simoco
wireless solutions

# SRB250

## P25 Rapid Replyment Suitcase Repeater

The Simoco SRB250 Suitcase Repeater is a flexible and fully customizable platform for rapid deployment or transportable mobile applications. The SRB250 provides stand alone “green field” communications or extends existing Public Safety systems, as well as offering deployable “on demand” coverage for vehicle and portable radio users in VHF, UHF, or both, in P25 mode.

## Features

- **Ruggedized P25 repeater**
- **Rapid deployment**
- **P25 transparent repeat function, repeats encryption intact, regenerates P25 frames**
- **LiFePO$_4$ (LFP) batteries for lightweight endurance and optimum voltage for radio modules**
- **Inbuilt duplexer**
- **Simple deploy and repeat mode (single button, closed box)**
- **High duty cycle operation with open lid, generously heat sinked power amplifier**
- **25 Watt transmit power**
- **Battery state of charge LED indicators**
- **Customizations available**
- **Environmentally protected**
- **-20 to +60 degrees operation**

## Optional Features

- **External battery pack in ruggedized case**
- **Link radio for remote dispatcher**
- **Case colors and custom labeling**
- **Local microphone**

# Specification

## General Specification

| | |
|---|---|
| **Frequency Bands** | AC (136-174 MHz)<br>TU (400-480 MHz)<br>UW (440-520 MHz) |
| **Channel Stability** | <1.5 ppm |
| **Channel Spacing** | 12.5 kHz |
| **Zones/Channels** | 40 Zones/1,500 Channels |
| **Dimensions** | 187h x 39w x 500d mm |
| **Weight** | 14 kg |
| **Power Source** | Internal batteries<br>Optional external battery box<br>Option external power supply |
| **Internal Batteries** | 1 or 2 $LiFePo_4$ 12.8 V DC 7.5 Ah |
| **Internal Battery Life (90% Stby 10% Tx)** | 5 W Tx: 22 Hours<br>25 W Tx: 14 Hours |
| **Internal Charger** | Single battery: 90% charge <2hours<br>Dual battery: 90% charge <4 hours<br>(from fully discharged) |
| **Conformance** | AS4295, FCC, IC |
| **Environmental Protection** | IP55 |
| **Operating Temperature** | -20° C to +60° C operating |

## P25 Operation

- Transparent P25 digital repeater
- P25CAP Compliant
- DES OFB and AES 256 Encryption*
- Encrypted repeat or local encrypt/decrypt in repeater

## Transmitter Specification

| | |
|---|---|
| **Duty Cycle** | 25 W (lid open):<br>45 mins Tx, 15mins Stby @ 25° C<br>25 W (lid closed):<br>30 mins Tx, 30 mins Stby @ 25 °C |
| **Hum and Noise** | >40 dB |
| **Modulation** | C4FM |
| **Transmitter Power** | 3 levels programmable 1-25 W |
| **Transmit Rise Time** | <25 ms |

## Receiver Specification

| | |
|---|---|
| **Audio Output** | 4 W @ <5% distortion |
| **Blocking** | >95 dB at +/-1 MHz |
| **Hum and Noise** | >40 dB |
| **Intermodulation** | >70 dB |
| **Selectivity** | >65 dB |
| **Sensitivity** | <0.3 µV for 5% BER |

## Internal Duplexer Specification

| | |
|---|---|
| **Insertion Loss** | <1.5dB (typical) |
| **Tx/Rx Split** | VHF: 4.7-7 MHz<br>UHF: 5.2-10 MHz |
| **Antenna Connector** | Type N |

*Encryption subject to export controls

## Accessories

AC Power Supply

Standard Microphone

DC Power Cable


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Specifications based on standard operating conditions. Not all frequency bands are permissible for every market area.
See Simoco Wireless Solutions Product Catalogue for a full list of specifications. All specifications are subject to change without prior notice.
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