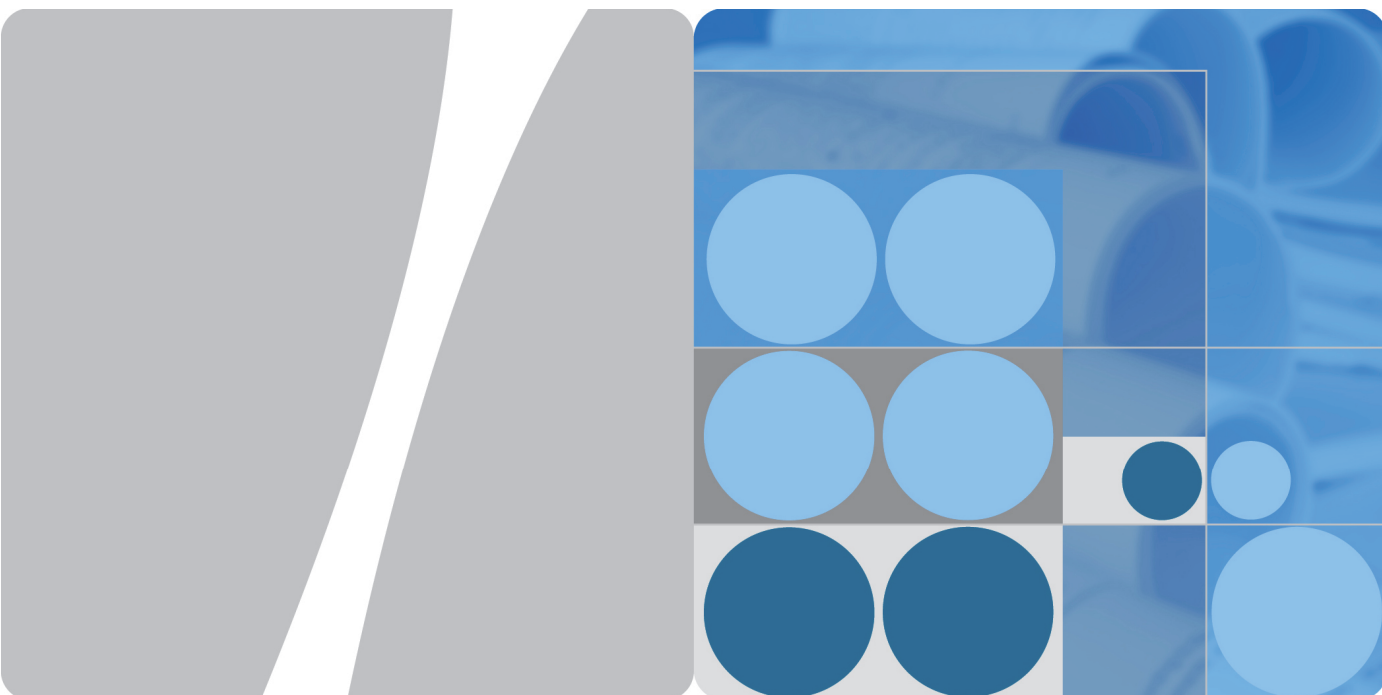


Product Description



E5576-322 Mobile WiFi
V100R001

Issue 02
Date 2020-06-24

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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	Draft.	2020-02-15
02	The second release.	2020-06-24

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1 Overview

1.1 Brief Introduction

E5576-322 Mobile WiFi (hereinafter referred to as the E5576-322) 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 E5576-322 supports the following standards:

- Long Term Evolution (LTE) Frequency Division Duplex (FDD)
- Dual Carrier High Speed Packet Access Plus (DC-HSPA+)
- 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 E5576-322 provides the following services:

- LTE FDD packet data service
- DC-HSPA+ packet data service
- HSPA+/HSPA/UMTS packet data service
- EDGE/GPRS packet data service
- Short Message Service (SMS)

You can connect the E5576-322 with the USB interface of a computer, or connect the E5576-322 with the Wi-Fi. In the service area of the LTE FDD/DC-HSPA+/HSPA+/HSPA/UMTS or EDGE/GPRS/GSM network, you can surf the Internet and send/receive messages/emails cordlessly. The E5576-322 is fast, reliable, and easy to operate. Thus, mobile users can experience many new features and services with the E5576-322. These features and services will enable a large number of users to use the E5576-322 and the average revenue per user (ARPU) of operators will increase substantially.

