



# SOTCA

Satellite  
Communications  
Equipment

High-Performance Microwave  
Components and Subsystems

## STC 3102MSW

1:1, 1:2 Universal Stand-alone Redundancy Switches



STC 3102MSW universal redundancy switch unit is a robust, user friendly solution for critical applications, where minimum downtime is required. It is designed to be used as a part of redundant system and is fully compatible with all Sotca Inc. frequency converters.

The switch is able to accept alarm from all converters. When operated in "Auto" mode, the unit monitors alarm signals of on-line converters. If one of converters fault is detected, alarm is generated and switch will automatically fall over to the hot stand-by unit. Using manual mode, any unit can be monitored, maintained, troubleshooted and replaced on the fly, without affecting the link. Any converter unit in the system can be assigned the role of back-up converter either locally using front panel or remotely. The current status of converters in the system is indicated on LCD display.

STC 3102MSW high isolation level, low return loss assures high performance of the system and ultra low level of cross-interference. Unit comes in a standard 1U(1.75") 19" Rack-mounted enclosure.

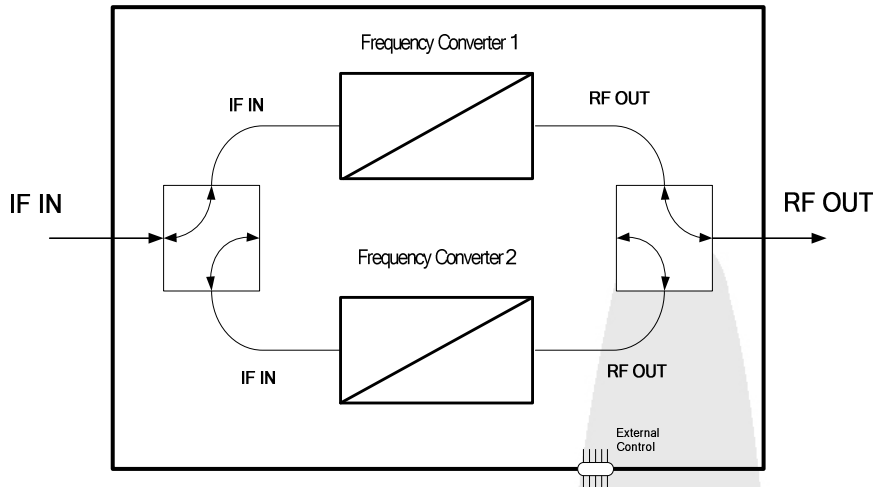
### Key Features

- User-friendly full visual interface, featuring manual and auto mode switch conveniently located on front panel.
- Dual AC power supply system is optionally available.
- Auto/Manual Mode switching local or remote
- Remote/Local Monitoring and control of the switching unit and frequency converters
- Hot redundancy to reduce downtime and increase reliability of the entire system
- Fast switching
- On the fly failed unit replacement

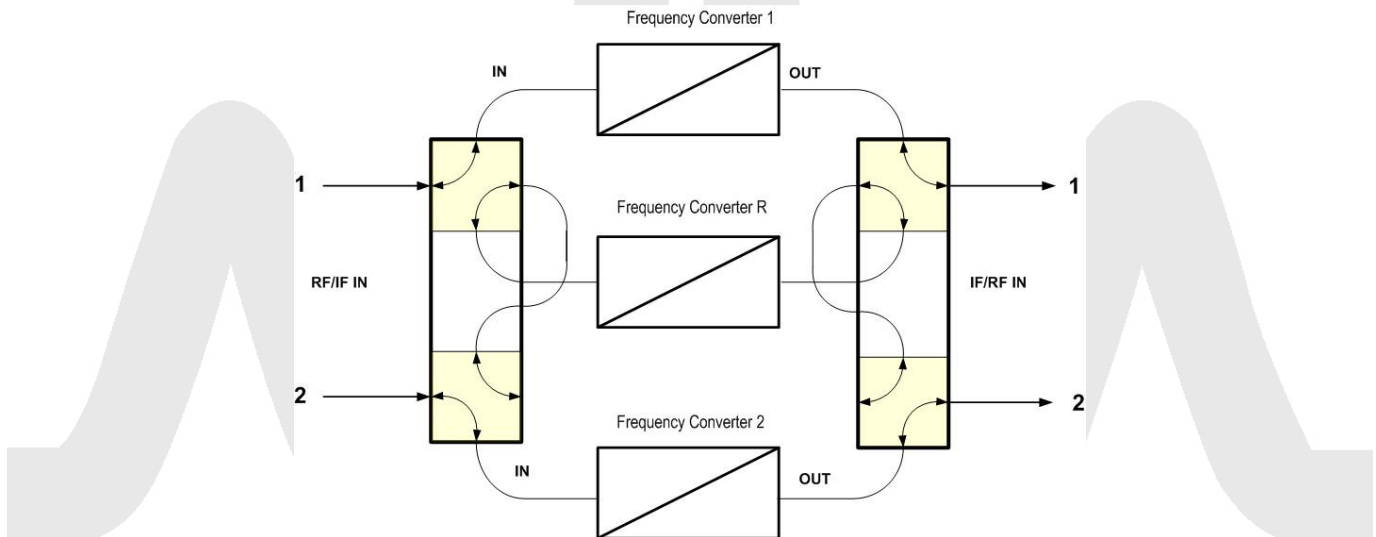
### Applications

- Satellite Ground Stations
- Network hubs or remote sites
- Broadcast
- Monitoring downlink stations
- VSAT Hubs

### 1:1 Redundancy Unit simplified block-diagram



### 1:2 Redundancy Unit simplified block-diagram





**Table 1. Technical Specifications**

<b>RF Chain</b>		<b>Mechanical</b>	
<b>Frequency Range</b>	0 to 18 GHz	Width	19" standard rack mount
<b>Insertion Loss</b>		Height	1U (1.75")
DC to 4GHz	0.2 dB	Depth	16", plus connectors
4 GHz to 8 GHz	0.3 dB	Weight	2.5 kg max
8 GHz to 12 GHz	0.4 dB	Construction	Lightweight Aluminum Chassis
12 GHz to 18 GHz	0.5 dB	<b>Power Supply</b>	
<b>Input return loss</b>		Voltage	95/230 VAC (auto-ranging)
DC to 4GHz	20 dB	Frequency	47 to 63 Hz
4 GHz to 8 GHz	16 dB	Power consumption	10W
8 GHz to 12 GHz	14 dB	<b>Environmental</b>	
12 GHz to 18 GHz	13 dB	Operating Temperature	0 to + 50°C
<b>Output Return Loss</b>		Non-Operating Temperature	-25 to + 60°C
DC to 4GHz	20 dB	Humidity	0-85%, non-condensing
4 GHz to 8 GHz	16 dB	Shock and Vibration	Normal handling by commercial carriers
8 GHz to 12 GHz	14 dB	<b>M &amp; C Interface</b>	
12 GHz to 18 GHz	13 dB	Remote control	- RS-232 DB-9 (M) OR - RS422 / RS485 DB-9 (M)
<b>Port Isolation</b>		Local control interface	LCD 20x2, 16 keypad
DC to 4GHz	85	<b>Options</b>	
4 GHz to 8 GHz	65	1. 2:1 Configuration	
8 GHz to 12 GHz	45	2. Redundant power supply	
12 GHz to 18 GHz	35		
<b>Connection</b>			
Input	50Ω SMA (F)		
Output	50Ω SMA (F)		
<b>Transfer Parameters</b>			
Switching time	15mS max		

Typical Specification. Subject to change without notice.