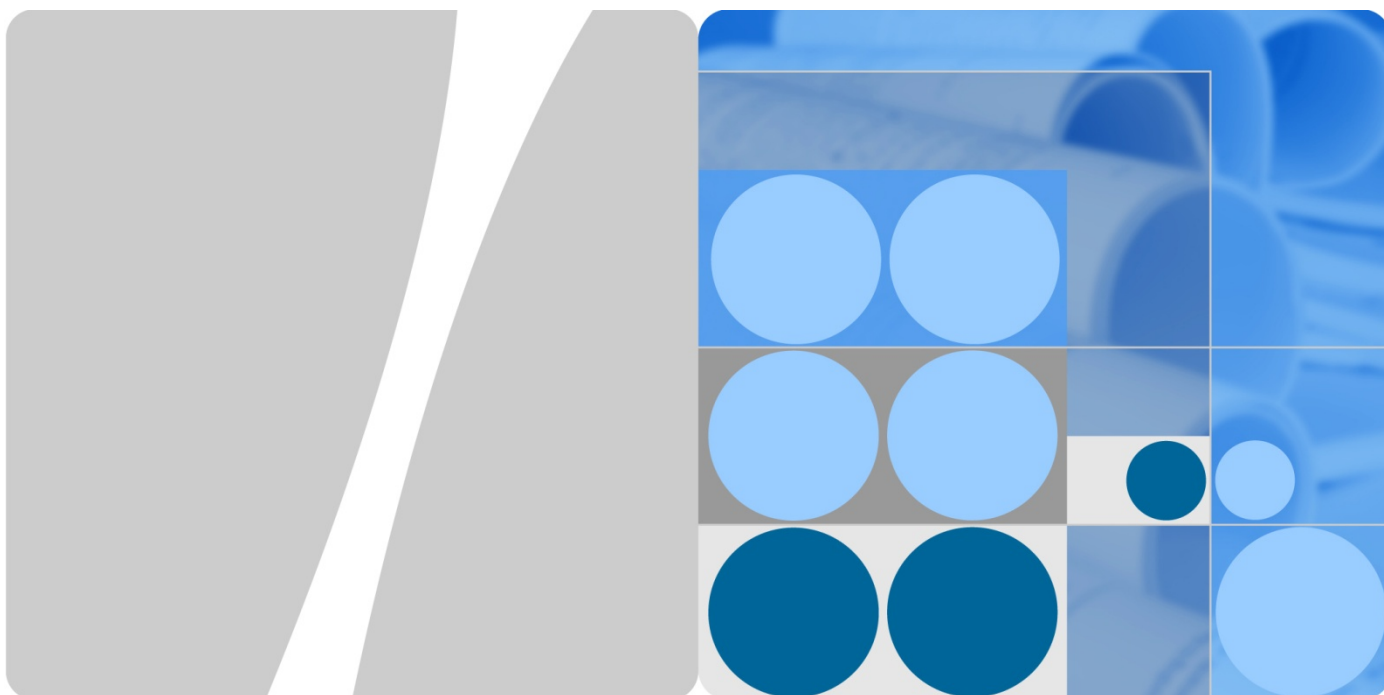


# Product Description



## R207 Mobile WiFi Product Description V100R001

**Issue** 02  
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## About This Document

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### 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. | 2014-04-02 |
| 02    | recension      | 2014-04-21 |

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# 1 Overview

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## 1.1 Brief Introduction

R207 Mobile WiFi (hereinafter referred to as the R207) 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 R207 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 R207 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 R207 with the USB interface of a computer, or connect the R207 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 R207 is fast, reliable, and easy to operate. Thus, mobile users can experience many new features and services with the R207. These features and services will enable a large number of users to use the R207 and the average revenue per user (ARPU) of operators will increase substantially.

Shows the appearance of the R207.



