



STR400 Series – TETRA Channel Selective RF Repeater

TETRA RF Repeater is used to extend the coverage area for both outdoor and indoor environment by picking up the signal through donor antenna, then amplifier and broadcast to the serving area by serving antenna(s). Sunny STR400 Series – TETRA Channel Selective RF Repeater provides wide range of configurations to address different customer requirements. With supporting maximum 8 TETRA channels selected by user within maximum 7MHz band.

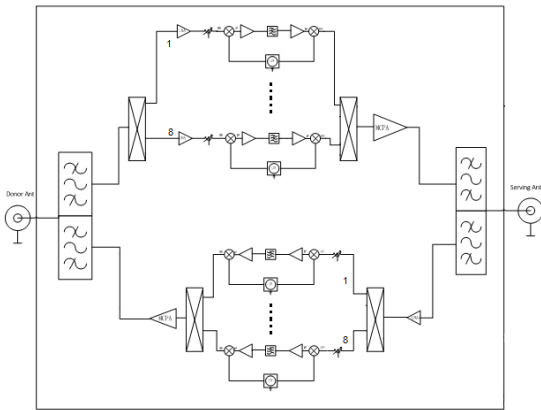
Model: STR400-F1'F2/F3'F4-RP-XC

Where X is 2, 4, 8 channels

Highlight

- Comply ETSI standard with CE certificate
- Support 380-470MHz
- Support up to 7MHz Bandwidth (Typical 5MHz Bandwidth and 5MHz Guardband)
- Support up to 8 TETRA channels
- Support up to 93dB Gain
- Optional remote alarm/control/monitoring/statistics by ethernet or sms
- Optional different kinds of redundancy configuration

System Block Diagram



System Outlook

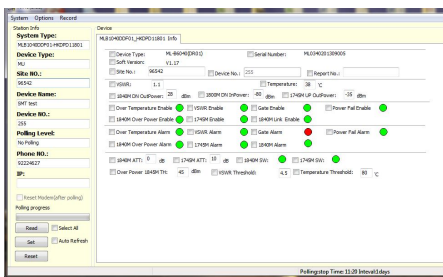


Wall mount

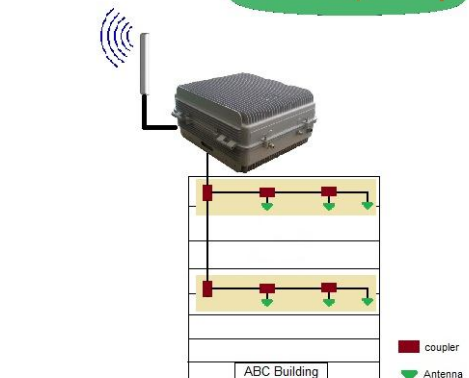
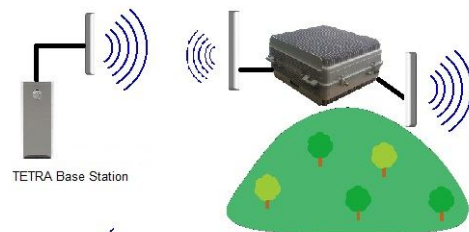


