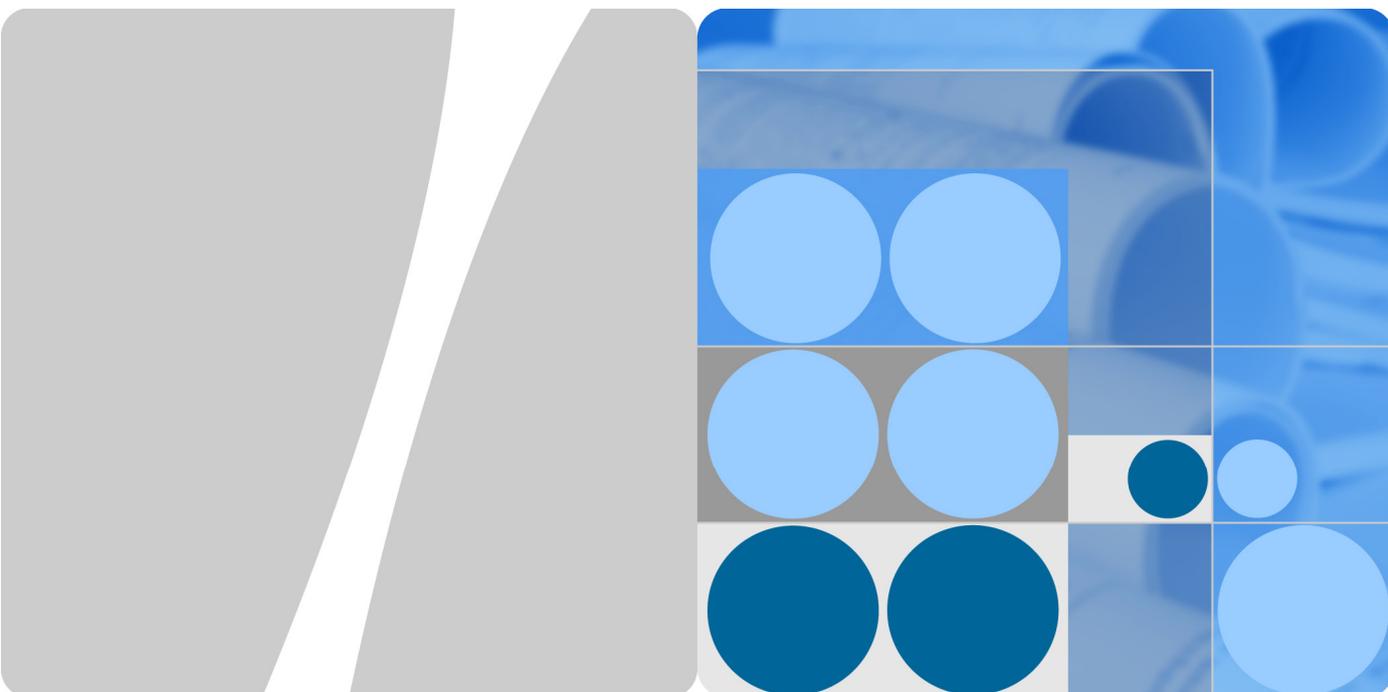


Product Description



HUAWEI E5338 Mobile WiFi
V200R001

Issue 01
Date 2014-07-18

HUAWEI TECHNOLOGIES CO., LTD.



Huawei Technologies Co., Ltd. provides customers with comprehensive technical support and service. Please feel free to contact our local office or company headquarters.

Huawei Technologies Co., Ltd.

Address: Huawei Industrial Base
Bantian, Longgang
Shenzhen 518129
People's Republic of China

Website: <http://consumer.huawei.com/en/>

Copyright © Huawei Technologies Co., Ltd. 2014. All rights reserved.

No part of this document may be reproduced or transmitted in any form or by any means without prior written consent of Huawei Technologies Co., Ltd.

Trademarks and Permissions



and other Huawei trademarks are trademarks of Huawei Technologies Co., Ltd.

All other trademarks and trade names mentioned in this document are the property of their respective holders.

Notice

The information in this document is subject to change without notice. Every effort has been made in the preparation of this document to ensure accuracy of the contents, but all statements, information, and recommendations in this document do not constitute a warranty of any kind, express or implied.

About This Document

Summary

This document provides information about the major functions, supported services and system architecture.