# 2 Features

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## 2.1 Main Features

The R207 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
- Press and Play
- IPv6 /IPv4 dual stack (optional)
- Built-in DHCP Server, DNS RELAY and NAT
- Traffic statistic
- Standard Micro USB interface
- HiLink features (Driverless, Zero installation)
- LED indicators
- Built-in UMTS and WLAN high gain antenna
- Windows Vista SP1/SP2, Windows 7, Windows 8 (32 and 64 Bit) (does not support Windows RT), MAC OS X 10.6, 10.7 and 10.8 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: 2100/900MHz                   |                        |
|                           | EDGE/GPRS/GSM: 1900/1800/900/850MHz            |                        |
|                           | WLAN: 2400MHz~2483.5MHz                        |                        |
| 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)                        |                        |
|                           | Capacity: 3.7 V, 1500 mAh                      |                        |

| Item                   | Specifications                                                                                                                                                     |                                                        |
|------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------|
|                        | Maximum working time: 5–6 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 SIM card interface                                                                                                              |                                                        |
| Indicators             | Signal                                                                                                                                                             | Green: Strong signal                                   |
|                        |                                                                                                                                                                    | Orange: Weak signal                                    |
|                        |                                                                                                                                                                    | Red: No signal                                         |
|                        | Wi-Fi                                                                                                                                                              | Green: Wi-Fi turned on                                 |
|                        | Battery                                                                                                                                                            | Green: Sufficient battery                              |
|                        |                                                                                                                                                                    | Blinking green: Charging the battery                   |
|                        |                                                                                                                                                                    | Red: Low battery                                       |
|                        | SMS                                                                                                                                                                | Green: New message                                     |
|                        |                                                                                                                                                                    | Blinking green: Inbox full                             |
|                        | Power                                                                                                                                                              | Blinks slowly: The Mobile WiFi enters the standby mode |
| Button                 | Power switch, Reset switch                                                                                                                                         |                                                        |
| Antenna                | <ul style="list-style-type: none"> <li>Built-in GSM/UMTS main diversity antenna</li> <li>Built-in UMTS diversity antenna</li> <li>Built-in WLAN antenna</li> </ul> |                                                        |
| Dimensions (D × W × H) | 60.0 mm×92.8 mm×14.0 mm                                                                                                                                            |                                                        |
| Weight                 | about 74 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"><li>• Writing/Sending/Receiving</li><li>• Sending/Receiving extra-long messages</li><li>• Storage: Up to 500 messages can be saved in the internal memory of the R207.</li><li>• New message prompt</li></ul>                                                                                                                                                                                               |
| Network connection setup        | <ul style="list-style-type: none"><li>• APN management: create, delete and edit.</li><li>• Set up network connection</li></ul>                                                                                                                                                                                                                                                                                                                |
| WLAN setup                      | <ul style="list-style-type: none"><li>• SSID broadcasting and hiding</li><li>• Open system and shared key authentication</li><li>• ASCII and HEX keys</li><li>• 64/128-bit WEP encryption</li><li>• 256-bit WPA2-PSK encryption</li><li>• AES encryption algorithm</li><li>• TKIP and AES integrated encryption algorithm</li><li>• Automatic adjustment of ratios</li><li>• Turn off Wi-Fi automatically</li><li>• WLAN MAC filter</li></ul> |
| Firewall setup                  | <ul style="list-style-type: none"><li>• Firewall Switch</li><li>• LAN IP Filter</li><li>• Virtual Server</li><li>• DMZ Service</li><li>• UPnP Service</li><li>• WAN Ping block</li></ul>                                                                                                                                                                                                                                                      |
| NAT setup                       | <ul style="list-style-type: none"><li>• CONE NAT</li><li>• Symmetric NAT</li><li>• VPN passthrough</li></ul>                                                                                                                                                                                                                                                                                                                                  |
| DHCP setup                      | <ul style="list-style-type: none"><li>• DHCP server enabling and disabling</li><li>• Address pool of the DHCP server setup</li><li>• DHCP lease time setup</li></ul>                                                                                                                                                                                                                                                                          |
| Software installation           | Automatic installation (PnP)                                                                                                                                                                                                                                                                                                                                                                                                                  |
| IPv6/IPv4 dual stack (optional) | <ul style="list-style-type: none"><li>• DHCPv6/v4 server and client</li><li>• DNSv6/v4 server and client</li><li>• Display IPv6/v4 WAN address</li></ul>                                                                                                                                                                                                                                                                                      |