Figure 1-1 shows the profile of the E5576-322.

Figure 1-1 E5576-322 profile



2 Features

2.1 Main Features

The E5576-322 mainly supports the following features:

- LTE FDD (DL) data service of up to 150 Mbit/s
- LTE FDD (UL) data service of up to 50 Mbit/s
- DC-HSPA+ (DL) data service of up to 43.2 Mbit/s
- 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 LTE/UMTS/GSM
- SMS based on LTE/UMTS/GSM
- Built-in LTE/UMTS/GSM and WLAN high gain antenna
- Wi-Fi 2.4 GHz
- Press and Play
- IPv4v6 dual stack
- Built-in DHCP Server and DNS RELAY
- Online software upgrade
- Traffic statistic
- Standard Micro USB interface
- Windows 7, Windows 8, Windows 8.1(Does not support Windows RT), Win10, Mac OS x 10.9~10.15 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: LTE FDD/DC-HSPA+/HSPA+/HSPA/UMTS/EDGE/GPRS/GSM	
	WLAN: IEEE 802.11b/g/n	
Operating frequency	LTE: B1/B3/B7/B8/B20/B28/B38/B40	
	DC-HSPA+/HSPA+/HSPA/UMTS: B1/B8	
	EDGE/GPRS/GSM: B3/B8	
	WLAN: 2.4GHz (AP channel 5~11, STA channel 5~13)	
Internal memory	128 MB Flash, 128 MB DDR SDRAM	
Maximum transmitter power	LTE: Conform to Power Class 3 Definition	
	UMTS: Conform to Power Class 3 Definition	
	WLAN	802.11b: 14 dBm
		802.11g: 11 dBm
	802.11n: 10 dBm	
Receiver sensitivity	LTE: Conform to 3GPP Requirements	
	UMTS: Conform to 3GPP Requirements	
	WLAN	802.11b: -76 dBm@11 Mbit/s
		802.11g: -65 dBm@54 Mbit/s
	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	HT20: Support MCS0~MCS7; Up to 72.2Mbit/s Support MCS8~MCS15; Up to 144.4Mbit/s HT40: Support MCS0~MCS7; Up to 150Mbit/s Support MCS8~MCS15; Up to 300Mbit/s
Maximum power consumption	3.5 W	
Power supply	AC: 100–240 V	

Item	Specifications
	DC: 5 V, 1 A
Battery	Type: Li-ion (rechargeable)
	Capacity: 3.8 V, 1500 mAh
	Maximum working time: 6 hours (depending on the network)
	Maximum standby time: 350 hours (depending on the network)
External interfaces	Micro USB interface
	Standard 6-pin SIM card interface
Indicators	LED indicators: Signal, Battery, SMS
Key-press	Power switch, RESET switch
Antenna	Built-in LTE/UMTS/GSM main antenna
	Built-in LTE/UMTS diversity antenna
	Built-in WLAN antenna, 2*2 MIMO
Dimensions (W × D × H)	96.8 mm×58.0 mm×12.8 mm
Weight	about 75 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 E5576-322.
Network connection setup	<ul style="list-style-type: none"> • APN edit. • Set up network connection
WLAN setup	<ul style="list-style-type: none"> • SSID broadcasting and hiding • None (Open), WEP, WPA2-PSK, and WPA/WPA2-PSK encryption Automatic adjustment of ratios • Display STA status • Turn off Wi-Fi automatically • WLAN MAC filter
NAT setup	<ul style="list-style-type: none"> • CONE NAT • Symmetric NAT • ALG
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
IPv4v6 dual stack	<ul style="list-style-type: none"> • DHCPv4v6 server and client • DNSv4v6 server and client • Display IPv4v6 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.
	LTE network switch: turn on/off LTE network
	PIN management: activate/deactivate PIN, PIN lock, changing PIN, unblocking by using the PUK.