The following table lists the contents of this document.

Chapter	Details
1 Overview	The supported network modes, basic services and functions, and the appearance of the product.
2 Features	The supported features and technical specifications of the product.
3 Services and Applications	The services and applications of the product.
4 System Architecture	The architecture of the product.
5 Packing List	The items contained in the package of the product.

History

Issue	Details	Date
01	First release.	2014-07-18

Contents

1 Overview	6
1.1 Brief Introduction	6
1.2 Optional Features.....	7
2 Features	8
2.1 Main Features	8
2.2 Technical Specifications	9
2.2.1 Hardware	9
2.2.2 Software.....	11
3 Services and Applications	13
3.1 Data Service.....	13
3.1.1 Wireless Modem.....	13
3.1.2 USB Modem	14
3.1.3 3G/Wi-Fi Auto Offload.....	14
3.2 SMS.....	15
3.3 Connecting an Android Device to the E5338 Using a 2D Barcode.....	15
4 System Architecture	16
4.1 System Architecture	16
4.2 Functional Modules	17
5 Packing List	18

1 Overview

1.1 Brief Introduction

HUAWEI E5338 Mobile WiFi (hereinafter referred to as the E5338) is a high-speed packet access mobile hotspot. It is a multi-mode wireless terminal for SOHO (Small Office and Home Office) and business professionals.

The E5338 supports the following standards:

- High Speed Packet Access Plus (HSPA+)
- High Speed Uplink Packet Access (HSUPA)
- High Speed Downlink Packet Access (HSDPA)
- Universal Mobile Telecommunications System (UMTS)
- Enhanced Data rates for Global Evolution (EDGE)
- General Packet Radio Service (GPRS)
- Global System for Mobile communications (GSM)

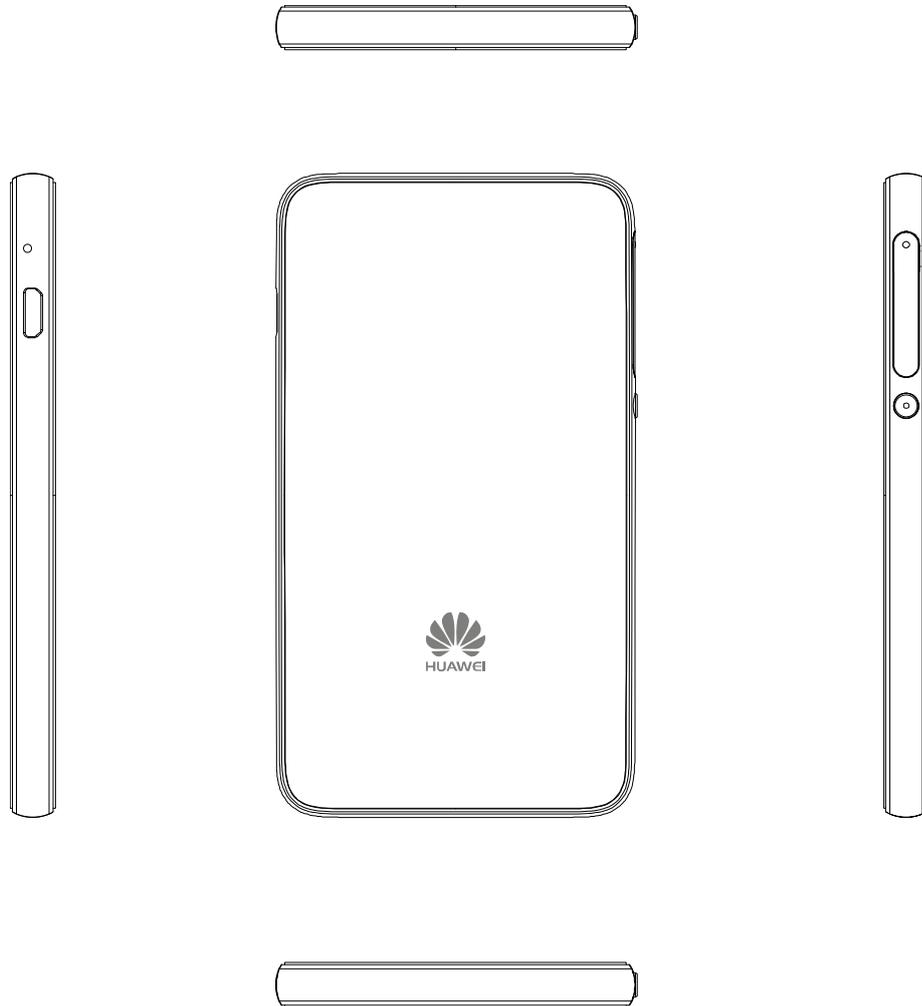
The E5338 provides the following services:

