# FS045W

## USER GUIDE

## Safety Precautions

Read the safety precautions carefully to ensure the correct and safe use of your wireless device.

| | |
|---|---|
| | Do not s itch on your device when the device use is prohibited or when the device use may cause interference or danger. |
| | Follow the rules or regulations in hospitals and health care facilities. Switch off your device near medical apparatus. |
| | Switch off your device in an aircraft. The device may cause interference to control signals of the aircraft. |
| | Switch off your device near high-precision electronic devices. The device may affect the performance of these devices. |
| | Do not attempt to disassemble your device or its accessories. Only qualified personnel are allowed to service or repair the device. |
| | Do not place your device or its accessories in containers with strong electromagnetic field. |
| | Do not place magnetic storage media near your device. Radiation from the device may erase the information stored on them. |
| | Do not put your device in a high-temperature place or use it in a place with flammable gas such as a gas station. |
| | Keep your device and its accessories away from children. Do not allow children to use your device without guidance. |
| | Only use original batteries and chargers. In order to avoid damage to the equipment or explosion. |
| | Observe the laws or regulations on device use. Respect others' privacy and legal rights when using your device. |

# Content

# 1. Overview

The device provides a simple way to use LTE connect to the Internet with any WLAN-enabled device and to fulfill needs of sharing your internet connection during outside home.

## 1.1 Introduction

### Indicator Description
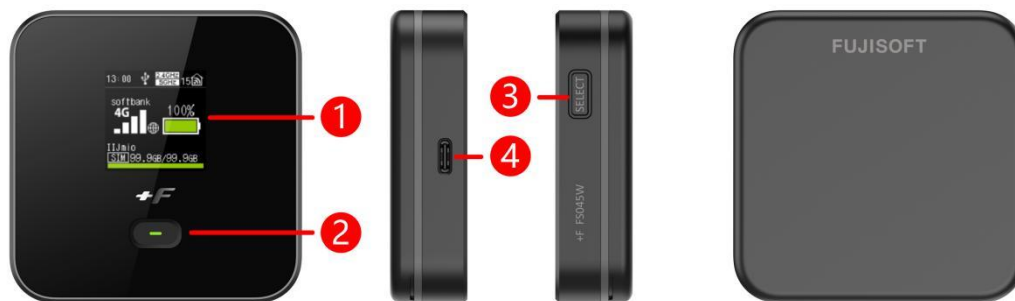


ID appearance

### Interface Specification

| | ITEM | INTRODUCTION |
|---|---|---|
| 1 | LCD screen | ● Displays current status of the device |
| 2 | Power button | ● Long press to start on / off the device<br>● Sleep mode short press to exit Sleep<br>● Equipment work properly,When selecting a menu on the LCD, confirm the action. |
| 3 | SELECT button | ● ''Selection '' of the function displayed on the display Used to make a selection. |
| 4 | USB interface | ● Connect the USB cable to power adapter or PC/Laptop |

# 1.2 LCD Specification



1. LCD screen status indicators.

2. LCD screen text information.

Status Information

| Category Icon | Display |
|---|---|
| Signal Strength | Network and signal status |
| WiFi SSID | 5G SSID working<br>2.4G SSID working<br>WiFi display |
| Battery | Display the percentage of charge above the battery icon. |
| USB Status | Equipment connected to the power adapter or use the USB Connection to PC. |
| Charging | It is to supply power to external devices. |
| Roaming | It is roaming status. |

## 1.3   System Requirements

| Item | | Description |
| --- | --- | --- |
| OS | Windows | Windows 10(64bit\32bit)/ 11(64bit) |
| | Mac | macOS Mojave 10.14<br>macOS Catalina 10.15<br>macOS Big Sur 11<br>macOS Monterey12<br>macOS Ventura13<br>macOS Sonoma14 |
| | Chrome OS | Chrome OS |
| | Android | Android OS 9.0+ |
| | iOS | iOS 15.0+ |
| Browser | Google Chrome | 109+ |
| | Safari | 16.2+ |
| | Mozilla Firefox | 109+ |
| | Microsoft Edge | 109+ |

