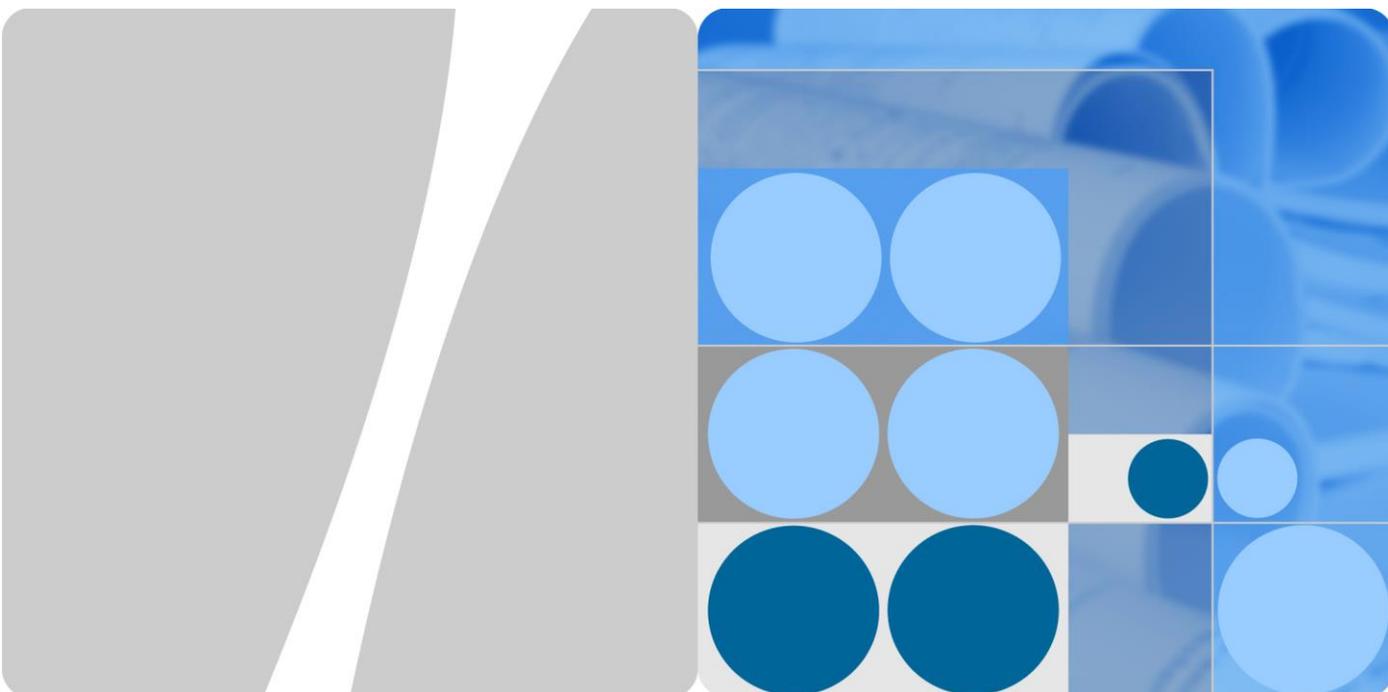


Product Description



HUAWEI E6878-370 5G Mobile WiFi
V100R001

Version 01
Date 2019-11-21

HUAWEI TECHNOLOGIES CO., LTD.



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About This Document

Summary

This document introduces the major functions, supported services, and system architecture of the HUAWEI E6878-370 5G Mobile WiFi.

The following table lists the contents of this document.

Chapter	Details
1 Overview	Supported network modes, basic services and functions, and the appearance of the product
2 Features	Major features and technical specifications
3 Services and Applications	Supported services
4 System Architecture	System architecture
5 Packaging Box Items	Items contained in the packaging box

History

Version	Details	Date
01	First release	2019-11-21

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1 Overview

1.1 Introduction

HUAWEI E6878-370 5G Mobile WiFi (hereinafter referred to as the E6878-370) is a high-speed packet access mobile hotspot. It is designed primarily for SOHO and business environments, as well as frequent travelers, and enables users to enjoy 5G connection without needing to switch phones.