- HSPA+ packet data service of up to 21.6 Mbit/s
- HSPA (HSUPA/HSDPA)/UMTS packet data service of up to 14.4 Mbit/s
- EDGE/GPRS packet data service of up to 236.8 kbit/s
- UMTS/GSM Short Message Service (SMS)

You can connect the E5338 with the USB interface of a computer, or connect the E5338 with the Wi-Fi. In the service area of the HSPA+/HSPA/UMTS/EDGE/GPRS/GSM network, you can surf the Internet and send/receive messages/emails cordlessly. The E5338 is fast, reliable, and easy to operate. Thus, mobile users can experience many new features and services with the E5338. These features and services will enable a large number of users to use the E5338 and the average revenue per user (ARPU) of operators will increase substantially

Figure 1-1 shows the appearance of the E5338.

Figure 1-1 Appearance



1.2 Optional Features

Optional features refer to features that are not supported by the standard version or are disabled by default. These features can be customized according to operator or customer requirements. The E5338's optional features are as follows:

IPv6 /IPv4 dual stack.

2 Features

2.1 Main Features

The E5338 mainly supports the following features:

- HSPA+ (DL) data service of up to 21.6 Mbit/s
- HSDPA (DL) data service of up to 14.4 Mbit/s
- HSUPA (UL) data service of up to 5.76 Mbit/s
- UMTS data service of up to 384 kbit/s
- EDGE data service of up to 236.8 kbit/s
- GPRS data service of up to 85.6 kbit/s
- PS domain data service based on UMTS and GSM
- SMS based on CS/PS domain of GSM and UMTS
- Wi-Fi
- Slim body
- Five-second fast boot
- Support for HUAWEI Mobile WiFi App
- Press and Play
- 3G/Wi-Fi auto offload
- IPv6 /IPv4 dual stack (optional)
- Built-in DHCP Server, DNS RELAY and NAT
- Online software upgrade
- Traffic statistic
- Standard Micro USB interface
- HiLink features (Driverless, Zero installation)
- LED indicators
- Built-in UMTS and WLAN high gain antenna
- Windows XP SP3, Windows Vista SP1/SP2, Windows 7, Windows 8, Windows 8.1 (does not support Windows RT), MAC OS X 10.7, 10.8 and 10.9 with latest upgrades

2.2 Technical Specifications

2.2.1 Hardware

Table 2-1 lists the hardware specifications.

Table 2-1 Hardware specifications

Item	Specifications	
Technical standard	WAN: HSPA+/HSPA/UMTS/EDGE/GPRS/GSM	
	WLAN: IEEE 802.11b/g/n	
Operating frequency	HSPA+/HSPA/UMTS: B1(2100)/B2(1900)/B4(AWS)/B5(850)/B8(900) MHz	
	EDGE/GPRS/GSM: 1900/1800/900/850 MHz	
	WLAN: 2.4 GHz	
Internal memory	128 MB Flash, 64 MB Memory	
Maximum transmitter power	UMTS: 24 (+1/-3) dBm	
	WLAN	802.11b: 14 (+/-3) dBm
		802.11g: 11 (+/-3) dBm
		802.11n: 9 (+/-3) dBm
Receiver sensitivity	UMTS: Confirm to 3GPP Requirements	
	WLAN 802.11b	-76 dBm@11 Mbit/s
		-82 dBm@1 Mbit/s
	WLAN 802.11g: -65 dBm@54 Mbit/s	
	WLAN 802.11n: -64 dBm@65 Mbit/s	
WLAN speed	802.11b: Up to 11 Mbit/s	
	802.11g: Up to 54 Mbit/s	
	802.11n: Support MCS0–MCS7; Up to 72.2 Mbit/s.	
Maximum power consumption	3.5 W	
Power supply	AC: 100–240 V	
	DC: 5 V, 1 A	
Battery	Type: Li (rechargeable, irremovable)	
	Capacity: 3.7 V, 1500 mAh	