# 2. Equipment installation

## 2.1. Connect the Device

Before you want to use the device, setup your device as following:
1. Insert SIM;
2. Insert the battery;
3. Hold the Power/Connect button to power on;
4. Connect this device to your terminal device.
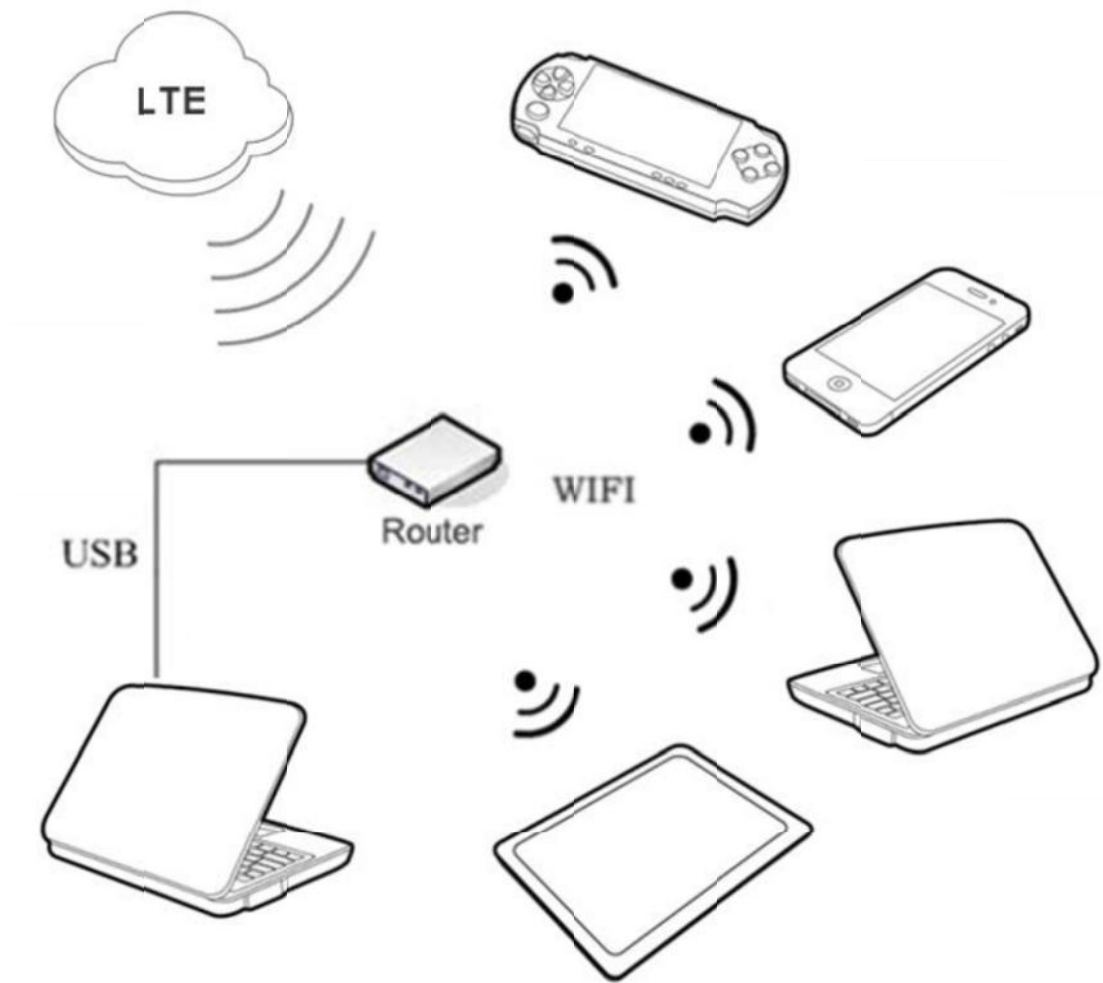
**The device applications scenes Figure**

## 2.2. Startup

➢  Power up the device

   After all installation is complete, Press and hold the power button over 1 second
   to power up the device.

➢  Restart the device

   Some configurations may take effect after system reboot. The device will reboot
   automatically once these configurations to be modified. After reboot the
   webpage will be automatically redirected to Homepage and need you to re-llogin
   for further changes.

➢  Shutdown the device

   Hold the power button over 3 second when the device is powered on, the device
   will automatically shutdown.

# 3. Description for Client Interface

**FUJISOFT**

English ▾    Help    Logout

Mobile Router +F FS045W    4G 📶 SIM 🔋 📶 2.4GHz 🌐 ▮70%

- ℹ Basic Information
- 🌐 Mobile Network Settings
- 📡 LAN Settings
- ▼ Router Settings
- 📱 Cradle Setting
- ⚙ System Settings
- 🔄 Software Update

