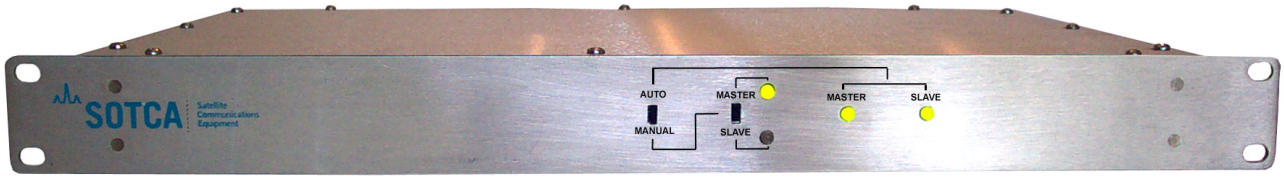
STC 83201SW

1:1 Redundancy Unit



STC 83201SW redundancy 1:1 unit is simple, robust, user frendly and economical solution for critical applications, where minimum downtime is required. It is designed to be used as a part of Sotca's frequency converters redundant system and it is fully compatible with all STC 83xxxx converters models.
When operated in "Auto" mode, the unit monitors alarm signals of an on-line converter. If fault is detected, the switch will automatically fall over to the hot stand-by unit. Using manual mode, any unit can be maintained, troubleshooted and replaced on the fly, without affecting the link. STC 83201SW has high isolation level, low return loss, assure 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 interface, featuring manual (test) and auto mode.
- Hot redundancy to reduce downtime and increase reliability of the entire system
- Fast switching
- On the fly failed unit replacement

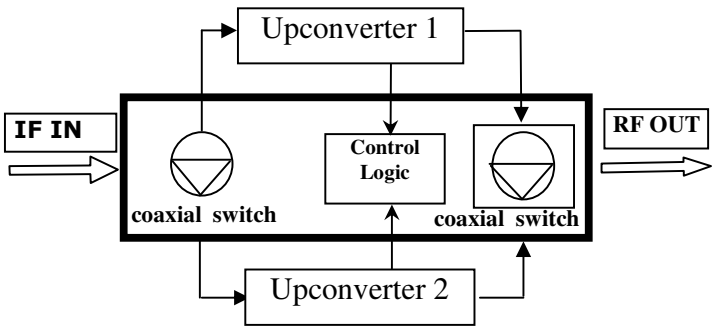
Options

- Remote control
- High-quality matched cables and accessories
- DC power to ODU can be provided

Applications

- Satellite Ground Stations
- Network hubs or remote sites
- Broadcast
- Monitoring downlink stations
- Satellite News Gathering
- VSAT terminals and Hubs

1:1 Redundancy Unit Block-Diagram in Upconversion Chain

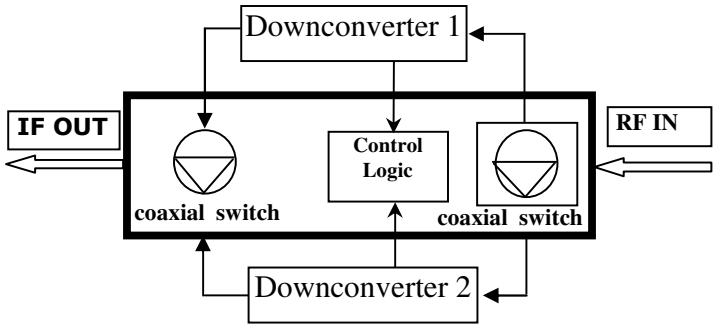


IF signal from a modulator is connected to the redundancy unit through SMA (F) connector. After equal splitting signals is fed into the inputs of Upconverter 1 and 2. Double-shielded cables with BNC connectors must be used for connection of splitter outputs with Upconverter inputs.
RF signals combined with 10MHz reference and 24V/18VDC from Upconverters is fed into the input of a transfer switch located inside the unit (where applicable). Good quality cables with SMA connectors must be used for connection of Upconverters outputs with appropriate redundancy unit inputs.
Each Upconverter outfitted with "redundancy ready" option must be connected to the control logic located in the redundancy unit, by a digital cable with DB9 (F) connectors

Table 1. Technical Specifications

IF Chain	
Frequency Range	70MHz ± 20MHz, 140MHz ± 40MHz
Insertion Loss	0.3dB max
VSWR	1.15:1 max
Connectors	SMA (F) 50 Ohm
Ports Isolation	70dB min
Phase unbalance	0.15 deg
RF Chain	
Frequency Range	0 to 18 GHz
Insertion Loss	0.3dB max (L, C-band) 0.5dB max (Ku-band)
VSWR	1.3:1 max (L, C-band) 1.5:1 max (Ku-band)
Connectors	SMA (F) 50 Ohm
Ports Isolation	70dB min (L, C-band) 60dB min (Ku-band)
Transfer Parameters	
Switching time	15mS max
DC Voltage (RF Chain)	18V/24V (where applicable)
DC Current (RF Chain)	2.5A max
Mechanical	
Width	19" standard rack mount
Height	1U (1.75")
Depth	13", plus connectors
Weight	2 kg max
Power Requirements	
Voltage	95/230 VAC (auto-ranging)
Frequency	47 to 63 Hz
Power consumption	10W
Operating Temperature	0 to +50 °C

1:1 Redundancy Unit block-diagram in downconvertion chain



RF signal from an LNB (LNA) comes to the redundancy unit input through SMA connector. After passing the transfer switch RF signal comes to input of Downconverter 1 or Downconverter 2. Good quality cables with SMA connectors must be used for connection of Downconverter outputs with appropriate redundancy unit outputs.

IF signals combined with 10MHz reference and 24V DC from Downconverters comes to the input of an IF switch located in the unit (where applicable).

Double-shielded cables with BNC connectors must be used for connection of the IF switch inputs to Downconverter outputs.

Each Downconverter feathered with "redundancy ready" option must be connected to the control logic located in the redundancy unit, by a digital cable with DB9 (F) connectors.

Table 2. Technical Specifications

IF Chain	
Frequency Range	70MHz ± 20MHz, 140MHz ± 40MHz
Insertion Loss	0.1dB max
VSWR	1.1:1 max
Connectors	SMA (F) 50 Ohm
Ports Isolation	80dB min
RF Chain	
Frequency Range	0 to 18 GHz
Insertion Loss	0.3dB max (L, C-band) 0.5dB max (Ku-band)
VSWR	1.3:1 max (L, C-band) 1.5:1 max (Ku-band)
Connectors	SMA (F) 50 Ohm
Ports Isolation	70dB min (L, C-band) 60dB min (Ku-band)
Transfer Parameters	
Switching time	15mS max
DC Voltage	18V/24V (where applicable).
DC Current (RF Chain)	2.5A max
Mechanical	
Width	19" standard rack mount
Height	1U (1.75")
Depth	13", plus connectors
Weight	2 kg
Power Requirements	
Voltage	95/230 VAC (auto-ranging)
Frequency	47 to 63 Hz
Power consumption	10W
Operating Temperature	0 to +50 °C

Typical specification. Subject of change without notice