Item	Specifications	
	Maximum working time: 6 hours (depending on the network)	
	Maximum standby time: 300 hours (depending on the network)	
External interfaces	USB interface: Micro USB	
	SIM card interface: standard 6-pin micro SIM card interface	
Indicators	Signal	Green: Strong signal
		Orange: Weak signal
		Red: No signal
	Wi-Fi	Green: Wi-Fi turned on
		Blue: Connected to WLAN
	Battery	Green: Sufficient battery
		Blinking green: Charging the battery
		Red: Low battery
	Roaming	Green: Roaming
	Power	Blinks slowly: The Mobile WiFi enters the standby mode
Button	Power switch, Reset switch	
Antenna	<ul style="list-style-type: none"> • Built-in GSM/UMTS main diversity antenna • Built-in UMTS diversity antenna • Built-in WLAN antenna 	
Dimensions (D × W × H)	98.4 mm×54.5 mm×6.8 mm	
Weight	about 67 g (including the battery)	
Temperature	Operating: 0°C to +35°C	
	Storage: -20°C to +60°C	
Humidity	5% to 95% (non-condensing)	

2.2.2 Software

Table 2-2 lists the software specifications.

Table 2-2 software specifications

Item	Description
SMS	<ul style="list-style-type: none"> • Writing/Sending/Receiving • Sending/Receiving extra-long messages • Storage: Up to 500 messages can be saved in the internal memory of the E5338. • New message prompt
Network connection setup	<ul style="list-style-type: none"> • APN management: create, delete and edit. • Set up network connection
WLAN setup	<ul style="list-style-type: none"> • SSID broadcasting and hiding • Open system and shared key authentication • ASCII and HEX keys • 64/128-bit WEP encryption • 256-bit WPA-PSK and WPA2-PSK encryption • AES encryption algorithm • TKIP and AES integrated encryption algorithm • Automatic adjustment of ratios • STA management • Turn off Wi-Fi automatically • WLAN MAC filter
Firewall setup	<ul style="list-style-type: none"> • Firewall Switch • LAN IP Filter • Virtual Server • DMZ Service • UPnP Service • WAN Ping block
NAT setup	<ul style="list-style-type: none"> • CONE NAT • Symmetric NAT • VPN passthrough
DHCP setup	<ul style="list-style-type: none"> • DHCP server enabling and disabling • Address pool of the DHCP server setup • DHCP lease time setup
Software installation	Automatic installation (PnP)
3G/Wi-Fi auto offload	<ul style="list-style-type: none"> • Accessing to WAN via 3G or Wi-Fi • Automatic offload between 3G and Wi-Fi

Item	Description
IPv6/IPv4 dual stack (optional)	<ul style="list-style-type: none"> • DHCPv6/v4 server and client • DNSv6/v4 server and client • Display IPv6/v4 WAN address
Other	Network connection settings: <ul style="list-style-type: none"> • Automatic network selection and registration • Manual network selection and registration
	Network status display: signal, operator name, system mode, and so on.
	Selection of network connection types, for example: <ul style="list-style-type: none"> • 3G Only • 2G Only • Auto
	PIN management: activate/deactivate PIN, PIN lock, changing PIN, unblocking by using the PUK.
System requirement	<ul style="list-style-type: none"> • Windows XP SP3, Windows Vista SP1/SP2, Windows 7, Windows 8, Windows 8.1 (does not support Windows RT) • MAC OS X 10.7, 10.8 and 10.9 with latest upgrades • Your computer's hardware system should meet or exceed the recommended system requirements for the installed version of OS

