dB	
	≤ 12.75 GHz	≤ 1.5 dB	
	≤ 31.0 GHz	≤ 2.0 dB	
Insertion Loss (6 GHz Path) (Excludes all linking cables external from the module)	≤ 2.5 GHz	≤ 0.8 dB	
	≤ 6 GHz	≤ 1.2 dB	
Insertion Loss Variation (Max) (Between input paths or output paths)		± 0.50 dB	
Gain Flatness (Input/Output Path)	0.85—2.15 GHz	± 0.2 dB	
	10.70—12.75 GHz	± 0.35 dB	
	29.25—31.00 GHz	± 0.5 dB	
Return Loss (Input/Output Path)	0.85—2.15 GHz	-18 dB	
	10.7—12.75 GHz	-14 dB	
	29.25—31.00 GHz	-12 dB	
Isolation (path to path)		55 dB min	
Input Power Range		≤ +35 dBm	
Spurs In-band	Non-carrier related	< -85 dBm (In 1kHz Bandwidth)	

**1+1 Redundancy Configuration**

Specs are for standalone modules. There may be slight variation when used for frequency converter redundancy configurations

Note 1: The specification is subject to regular reviews and will be updated from time to time as part of our continuing product development and improved spec accuracy.  
Note 2: Operation beyond the quoted limits stated above may cause instantaneous and permanent damage.