| Item               | Description                                                                                                                                                                                                                                                                                                                                 |
|--------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Other              | Network connection settings: <ul style="list-style-type: none"><li>• Automatic network selection and registration</li><li>• Manual network selection and registration</li></ul>                                                                                                                                                             |
|                    | Network status display: signal, operator name, system mode, and so on.                                                                                                                                                                                                                                                                      |
|                    | Selection of network connection types, for example: <ul style="list-style-type: none"><li>• 3G Only</li><li>• 2G Only</li><li>• Auto</li></ul>                                                                                                                                                                                              |
|                    | PIN management: activate/deactivate PIN, PIN lock, changing PIN, unblocking by using the PUK.                                                                                                                                                                                                                                               |
| System requirement | <ul style="list-style-type: none"><li>• Windows Vista SP1/SP2, Windows 7, Windows 8 (32 and 64 Bit) (does not support Windows RT)</li><li>• Mac OS X 10.6, 10.7 and 10.8 with latest upgrades</li><li>• Your computer's hardware system should meet or exceed the recommended system requirements for the installed version of OS</li></ul> |

# 3 Services and Applications

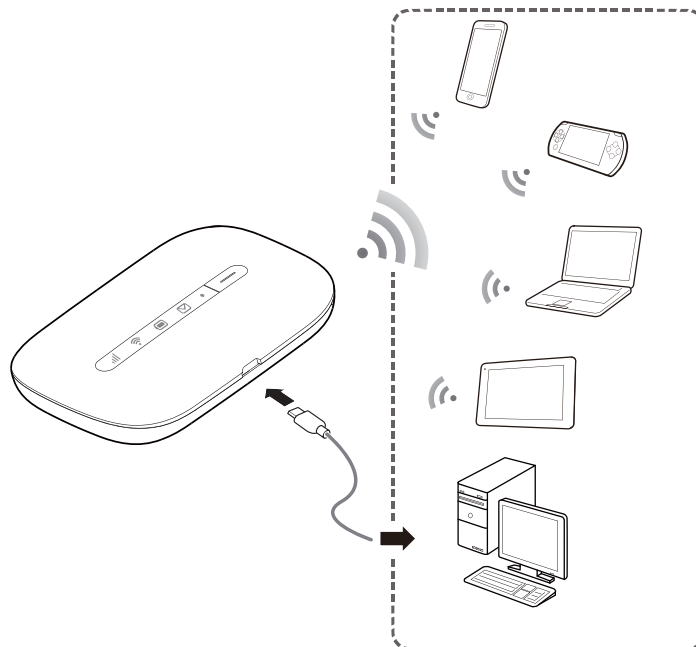
## 3.1 Data Service

### 3.1.1 Wireless Modem

The R207 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 R207.

A maximum of ten wireless users can access the R207 at the same time. You can set up the WLAN with the access point (AP) function.

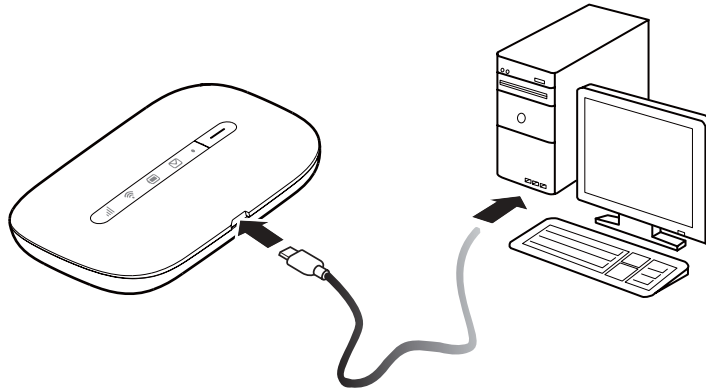
**Figure 3-1** Multi-device access via Wi-Fi and USB at the same time