Rack mount

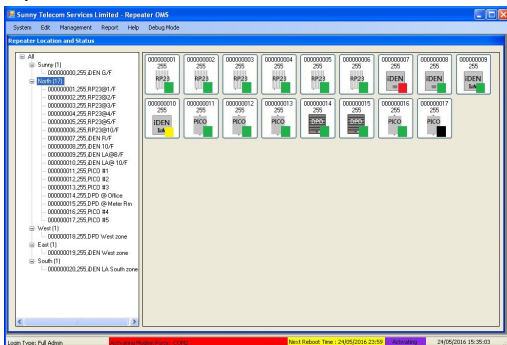
Remote Software



Application Example



Option: SUN-OMS





Electrical Specification

Items	Uplink	Downlink	
Frequency Range	F1-F2MHz (within 380-470MHz)	F3-F4MHz (within 380-470MHz)	
Bandwidth range	5MHz (Optional 7MHz)	5MHz (Optional 7MHz)	
Guardband (F3 minus F2)	≥3MHz	≥3MHz	
Number of Channels	2, 4, 8		
Channel frequency	25kHz per channel*		
Output Power Per Channel	2 Channels	24±2dBm	34±2dBm
	4 Channels	21±2dBm	31±2dBm
	8 Channels	18±2dBm	28±2dBm
Max. Gain (1dB per step)	60 to 90±3dB		
Intermodulation attenuation	≤ -60dBc @ 2 x 34dBm		
Third order intercept	≥ +58dBm @ 2 x 24dBm	≥ +68dBm @ 2 x 34dBm	
Max. Input without damage	≤ -10dBm		
Input Sensitivity	2 Channels	≥ -117dBm	≥ -97dBm
	4 Channels	≥ -114dBm	≥ -94dBm
	8 Channels	≥ -111dBm	≥ -91dBm
ALC / AGC	△Po≤±1 dBm / range 0~20dB		
Spurious emissions from RF Port	≤ -36dBm@9kHz~1GHz ; ≤ -30dBm@1GHz~12.75GHz		
Time Delay	≤12us		
Noise Figure	≤5dB at maximum gain		
VSWR	1.5		
Compliance	Radio: ETSI TS101 789, EN300 392, EN300 394, EN303 035 EMC: EN301 489, Safety: EN60950, Health: EN 50385		

Power Supply and Mechanical Specification

RF Connector	N-Female/50ohm**
Operating Temperature	-25°C ~+55°C
Relative Humidity	Max. 95%
MTBF	Min. 100000 hours
Power Supply	230VAC, 50/60Hz OR -48V DC (option STR400-DC)
Maximum power Consumption	≤350W
Cooling	Natural cooling for wall mount, FAN cooling for rack mount
Heat Dissipation	≤170W for wall mount
Cabinet Environment Rating	IP65 for wall mount, IP20 for rack mount
Local LED	Power – GREEN, Alarm – RED
Alarm types	No AC Power, Over Temperature, Module Failure, VSWR, Over RF Downlink Power, Low RF Downlink Power, Door Open
Remote Control Module	RS232/USB (Standard) Wireless Modem (option STR400-RFM, STR400-WD) Ethernet (option STR400-ETH)
Dimensions	550x460x235mm (wall mount) OR 4U, 19" rack mount, 500mm depth (option: STR400-RACK)
Weight	N.W.33.5kg, G.W.36kg

* User is not allowed to select ±2 channels of the selected channel

** User predefine Simplex or Duplex configuration for I/P and O/P ports during ordering stage

Ordering Information:

Model: STR400-F1'F2/F3'F4-RP-XC	1. Confirm uplink/downlink frequency. F1 to F2 and F3 to F4 are within 380-470MHz and typically 5MHz (Optional ≤7MHz); F3 minus F2 must be ≥3MHz 2. Confirm Nos of Channel - 2, 4, 8
Options	STR400-RFM: Sunny Remote Control by RF Modem (SMS) ² STR400-WD: Sunny Remote Control by RF Modem (wireless data) ² (Fixed IP needed) STR400-ETH: Sunny Remote Control by Ethernet ² SUN-OMS: Sunny Remote Control Software (Network management software) STR400-TP: With Downlink and Uplink -30dB test ports outside the cabinet STR400-RL: With 2 relay input and 2 relay output as external alarm (dry contact) STR400-UPS: Sunny Uninterruptible Power Supply STR400-DC: Using -48VDC as power supply input STR400-RACK: Rack mount cabinet with FAN cooling STR400-HSPSU: Sunny Hot Standby Power Supply Unit ¹ STR400-HSWU: Sunny Hot Standby Whole Unit ¹ ^{1 & 2} need to order together with main unit, ^{1, 2} order either option only

Technical data are subjected to change without notice – File: STR400-F1'F2/F3'F4-RP-XC datasheet 2018V1.3