The E6878-370 supports multiple network modes to provide the packet data service and short message service (SMS). The E6878-370 can be connected to the PC through the USB port to support high-speed data transfer via a USB 3.0 cable, or be connected to multiple wireless devices over a Wi-Fi network. In the service area of the network, the E6878-370 allows you to surf the Internet and send/receive messages/emails, providing you with a fast, reliable, and convenient user experience. It also helps carriers improve their average revenue per user (ARPU).

Figure 1-1 shows the appearance of the E6878-370.

Figure 1-1 E6878-370 appearance (for reference only)





1.2 Optional Features

Optional features refer to features that are not supported on the standard version. These features can be customized according to carrier or customer requirements. The E6878-370's optional features include the following:

- SIM lock

2 Features

2.1 Main Features

The E6878-370 features:

- LTE FDD Cat4 (DL) packet data service of up to 150 Mbps
- LTE FDD Cat6 (DL) packet data service of up to 300 Mbps
- LTE FDD Cat5 (UL) packet data service of up to 75 Mbps
- LTE TDD Cat4 (DL) packet data service of up to 112 Mbps
- LTE TDD Cat6 (DL) packet data service of up to 224 Mbps
- LTE TDD (UL) packet data service of up to 10 Mbps
- 5G (UL) packet data services with a maximum rate of 180 Mbps (NSA)/225 Mbps (SA) (if the downlink-uplink ratio is 8:2; The SA capability depends on the available network and software version and can be put into commercial use only after the testing on the live network is passed.)
- 5G (UL) packet data services with a maximum rate of 1.65 Gbps (NSA)/1.65 Gbps (if the downlink-uplink ratio is 8:2; The SA capability depends on the available network and software version and can be put into commercial use only after the testing on the live network is passed.)
- SMS (SMS over SGs)
- Built-in 5G/LTE and Wi-Fi antenna
- 2.4 GHz and 5 GHz Wi-Fi (non-simultaneous)
- 5G/LTE/Wi-Fi auto offload
- Menu display
- Compatible with the HUAWEI AI Life app (Android) and HUAWEI SmartHome app (iOS)
- IPv4v6 dual stack
- Built-in DHCP Server, DNS RELAY, and NAT
- Online software upgrade
- Traffic statistics
- WPS
- 1.45 inch LCD display
- USB Type-C port
- USB Type-A port

- Compatible with Windows 7, Windows 8, Windows 8.1, Windows 10 (excluding Windows RT), MAC OS X 10.9, 10.10, 10.11 and 10.12 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: 5G NR(NSA&SA)/LTE/3GPP Rel 15(The SA capability depends on the available network and software version and can be put into commercial use only after the testing on the live network is passed.)	
	Wi-Fi/WLAN: IEEE 802.11a/b/g/n/ac	
Operating frequency	5G: n41/ n77/ n78/ n79(4800–4900 MHz) LTE FDD: B1,B3,B5,B7,B8,B20,B28,B32 LTE TDD: B34,B38,B39,B40,B41,B42	
	Wi-Fi/WLAN: 2.4 GHz	
	Wi-Fi/WLAN: 5 GHz	
Transmit power	LTE: Conforms to Power Class 3 Definition	
	5G: Conforms to Power Class 3 Definition	
	Wi-Fi/WLAN 2.4 GHz	802.11b: 14.5 dBm
		802.11g: 14 dBm
		802.11n: 14(20 MHz/40 MHz) dBm
	Wi-Fi/WLAN 5 GHz	802.11a: 14.5 dBm
		802.11ac: 14.5 (20 MHz)/15.5 (40 MHz)/10(80 MHz) dBm
802.11n: 14.5 (20 MHz)/15.5 (40 MHz) dBm		
Note: The value above represents a typical transmit power in Wi-Fi/WLAN mode, and may vary slightly by device.		
Receiver sensitivity	LTE: Conforms to 3GPP	
	5G: Conforms to 3GPP	
	Wi-Fi/WLAN 2.4 GHz	802.11b: -85 dBm@11 Mbps
		802.11g: -72 dBm@54 Mbps
802.11n: -70 dBm@65 Mbps		

