



SUNNY SV100 Series - VHF Repeater

Model : SV100-F1'F2/F3'F4-RP-P

Where

P : Downlink Max. Output power 37, 40, 43dBm

VHF : F1-F2 and F3-F4 are within 110-175MHz

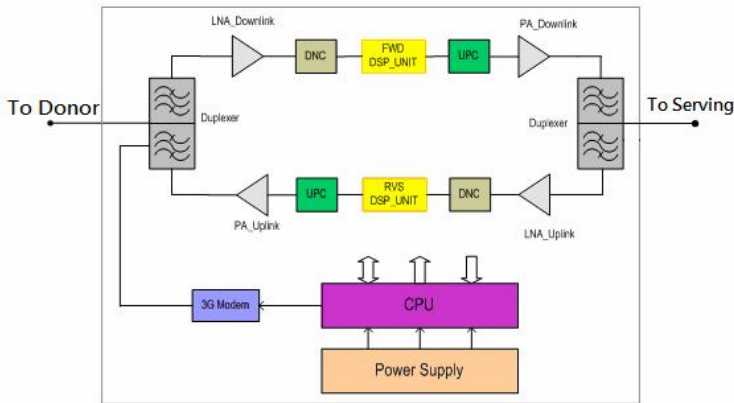
F1-F2 and F3-F4 is 0.2 to 5MHz

F3 minus F2 \geq 5MHz

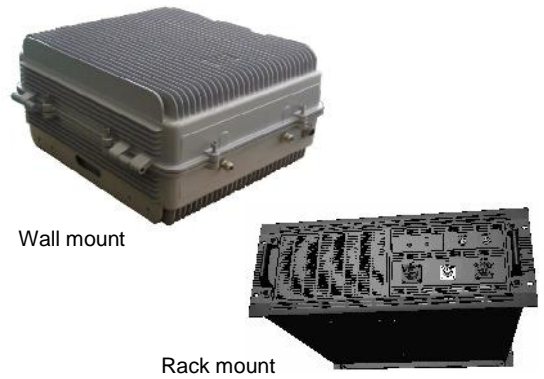
Product Highlight

- Support VHF frequency range
- Simple plug and play design
- ETSI and HKTA 1002 Compliance
- Option remote control by Ethernet or RF modem
- Option Rack mount cabinet

