



# HUAWEI GSM-R OPH R951 V100R001 Product Description

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## About This Document

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### Brief Introduction

This document describes the appearance, features, specifications, and functions of the HUAWEI R951 GSM-R OPH handset (R951 for short).

### Change History

| Issue | Details                                  | Date       | Author       | Approved By  |
|-------|--|------------|--------------|--------------|
| 01    | Released the first issue.                | 2013-08-15 | Ma Qianli    | Yu Shengli   |
| 02    | Updated issue.                           | 2015-05-15 | Zeng Xianqin | Tang Xinting |
| 03    | Delete some useless optional accessories | 2015-7-22  | Zheng Hao    | Tang Xinting |

# Content

**About This Document.....3**

**1 Overview.....5**

    1.1 Introduction.....5

    1.2 Appearance.....6

**2 Product Specifications.....7**

    2.1 Physical Specifications.....7

    2.2 Main Features.....8

    2.3 Environmental Specifications.....9

    2.4 Performance Specifications.....10

    2.5 Product Certifications.....10

    2.6 Accessories.....10

**A Acronyms and Abbreviations.....12**

# 1 Overview

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## 1.1 Introduction

The R951 is a GSM-R OPH handset with the following features:

- Mature platform, stable performance and quality, and low hardware cost

In addition to incorporating the advantages of mature products using the same hardware as the R951, the R951 software and hardware have been developed to comply with the GSM-R protocol stack and GSM-R communication service. By building on previous product development, the R951 has established itself as a mature product yet available to consumers at relatively low cost.

- A wide range of GSM-R functions

The R951 provides voice group call service (VGCS), voice broadcast service (VBS), late entry, emergency calls, enhanced Multi-Level Precedence and Preemption (eMLPP), and functional number services.

- PTT and emergency call keys

Dedicated PTT and emergency call keys facilitate rapid communications with individuals or groups.

- Waterproof, dustproof, and shockproof.

The R951 is waterproof and dustproof and meets IP54 standards.

## 1.2 Appearance

Figure 1-1 shows the appearance of the R951.

**Figure 1-1** Appearance of the R951



# 2 Product Specifications

## 2.1 Physical Specifications

Table 2-1 lists the physical specifications of the R951.

**Table 2-1** Physical specifications of the R951

| Item         |                          | Specifications  |
|--------------|--------------------------|---|
| Dimensions   |                          | 133 mm × 64 mm × 30 mm (5.24 in. x 2.52 in. x 1.18 in.)   |
| Weight       |                          | 240 g (including the battery)   |
| Form factor  |                          | Bar type  |
| Antenna      |                          | Built-in  |
| SIM          |                          | One   |
| Battery      | 3000 mAh lithium battery | Standby time: more than 300 hours (network dependent)<br>Talk time: more than 900 minutes (network dependent) |
| Display      | Resolution               | 240 x 320 pixels  |
|              | LCD type                 | Thin film transistor (TFT)  |
|              | Colors                   | 262 K   |
|              | LCD size                 | 2.2 inches  |
| Ports        | Charger port             | 20-pin USB port   |
|              | USB port                 | 20-pin USB port   |
|              | Headset jack             | 20-pin USB port   |
| Special keys |                          | PTT and emergency call keys   |

## 2.2 Main Features

Table 2-2 Main features

| Feature            | Description   |
|--------------------|---|
| Working bands      | Supports GSM900 and DCS1800 bands.  |
| Trunking service   | <ul style="list-style-type: none"><li>• Supports VGCS and editing of group names.</li><li>• Supports VBS and editing of group names.</li><li>• Supports joining an ongoing group call (late entry).</li><li>• Supports eMLPP.</li><li>• Supports emergency calls.</li><li>• Supports emergency call acknowledgment.</li><li>• Supports PTT settings, including:<br/>PTT mode, group call status, broadcast status, and automatic answer</li><li>• Supports setting functional numbers.</li><li>• Supports calling number identification (CNID).</li><li>• Supports dialed number identification service (DNIS).</li><li>• Supports hands-free calling.</li><li>• Supports group call record management.</li></ul> |
| Functional numbers | <ul style="list-style-type: none"><li>• Supports functional number registration, deregistration, and querying.</li><li>• Supports changing the current functional number used for call forwarding.</li><li>• Supports forced deregistration of functional numbers.</li><li>• Supports deregistration of functional numbers upon power-off.</li><li>• Supports the China Region numbering plan.</li></ul>  |
| Folders            | <ul style="list-style-type: none"><li>• Image folder: Stores downloaded images.</li><li>• Ringtone folder: Stores downloaded ringtone.</li><li>• Music folder: Stores downloaded music.</li><li>• Others: Store other files.</li></ul>  |
| Shortcut keys      | <ul style="list-style-type: none"><li>• Provides four customizable navigation keys as shortcut keys for different functions.</li><li>• Supports an emergency number shortcut key.</li><li>• Supports a PTT call shortcut key.</li></ul>   |
| SMS                | <ul style="list-style-type: none"><li>• Supports text message sending and receiving and message template editing.</li><li>• Supports a storage of up to 200 text messages in onboard phone storage including inbox, outbox, and draft box messages.</li><li>• Supports setting a signature to append to text messages.</li></ul>  |