Item	Specifications	
	Wi-Fi/WLAN 5 GHz	802.11a: -75 dBm@54 Mbps
		802.11n: -73 dBm@65 Mbps
		802.11ac: -64 dBm@180 Mbps
	Note: The sensitivity data above represent the typical values, and may vary slightly by device.	
Wi-Fi/WLAN speed	802.11a: Up to 54 Mbps	
	802.11b: Up to 11 Mbps	
	802.11g: Up to 54 Mbps	
	802.11n	HT20: Supports MCS0–MCS7; Up to 72.2 Mbps. Supports MCS8–MCS15; Up to 144.4 Mbps. HT40: Supports MCS0–MCS7; Up to 150 Mbps. Supports MCS8–MCS15; Up to 300 Mbps.
	802.11ac: Up to 867 Mbps	
Battery	Type: Rechargeable lithium battery (non-removable)	
	Typical capacity: 8000 mAh (actual capacity may be slightly smaller)	
External ports	USB Type-C port	
	USB Type-A port	
	nano-SIM card slot (4FF)	
Display	1.45 inch LCD display	
Indicators	LED indicator: indicates wireless charging status	
Buttons	Power button, Menu button	
Antenna	Built-in 5G/LTE antenna	
Dimensions	148 mm x 72 mm x 18 mm	
Weight	Approximately 280 g	
Temperature	Operating temperature: 0°C to +35°C	
	Storage temperature: - 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"> • Write/send/receive short messages • Send/receive extra-long messages • Storage: Up to 500 messages can be saved in the internal memory of the E6878-370
Network connection setup	<ul style="list-style-type: none"> • Create, delete, or edit APN • Set up network connection
WLAN/Wi-Fi setup	<ul style="list-style-type: none"> • SSID broadcasting and hiding • None (Open), WEP, WPA2-PSK, and WPA/WPA2-PSK encryption • Automatic adjustment of Wi-Fi speed • Display STA status • MAC address filtering
Firewall setup	<ul style="list-style-type: none"> • Enable and disable firewall • LAN IP Filtering • Virtual Server • DMZ • UPnP
NAT setup	<ul style="list-style-type: none"> • CONE NAT • Symmetric NAT • ALG
DHCP setup	<ul style="list-style-type: none"> • Enable and disable DHCP server • Configure DHCP server address pool • Set DHCP lease time
5G/LTE/Wi-Fi auto offload (Wi-Fi Extender)	<ul style="list-style-type: none"> • Access WAN via 5G/LTE/Wi-Fi
IPv4v6 dual stack	<ul style="list-style-type: none"> • DHCPv4v6 server and client • DNSv4v6 server and client • Display IPv4v6 WAN address
Others	Display network status including signal strength, carrier name, network mode, and so on
	Select network mode
	PIN management: activate/deactivate PIN, verify PIN/PUK, and modify PIN

Item	Description
System requirements	<ul style="list-style-type: none">• Windows 7, Windows 8, Windows 8.1, Windows 10 (excluding Windows RT). Mac OS X 10.9, 10.10, 10.11 and 10.12 with latest updates• Your computer should also meet the recommended hardware requirements for the operating system installed

3 Services and Applications

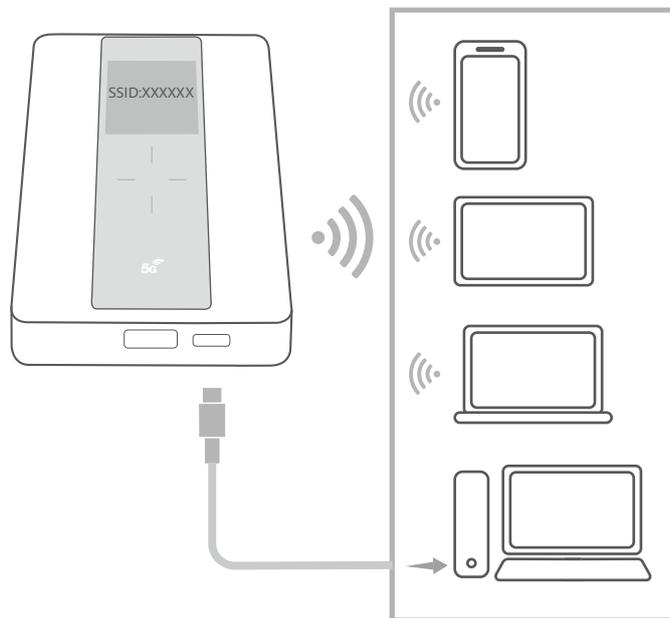
3.1 Data Service

3.1.1 Wireless Modem

The E6878-370 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 E6878-370's web-based management page) to set up a wireless network, after which you will be able to access the Internet.