3 Services and Applications

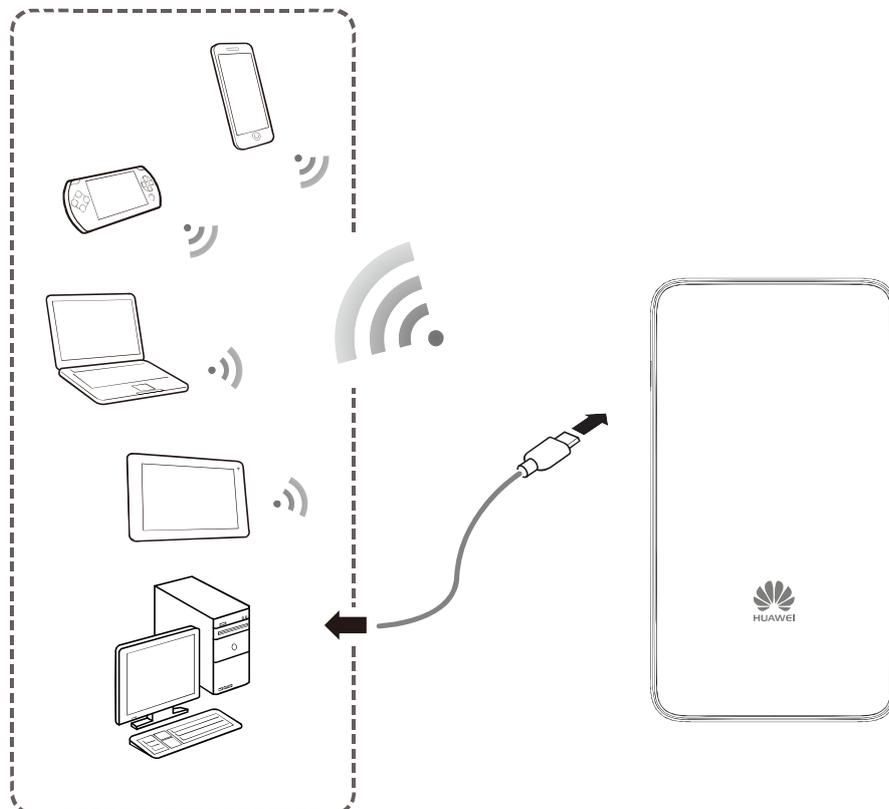
3.1 Data Service

3.1.1 Wireless Modem

The E5338 can be used as a wireless modem when the Wi-Fi is enabled. You can access the Internet service through setting up the wireless network connection with the E5338.

A maximum of ten wireless users can access the E5338 at the same time. You can set up the WLAN with the access point (AP) function.

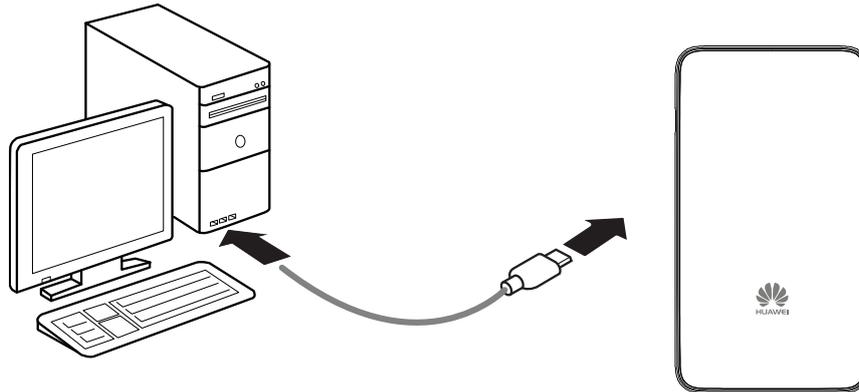
Figure 3-1 Multi-device access via Wi-Fi and USB at the same time



3.1.2 USB Modem

After you connect the E5338 and PC with a USB data cable, the Web page is displayed on the PC desktops automatically. You can directly use the default settings (or configure APN on the E5338 Web page) and set up a network connection. Then you can send or receive E-mail, access the network through wireless connection, and download files through wireless data channels.