| Feature                | Description   |
|------------------------|---|
|                        | <ul style="list-style-type: none"> <li>• Supports voice mail.</li> <li>• Supports cell broadcast and configuration.</li> </ul>  |
| Contacts               | <ul style="list-style-type: none"> <li>• Supports up to 200 contacts in onboard phone storage.</li> <li>• Supports copying contacts between onboard phone storage and the SIM card.</li> <li>• Supports speed dialing.</li> </ul> |
| Call log               | <ul style="list-style-type: none"> <li>• Stores 20 missed calls.</li> <li>• Stores 20 answered calls.</li> <li>• Stores 20 outgoing calls.</li> </ul>   |
| Memory card            | Supports a microSD card of up to 2 GB.  |
| Profiles               | Supports general, silent, meeting, outdoor, and headset modes   |
| Applications           | Provides multiple applications, such as alarm, calendar, and calculator.  |
| Supplementary services | Supports other services, such as call prioritization, call blocking, call waiting, and call forwarding.   |

## 2.3 Environmental Specifications

Table 2-3 lists the environmental specifications of the R951.

**Table 2-3** Environmental specifications of the R951

| Item                               | Specifications |
|------------------------------------|----------------|
| Operating temperature              | –25°C to +55°C |
| Storage temperature                | –40°C to +70°C |
| Transportation temperature         | –40°C to +70°C |
| Humidity                           | 0%–95% RH      |
| Waterproof and dustproof standards | IP54           |

## 2.4 Performance Specifications

Table 2-4 lists the performance specifications of the R951.

**Table 2-4** Performance specifications of the R951

| Item            | Specifications  |
|-----------------|---|
| Frequency bands | <ul style="list-style-type: none"><li>• GSM900:<br/>Uplink: 876–915 MHz<br/>Downlink: 921–960 MHz</li></ul> |

## 2.5 Product Certifications

The R951 is certified by:

- China Compulsory Certification (CCC)
- Radio Type Approval Certification (China)
- China Railways Production Certification (CRCC)
- Restriction of Hazardous Substances (RoHS)
- Conformité Européenne (CE)

## 2.6 Accessories

Table 2-5 lists the standard accessories of the R951.

**Table 2-5** Standard accessories of the R951

| No. | Item           | Quantity |
|-----|----------------|----------|
| 1   | Travel charger | 1        |
| 2   | Battery        | 1        |
| 3   | User Guide     | 1        |
| 4   | Headset        | 1        |
| 5   | USB cable      | 1        |

Table 2-6 lists the optional accessories of the R951.

Table 2-6 Optional accessories of the R951

| No. | Item           | Quantity |
|-----|----------------|----------|
| 1   | Backup battery | 1        |

# A Acronyms and Abbreviations

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|             |   |
|-------------|---|
| <b>CNID</b> | Calling Number Identification           |
| <b>DCS</b>  | distributed control system              |
| <b>DNIS</b> | Dialed Number Identification Service    |
| <b>GSM</b>  | Global System for Mobile Communications |
| <b>LCD</b>  | liquid crystal display                  |
| <b>PTT</b>  | push-to-talk                            |
| <b>SIM</b>  | Subscriber Identity Module              |
| <b>TFT</b>  | thin film transistor                    |
| <b>VBS</b>  | Voice Broadcast Service                 |
| <b>VGA</b>  | Video Graphics Array                    |
| <b>VGCS</b> | Voice Group Call Service                |