A maximum of 16 wireless devices can connect to the E6878-370's Wi-Fi network.

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



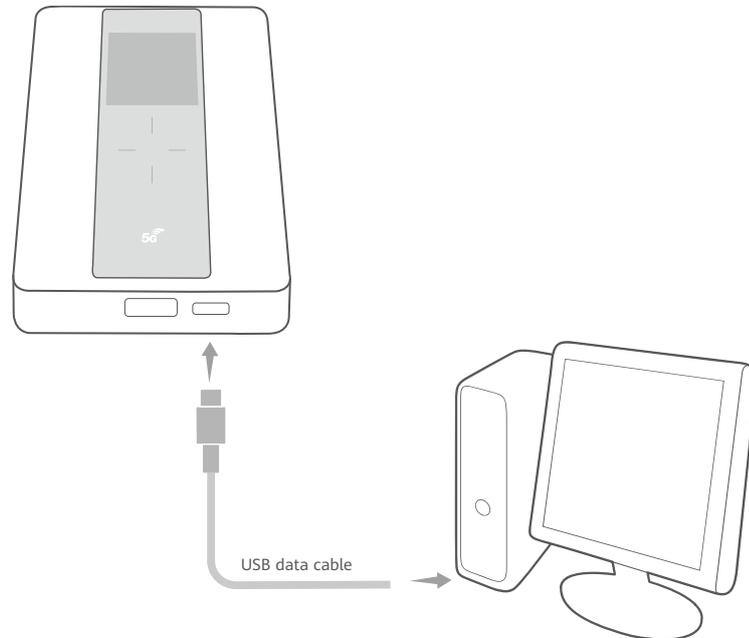
3.1.2 USB Modem

After you connect the E6878-370 and the PC using a USB data cable, the web-based management page will display automatically. Follow the onscreen instructions to complete network configuration. You can use the default APN settings or manually

configure the APN to set up a network connection, after which you will be able to access the Internet.

Remarks: The USB charging cable that came with the device is used for charging only. If you need to access the Internet via USB connection, please purchase a USB data cable that supports USB 2.0 or USB 3.0.

Figure 3-2 One-device access via USB data cable (using a PC as an example)

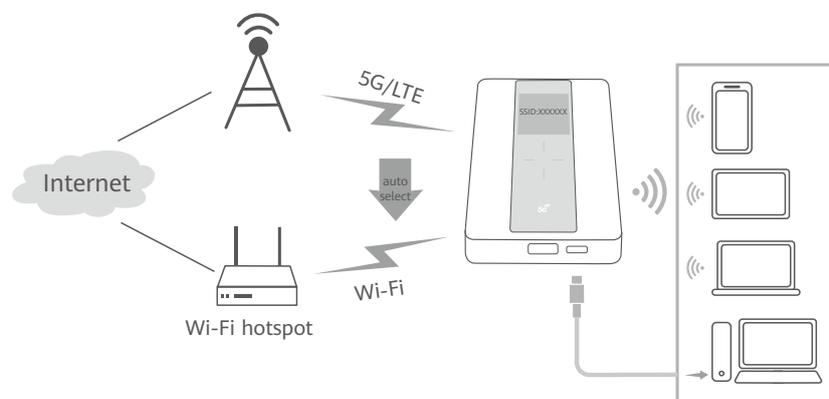


3.1.3 5G/LTE/Wi-Fi Auto Offload

The E6878-370 allows you to access the Internet via 5G, LTE or Wi-Fi. When you are using the E6878-370 in areas with a Wi-Fi hotspot, for example, an airport, a cafe, a hotel, or your home, the E6878-370 switches to the Wi-Fi network to save your 5G/LTE network data usage.

This function is disabled by default, and can be enabled manually on the web-based management page.

Figure 3-3 5G/LTE/Wi-Fi auto offload



3.2 SMS

The E6878-370 supports message writing/sending/receiving. You can manage messages in the Inbox, Outbox, and Drafts on the E6878-370's web-based management page.

