

QCOM



QDR-50SFR

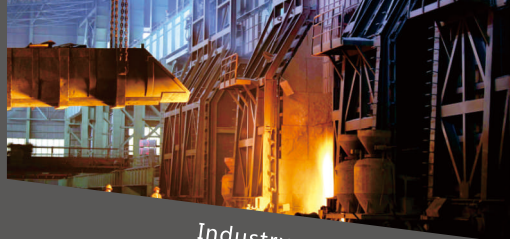
Simplex Frequency Repeater

- ▶ ETSI TDMA DMR Protocol
- ▶ Built-in Power Supply
- ▶ No duplexer required
- ▶ Base radio configuration analogue/ digital
- ▶ Standby current draw 320mA on 13.8V
- ▶ Utilising time slot 1 and time slot 2 on simplex enabling repeater functionality





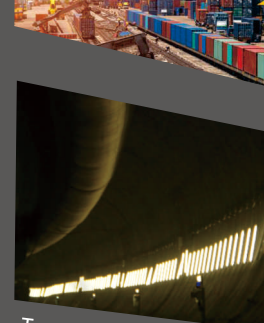
Transportation



Industry



Emergency Services



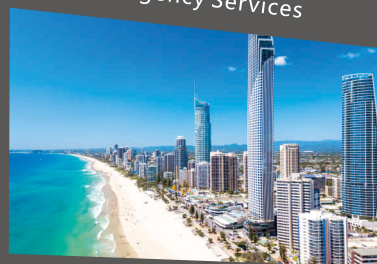
Tunnel Communication



Prison Communication



Disaster Rescue



Hotels



Shopping Centres



Airport Communication



Sports Event



Basement Coverage



Building Coverage

Product advantages

Light weight, super portable design

Only a quarter size of regular repeater, 3.2kg light weight.

Increase communication distance

Unlike traditional repeaters, the QDR-50SFR provides 5-20W of output power without TX power loss through the duplexer, and the improved RX sensitivity ensures communication over greater distances.

Easy installation

QCOM provides an easy-to-install wall bracket for the QDR-50SFR. Repeater requires external antenna only, no DUPLEXER needed.

Support single frequency repeater mode, save frequency resources

Only a digital simplex frequency is required to operate and no need to apply for duplex frequencies as in the case of normal repeater.

Support base station mode

The QDR-50SFR supports a fist microphone as an optional accessory to support base station operation.

With temperature power control to achieve super stability

When the repeater temperature reaches 40 degrees, the built-in fan will automatically turn on. When the repeater temperature reaches 70 degrees, the power will automatically be reduced. Once the temperature decreases, the repeater will revert back to high power. This ensures high reliability of QDR-50SFR.

Support voice encryption and authentication

The QDR-50SFR supports fixed key digital encryption technology, as well as authentication with QCOM encryption protocol. These features can improve and prevent interference and ensure the information is secured during communication.

2.0 inch HD large screen display

Using 2.0 inch high-definition full-view IPS screen, the display is clear and visible even in sunlight.

1600 channels, 100 areas supported

Using large-capacity memory unit, 1600 channels can be stored, 100 zones to meet the needs of different users.

Data and audio signal transmit simultaneously

QCOM has developed the digital simultaneous interpretation function for professional users. During the communication, it supports simultaneous data and audio signal transmission.

Signal adaptation

In the single frequency repeater mode, the terminal adopts an adaptive protocol to receive the transferred signal or the terminal's signal automatically.

Individual call and group call supported

Support individual calls and group calls.

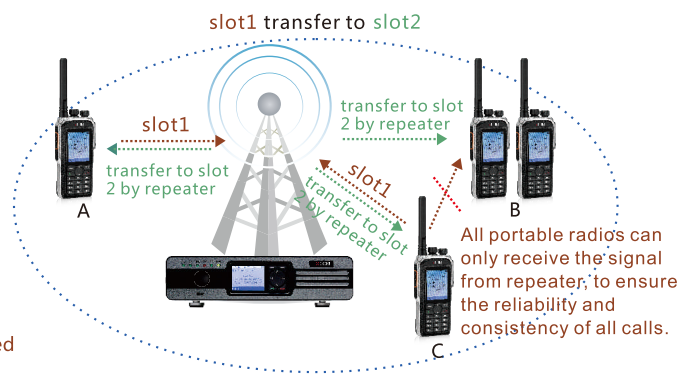
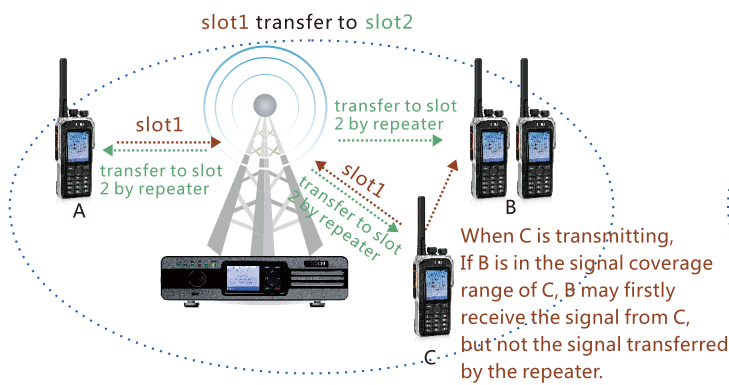
Single frequency repeater mode : Common mode and QCOM enhance mode