Item	Description
System requirement	<ul style="list-style-type: none">• Windows 7, Windows 8, Windows 8.1, Windows 10 (does not support Windows RT)• MAC OS X 10.9~10.15 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

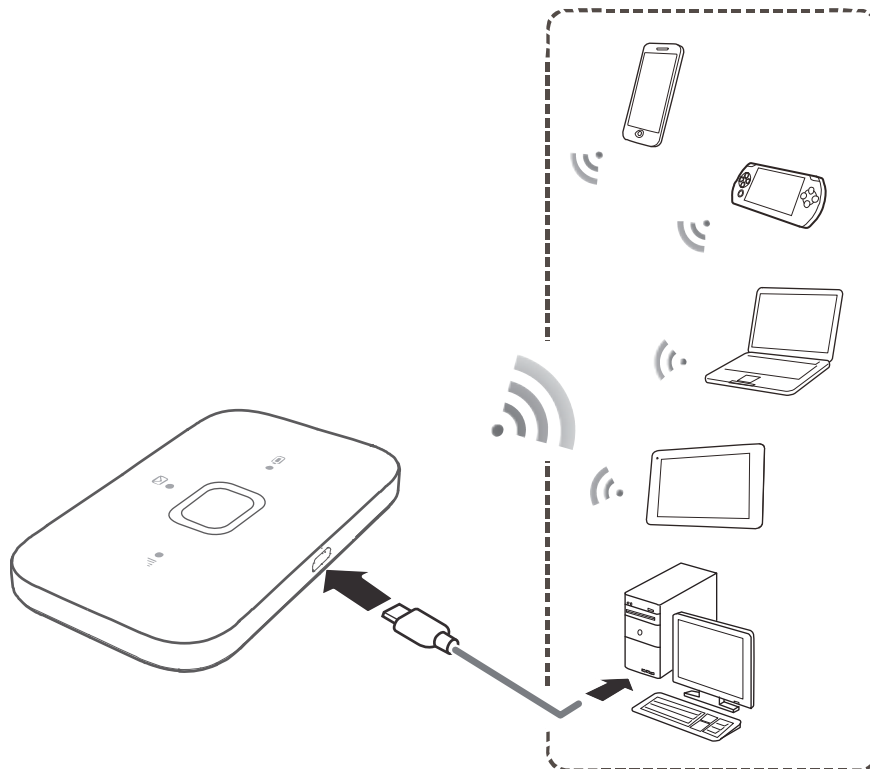
3.1 Data Service

3.1.1 Wireless Modem

The E5576-322 can be used as a wireless modem when the Wi-Fi is enabled. You can directly use the default settings (or configure APN on the E5576-322 Web page) and set up a wireless network connection. Then you can access the Internet.

A maximum of 16 wireless users can access the E5576-322 at the same time. You can set up the WLAN with the access point (AP) function.

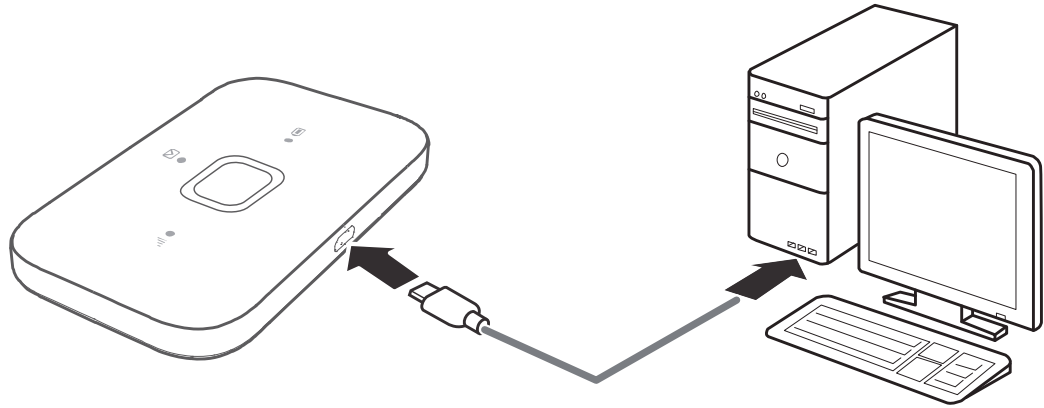
Figure 3-1 Multi-device access via Wi-Fi and USB at the same time



3.1.2 USB Modem

After you connect the E5576-322 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 E5576-322 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