Figure 3-2 One-device access via USB

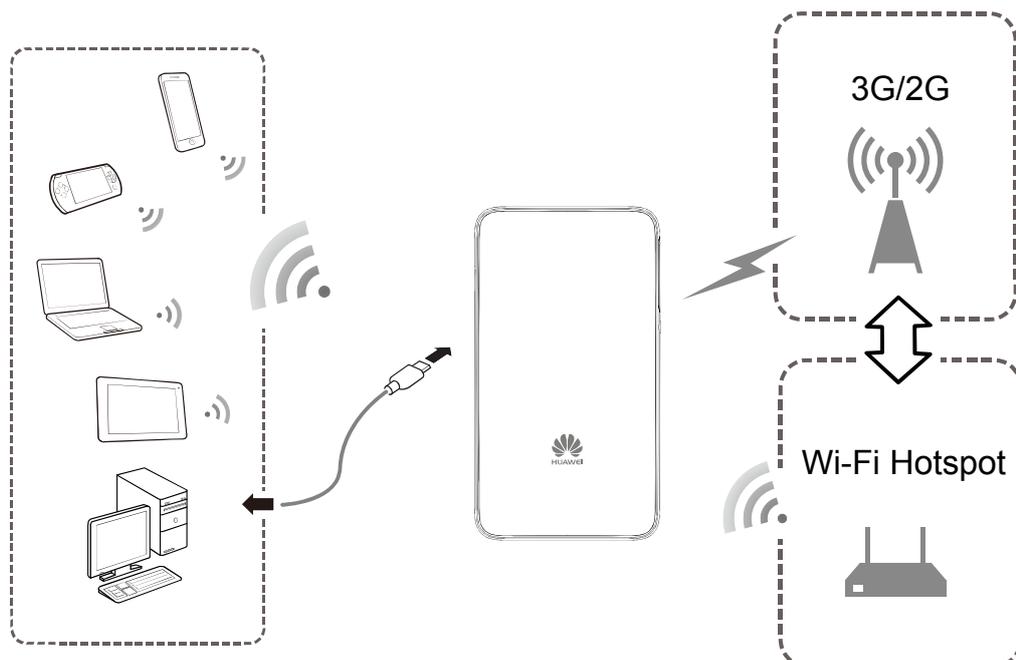


3.1.3 3G/Wi-Fi Auto Offload

The E5338 allows you to access the Internet via 3G or Wi-Fi. When you are using the E5338 in areas with a Wi-Fi hotspot, for example, an airport, a cafe, a hotel, or your home, the E5338 switches to Wi-Fi connection automatically, saving your 3G network traffic fees.

After the function is enabled, a maximum of nine wireless users can access the E5338 at the same time.

Figure 3-3 3G/Wi-Fi auto offload



3.2 SMS

The E5338 supports message writing/sending/receiving. You can manage messages through the Web page, such as an inbox, an outbox and a draft.

3.3 Connecting an Android Device to the E5338 Using a 2D Barcode

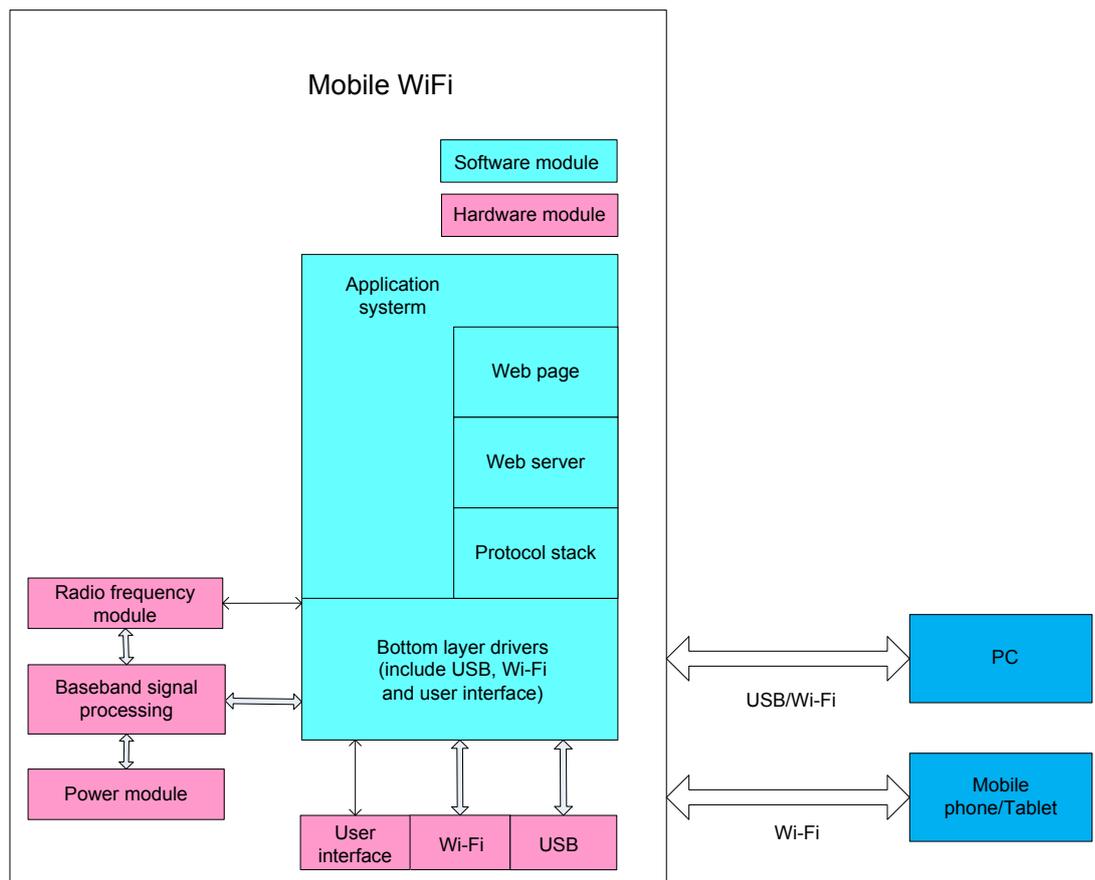
If you are using an Android device and has the HUAWEI Mobile WiFi App installed, you can quickly connect your device to the E5338 to access the Internet by scanning a 2D Barcode on the E5338 label.