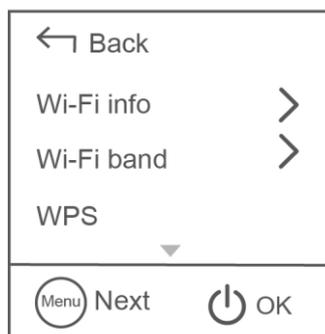
3.3 Menu Display

The E6878-370 supports menu display in multiple languages. Press the MENU button to enter the menu. Continue to press the Menu button to select a menu and press the Power button to confirm your selection. You can view menu information or configure settings such as:

- 5G/LTE/Wi-Fi auto offload
- WPS

Figure 3-4 shows the menu screen (your actual screen may vary).

Figure 3-4 Menu



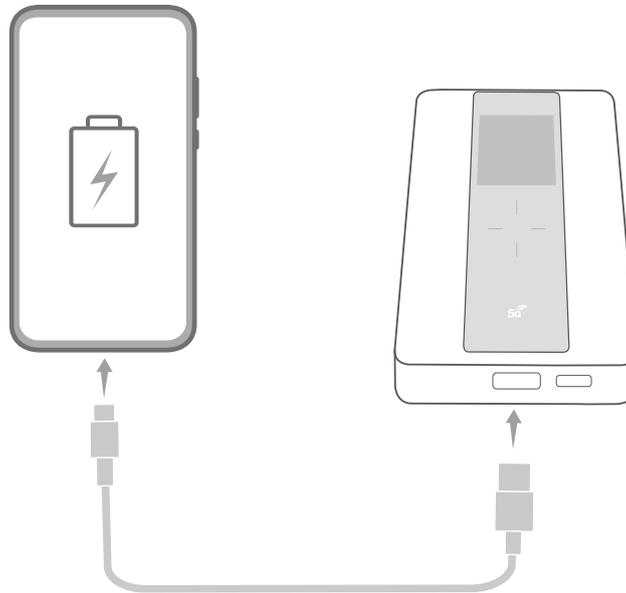
3.4 Charging Another Device

You can use the E6878-370 to charge devices such as mobile phones, music players, and Bluetooth headsets, through the wired or wireless reverse charging.

Note:

- When the E6878-370's battery level is low or overheating, it automatically stops reverse charging to ensure that its other functions are not affected.