Common mode

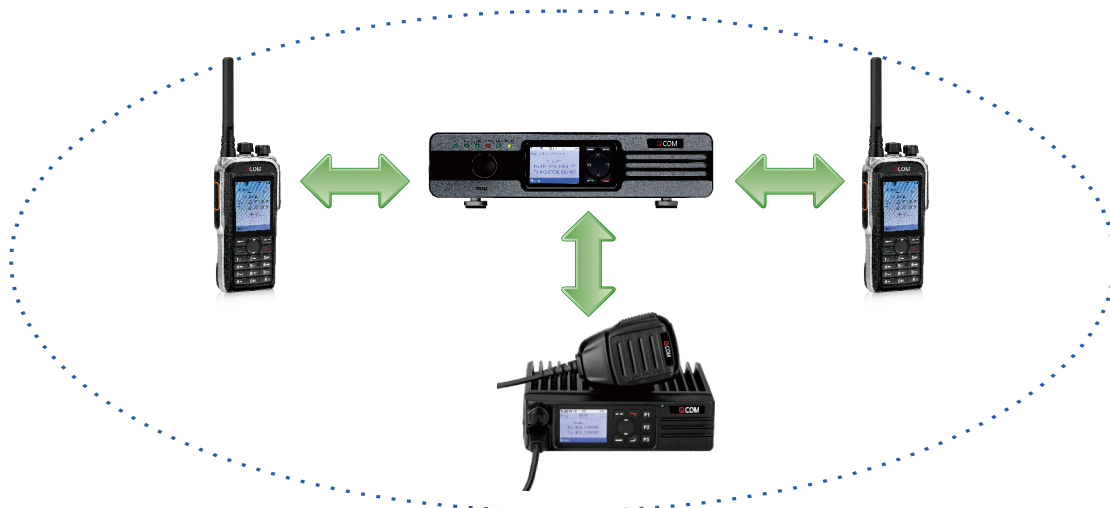
In common mode, the PD-1600W portable radio can receive both the signal from the repeater and the signal from the other radios. In this mode, both the radio and the repeater do not have fixed time slots for receiving/transmitting, allowing the repeater to be receiving on slot 1, whilst slot 2 will be used for transmitting or receiving on slot 2 and transmitting on slot 1. The portable can also still talk with the nearest radio without going through the repeater if the portable radio's signal coverage is within range.

QCOM mode

In QCOM enhance mode, all portable radios can only receive the signal from repeater, to ensure the reliability and consistency of calls. This mode specifies a specific receiving and transmitting time slot for the portable radios. For example, if the PD-1600W transmits on time slot 1, the simplex frequency repeater will receive on time slot 1 and transmit on time slot 2. All PD-1600W radios will transmit on time slot 1 and receive on time slot 2.



Digital emergency wireless communication system.



Technical parameters

General Specification

Frequency Range	UHF1: 400-470 MHz UHF2: 450-520 MHz VHF: 136-174 MHz
Number of zones	100
Channel Capacity	1600
Channel Spacing	12.5KHz/25KHz
Working method	Semi-duplex or simplex relay
Operation Voltage	DC 13.8V(±20%); AC 100-240V
Standby current draw	320mAmp
Frequency stability	±0.5ppm
Antenna Impedance	50Ω
Dimension	282(L)*241(W)*56(H) mm(Without battery)
Weight	3.2Kg(Without battery)

Transmitter

Output Power	H:20W L:5W
4FSK Digital modulation	Only data:7K60FXD, data and voice 7K60FXE
FM modulation	12.5 kHz:8K50F3E; 25 kHz:16KΦF3E;
Modulation limitation	±2.5kHz@12.5kHz; ±5.0kHz@25kHz
FM modulation	-40dB@12.5kHz, -45dB@25kHz
Emission spurious	-36 dBm≤1GHz/-30 dBm≥1GHz
Adjacent channel power	≤-60dB/12.5KHz, ≤-70dB/25KHz
Frequency response	+1/-3 dB
Rated Audio Distortion	≤3%
Digital speech coder	AMBE+2™

Included in box

SFR repeater
Operating manual
Power cable
Wall bracket

Optional Accessories



Remote Microphone



Programming Cable



Wall panel

Receiver

Digital sensitivity	5% BER:0.225 uV
Analog sensitivity	0.225 uV (12 dB SINAD)
Intermodulation	≥65 dB
Adjacent Channel Selectivity	≥60 dB/12.5KHz, ≥70dB/25KHz
Spurious suppression	≥70 dB
FM noise	-40dB@12.5kHz, -45dB@25kHz
Frequency response	+1/-3 dB
Rated audio output power	3W(speaker)
Audio Distortion	3%(typical)
Conducted spurs	-57dBm

Environmental indicators

Range of working temperature	-30°C~ +60 °C
Storage temperature range	-40°C~ +85 °C
Moisture proof	According to MIL-STD-810C/D/E/F standard
Shock and vibration	According to MIL-STD-810C/D/E/F standard

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Dealer