4 System Architecture

4.1 System Architecture

Figure 4-1 shows the system architecture.

Figure 4-1 System architecture



4.2 Functional Modules

1. **Radio frequency module:** It sends/receives radio signals and modulates/demodulates the radio frequency (RF) signals and baseband signals.
2. **Baseband signal processing:** It processes HSPA+/HSPA/UMTS/EDGE/GPRS/GSM baseband digital signals, including:
 - Modulating/Demodulating HSPA+/HSPA/UMTS baseband signals
 - Modulating/Demodulating EDGE/GPRS/GSM baseband signals
 - Encoding/Decoding HSPA+/HSPA/UMTS channel
 - Encoding/Decoding EDGE/GPRS/GSM channel
3. **Bottom layer driver:** It drives peripherals, including USB device, Wi-Fi device, indicator, button and SIM card.
4. **Protocol stack system:** It processes protocols of HSPA+/HSPA/UMTS/EDGE/GPRS/GSM and TCP/IP.
5. **Application system:** It provides management system, including SMS, PS domain service, Wi-Fi configuration, network service, Web service and Web page. The user can set management parameters by Web page.
6. **User interface:** It provides human-computer interaction, including indicator and button.

5 Packing List

This chapter describes the items contained in the package of the E5338.

Table 5-1 lists the items contained in the package of the E5338.

Table 5-1 Packing list of the E5338

Item	Quantity	Remarks
Mobile WiFi	1	Standard
Rechargeable Battery (1500 mAh)	1	Standard
USB Cable (17 cm)	1	Standard
Quick Start	1	Standard
Safety Information	1	Standard
Charger	1	Optional
Warranty Card	1	Optional

A Acronyms and Abbreviations

2G	The Second Generation
3G	The Third Generation
AES	Advanced Encryption Standard
APN	access point name
ARPU	average revenue per user
ASCII	American Standard Code for Information Interchange
CS	circuit switched
DHCP	Dynamic Host Configuration Protocol
DMZ	demilitarized zone
DNS	Domain Name Server
EDGE	Enhanced Data Rates for GSM Evolution
GPRS	General Packet Radio Service
GSM	Global System for Mobile Communications
HSPA+	High Speed Packet Access Plus
HSUPA	High Speed Uplink Packet Access
HSDPA	High Speed Downlink Packet Access
IEEE	Institute of Electrical and Electronics Engineers
IP	Internet Protocol
LAN	Local Area Network
LED	Light Emitting Diode
MAC	Medium Access Control
Modem	Modulator Demodulator
NAT	Network Address Translation

OS	Operating System
PC	personal computer
PIN	personal identification number
PS	packet switched
PUK	PIN unblocking key
SIM	subscriber identity module
SMS	short messaging service
SOHO	small office home office
SSID	Service Set Identifier
TKIP	Temporal Key Integrity Protocol
UMTS	Universal Mobile Telecommunications System
UPnP	Universal Plug and Play
USB	Universal Serial Bus
VPN	Virtual Private Network
WAN	wireless area network
WEP	wired equivalent privacy
Wi-Fi	Wireless Fidelity
WLAN	wireless local area network
WPA	Wi-Fi Protected Access