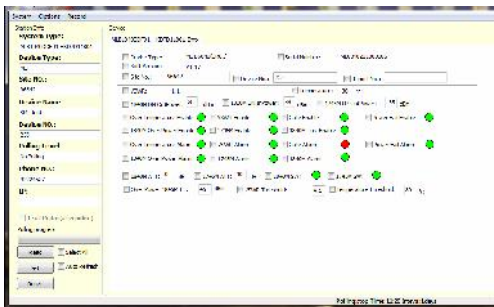
System Block Diagram



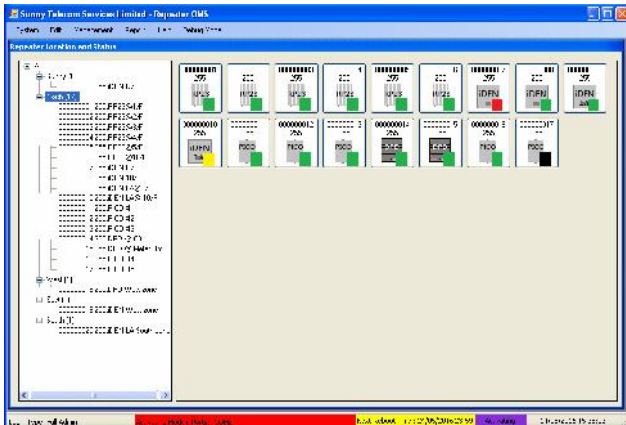
System Outlook



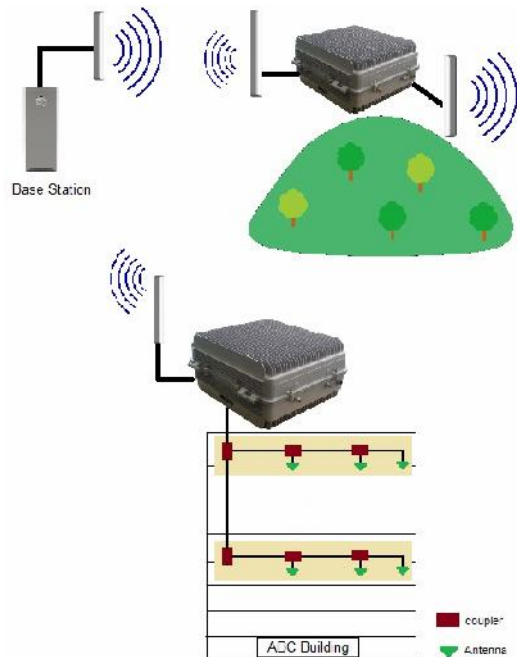
Remote Software



SUN-OMS:



Application Example





Specifications

Frequency Range	Uplink F1-F2MHz (within 110-175MHz)	Downlink F3-F4MHz (within 110-175MHz)
Bandwidth	5MHz	5MHz
Guardband (F3 minus F2)	5MHz	5MHz
Output Power	33±1.5dBm	37±1.5dBm 40±1.5dBm 43±1.5dBm
Gain	90dB±3dB	90dB±3dB
Maximum Input	-10dBm	0dBm
Input Sensitivity	-120dBm	-100dBm
Gain Adjustable Range	20dB@1dB per step	
Frequency Error	±1kHz	
Frequency Deviation	±2.5kHz	
Adjacent channel power [^]	60dBc	
Alternate channel power [^]	70dBc	
Spurious Emissions	-36dBm@9kHz to 1GHz -30dBm@1GHz to 12.75GHz	
Noise Figure	5dB	
Transmission Delay	1µS	
ALC	△Po ±1 dBm	
VSWR	1.5	
Remote Control	RS232/USB (Standard) Wireless Modem (option SV100-RFM, SV100-WD) Ethernet (option SV100-ETH)	
Alarm items	No AC Power, Module Failure, VSWR, Over Temperature, Downlink Over RF Power Downlink Low RF Power, Door Open (not for Rack mount)	
Compliance	EN 301 489, EN 60950, EN 50385, EN 300 086, EN 302 561, HKCA1002	

Power Supply and Mechanical Specifications

RF connector	N-Female connector/50
Local LED	Power – GREEN, Alarm - RED
Power Supply	220VAC 45-60Hz OR -48V DC (option SV100-DC)
External Battery	Charging Interface: 27.6V, 2A (option SV100-EB)
Dimension	550x440x235mm (wall mount) OR 4U, 19" rack mount, 500mm depth (option: SV100-RACK)
Weight	N.W.33.5kg, G.W.36kg
Max. Power Consumption	300W
Heat Dissipation	260W
Operating Temperature	-25 to +55°C
Operating Humidity	95%
Cabinet Environment Rating	IP65 for wall mount, IP20 for rack mount
MTBF	50000 hours

[^] Measure at offset > ±2 channels (for 25kHz channel bandwidth)

Ordering information:

Model: SV100-F1'F2/F3'F4-RP-P	1. Confirm uplink/downlink frequency. F1 to F2 and F3 to F4 are within 110-175MHz and 5MHz; F3 minus F2 must be 5MHz 2. Confirm Maximum Downlink output power (P, dBm): 43, 40, 37
Options	SUN-RACK: Rack mount cabinet with FAN Cooling ¹ SV100-RFM: Sunny Remote Control by RF Modem (SMS) ^{1,2} SV100-WD: Sunny Remote Control by RF Modem (wireless data) (Fixed IP needed) ^{1,2} SV100-ETH: Sunny Remote Control by Ethernet ^{1,2} SV100-TP: With Downlink and Uplink -30dB test ports outside the cabinet SV100-RL: With 2 relay input and 2 relay output as external alarm (dry contact) SV100-DC: Using -48VDC as power supply input SV100-EB: With interface to connect external battery as UPS (auto switch when AC loss) SUN-OMS: Sunny Remote Control Software (Network management software) ¹ need to order together with main unit ^{1,2} order either option only

Technical data are subjected to change without notice – File: SV100-F1'F2/F3'F4-RP-P datasheet 2020V1.0