Figure 3-5 Wired charging

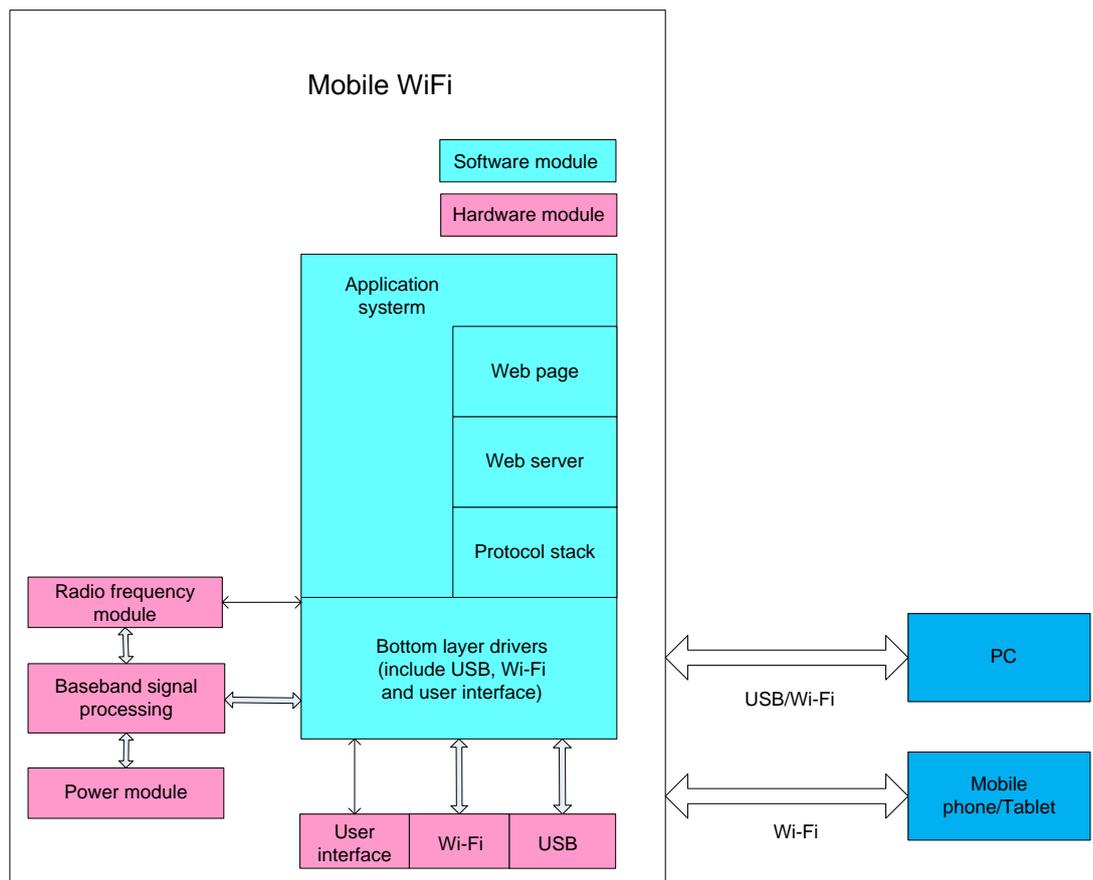


4 System Architecture

4.1 System Architecture

Figure 4-1 shows the system architecture of the E6878-370.

Figure 4-1 System architecture of the E6878-370



4.2 Functional Modules

1. **Radio frequency module:** Sends/receives radio signals and modulates/demodulates radio signals and baseband signals.
2. **Baseband signal processing module:** Processes 5G/LTE baseband signals, including:
 - Modulating/demodulating
 - Encoding/decoding
3. **Bottom layer driver:** Drives peripherals, including USB devices, Wi-Fi devices, display screen, buttons and SIM cards.
4. **Protocol stack system:** Processes protocols of 5G/LTE and TCP/IP.
5. **Application system:** Provides SMS, PS domain service, Wi-Fi configuration, network service, web service and web-based management page. Users can configure system settings on the web-based management page.
6. **User interface:** Provides man-machine interaction, including a display screen and buttons.

5 Packaging Box Items

This chapter describes the items contained in the packaging box of the E6878-370.

Table 5-1 lists the items contained in the packaging box of the E6878-370.

Table 5-1 Packaging box items of the E6878-370

Item	Quantity	Remarks
HUAWEI 5G Mobile WiFi Pro	1	Standard
USB charging cable	1	Standard
Quick Start Guide (Including safety information)	1	Standard
Charger	1	Standard
Warranty Card	1	Optional

A Acronyms and Abbreviations

Numerics

5G The Fifth Generation

A

AES Advanced Encryption Standard

ALG Application Level Gateway

APN Access Point Name

ARPU Average Revenue Per User

ASCII American Standard Code for Information Interchange

D

DHCP Dynamic Host Configuration Protocol

DMZ Demilitarized Zone

DNS Domain Name Server

E

EDGE Enhanced Data Rates for GSM Evolution

F

FDD Frequency Division Duplex

G

GPRS General Packet Radio Service

GSM Global System for Mobile Communications

H

HSPA+ High Speed Packet Access Plus

HSUPA High Speed Uplink Packet Access

HSDPA High Speed Downlink Packet Access

I

IEEE Institute of Electrical and Electronics Engineers

IP	Internet Protocol
L	
LCD	Liquid Crystal Display
LTE	Long Term Evolution
M	
MAC	Medium Access Control
Modem	Modulator Demodulator
N	
NAT	Network Address Translation
O	
OS	Operating System
P	
PC	Personal Computer
PIN	Personal Identification Number
PnP	Plug and Play
PS	Packet Switched
PUK	PIN unblocking key
S	
SIM	Subscriber Identity Module
SMS	Short Messaging Service
SOHO	Small Office Home Office
SSID	Service Set Identifier
T	
TDD	Time Division Duplex
TFT	Thin Film Transistor
U	
UMTS	Universal Mobile Telecommunications System
UPnP	Universal Plug and Play
USB	Universal Serial Bus
V	
VPN	Virtual Private Network
W	
WAN	Wireless Area Network

WEP	Wired Equivalent Privacy
Wi-Fi	Wireless Fidelity
WLAN	Wireless Local Area Network
WPA	Wi-Fi Protected Access