### 3.1.2 USB Modem

After you connect the R207 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 R207 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

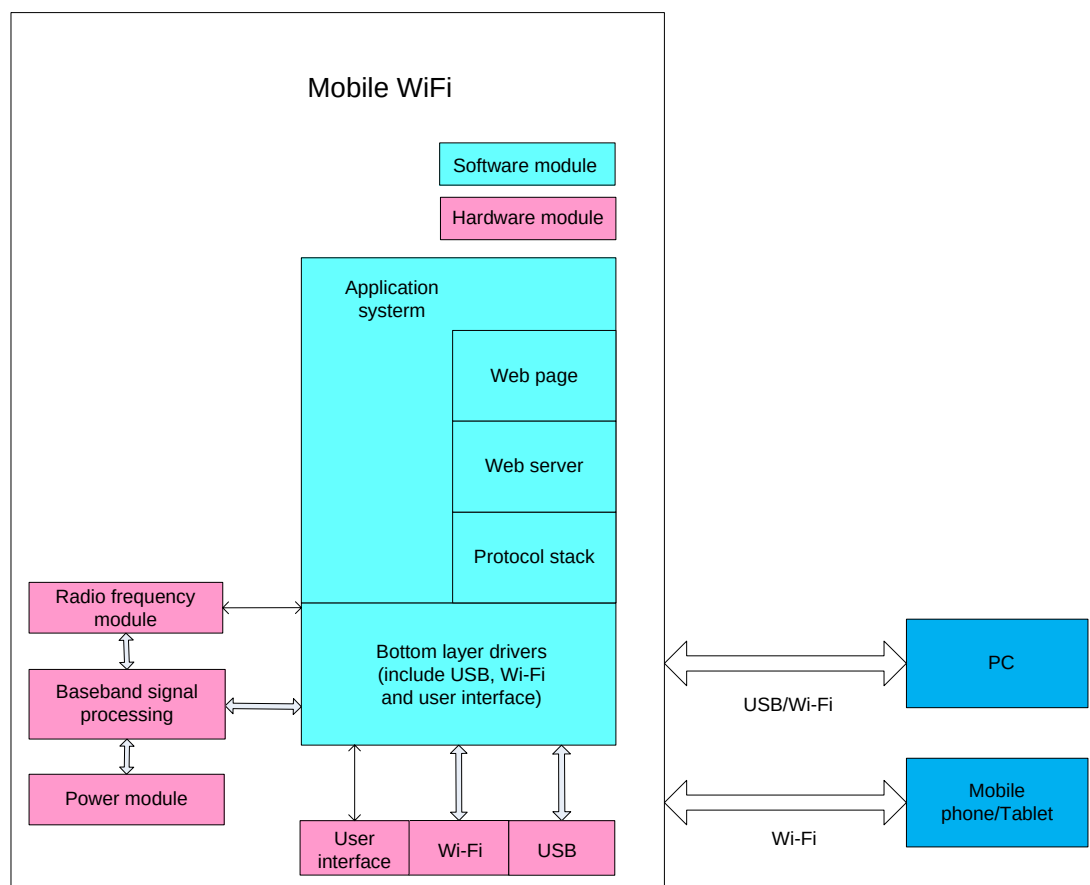
The R207 supports message writing/sending/receiving. You can manage messages through the Web page, such as an inbox, an outbox and a draft.

# 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 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 R207.

Table 5-1 lists the items contained in the package of the R207.

**Table 5-1** Packing list of the R207

| Item                            | Quantity | Remarks  |
|---------------------------------|----------|----------|
| Mobile WiFi                     | 1        | Standard |
| Rechargeable Battery (1500 mAh) | 1        | Standard |
| USB Cable (120cm)               | 1        | Standard |
| Quick Start                     | 1        | Standard |
| Safety Information              | 1        | Standard |
| Charger                         | 1        | Standard |
| Warranty Card                   | 1        | Optional |

# A Acronyms and Abbreviations

---

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



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