3.2 SMS

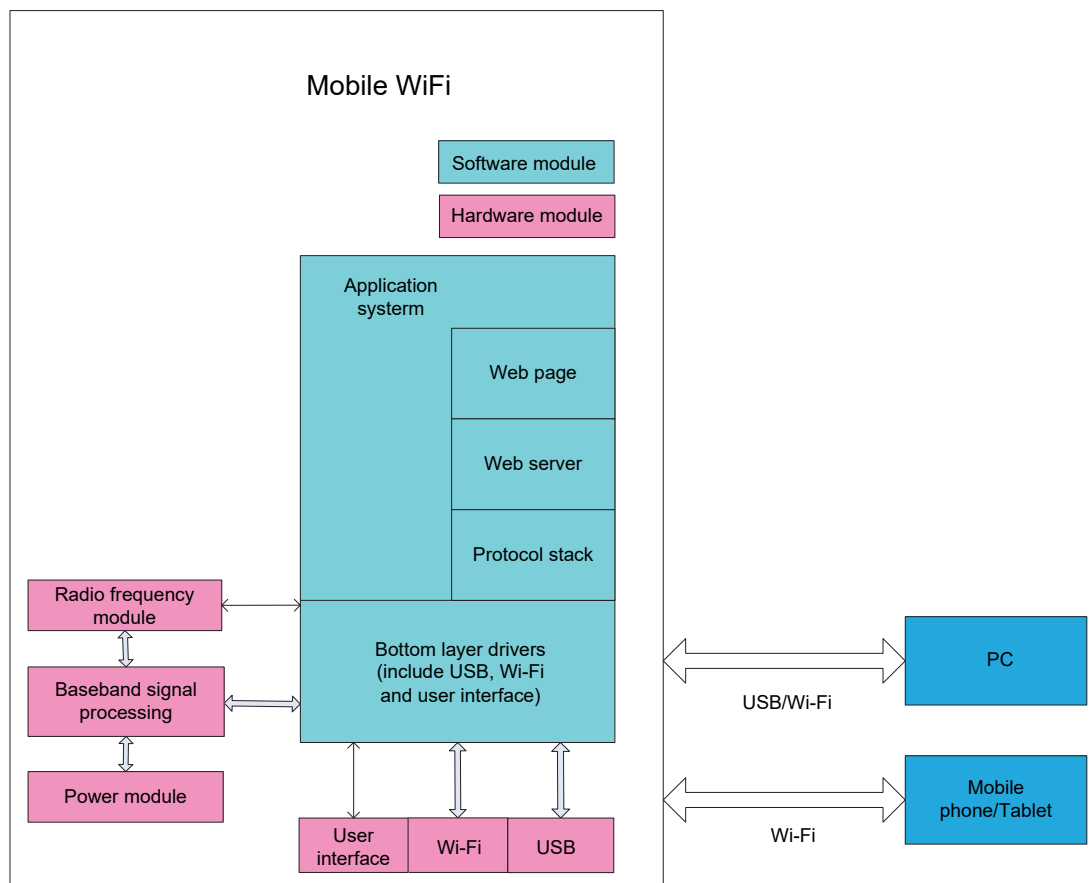
The E5576-322 supports message writing/sending/receiving. You can manage messages through the Web page, such as an inbox, an outbox and a draft.

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 LTE FDD/DC-HSPA+/HSPA+/UMTS/EDGE/GPRS/GSM baseband digital signals, including:
 - Modulating/Demodulating LTE FDD/DC-HSPA+/HSPA+/UMTS/EDGE/GPRS/GSM baseband signals
 - Encoding/Decoding LTE FDD/DC-HSPA+/HSPA+/UMTS/EDGE/GPRS/GSM channel
3. **Bottom layer driver:** It drives peripherals, including a USB device, Wi-Fi devices, indicators, buttons and a SIM card.
4. **Protocol stack system:** It processes protocols of LTE FDD/DC-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 indicators and buttons.

5 Packing List

This chapter describes the items contained in the package of the E5576-322.

Table 5-1 lists the items contained in the package of the E5576-322.

Table 5-1 Packing list of the E5576-322

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

A Acronyms and Abbreviations

3G	The Third Generation
AES	Advanced Encryption Standard
ALG	application level gateway
APN	access point name
ARPU	average revenue per user
ASCII	American Standard Code for Information Interchange
DHCP	Dynamic Host Configuration Protocol
DMZ	demilitarized zone
DNS	Domain Name Server
EDGE	Enhanced Data Rates for GSM Evolution
FDD	frequency division duplex
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
LCD	Liquid Crystal Display
LTE	Long Term Evolution
MAC	Medium Access Control
Modem	Modulator Demodulator
NAT	Network Address Translation

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