## Information

| | |
|---|---|
| SIM/eSIM | SIM |
| Network Operator | China Unicom |
| Data Usage Status | ○ Home ● Roaming |
| Data Usage Total | 0.00 KB    Reset |
| Data Usage 1Month | 0.00 KB |
| Data Usage 3Days | 0.00 KB |
| Data Usage 1Day | 0.00 KB |
| Duration | 00:00:00 |
| Last Reset Date | |

| | |
|---|---|
| IMEI | 864384020274138 |
| Software Version | FS045W_V1.1.0 |
| ICCID | 89852072200516743454 |
| Phone Number | |

| | |
|---|---|
| DHCP IP Address | 192.168.100.1 |
| WAN IP Address | 0.0.0.0 |
| Primary DNS | 0.0.0.0 |
| Secondary DNS | 0.0.0.0 |

| | |
|---|---|
| SSID1 | FS041W_1000007 |
| Security Mode | WPA2-PSK(AES)/WPA3-SAE(AES) |
| Current WLAN User | 1 |
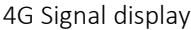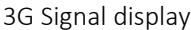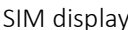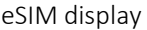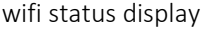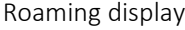
## Icons and functions defined:

Status information display and advanced settings area.

| Icon | Explanation |
|---|---|
|  | Basic Information |
|  | Mobile Network Settings |
|  | LAN Settings |
|  | Router Settings |
|  | Cradle Setting |
|  | System Settings |
|  | Software Update |

| Status Information | | Description |
|---|---|---|
| Network signal |  | 4G Signal display |
| |  | 3G Signal display |
| |  | Out of range display |
| SIM Card Status |  | SIM display |
| |  | eSIM display |
| WiFi |  2.4GHz 5GHz | wifi status display |
| Roaming |  | Roaming display |
| Battery |  | Battery power display |

# 4. Information

## 4.1. Info

Showing separately: SIM/eSIM, Operator name, Data communication counter, Duration, Last Reset Date, IMEI, Software Version, ICCID, Phone Number, IP Address, DNS, SSID1, Security Mode(SSID1), SSID2, Security Mode(SSID2), Current WLAN User.

## 4.2. Device list

The Device List displays the information about the device on the LAN, including IP address, device name, MAC address,connect mode and duration.

# 5. Device setting

## 5.1. Moblie Network Settings

**SIM/eSIM Setting**

This page allows you to select the SIM card or eSIM and configure the APN information.

And in the profile list, you will see the default and other APN configuration. An APN (Access Point Name) is a reference to the Internet access point on. You can select other APN as default, edit or delete exist ones or create a new APN configuration (no more than 20 in the list). Set the Profile Name, APN, User Name, Password,select IP Type and select Auth. Type when you want to create a new APN profile. Note: only input what you have received from your service provider and leave other fields empty.

**Auto Switch Setting**

This page, you can set the automatic switching of SIM/eSIM. Setting conditions include "Communication status", "Data usage&Timetamp", and "Priority Switching".

**Network Settings**

This page, you can set up you prefer network connection mode.

➢ **Network Mode:** Network connection mode, respectively 4G/3G, 4G, 4G(FD),4G(TD).
➢ **Roaming:** You can choose to turn "Enable" or "Disable" the roaming function.
➢ **Network Selection:** The default Network Selection mode is "Automatic". When click "Manual", a network list will be activated, containing all searched networks. Having selected an available network from the list, Equipment will register to the selected network.

**Band Setting**

This page, you can set up you prefer Band.
➢ **4G Band Setting:** You can set the band used for 4G communication.
➢ **3G Band Setting:** You can set the band used for 3G communication.

**Data Usage**

This page, you can set up your SIM/eSIM max data usage and data usage auto reset "Enable" or "Disable".you can set the sata usage over setting to "no restrictions", "suspension of communication", "communication restriction".and can set data usage over notification "Enable" or "Disable".

**PIN**
➢ You can lock the (U) SIM with PIN to protect the device against user and unlock it. The default PIN and PUK are provided by the operator or service provider. The current PIN status and the rest chances to input PIN and PUK are displayed in this page.

➢ When the user does not want to continue to use a PIN code, Please select "Disabled", then enter the correct PIN, click "Save" to disable PIN lock.

**Note:** The PUK (an 8-digit code) is required when PIN is input incorrectly 3 times. If the PUK is wrongly input for continuously 10 times, the card will be damaged. Please contact the network service provider for details.

**PING Reply Setting**
➢ **PING Reply Settings:** You can choose to "Enable" or "Disable".

**MTU Setting**
➢ **MTU Size Setting:** You can set up MTU value.

**DDNS Setting**
➢ **DDNS Setting:** You can configure DDNS.Set the DDNS Name,Port Setting,Domain Name,User Name,Password,Status information.

# 5.2. LAN Settings

**WLAN Setting**
➢ **WLAN Settings:** You can choose to "Enable" or "Disable".

➢ **SSID Broadcast:** You can choose to "Enable" or "Disable".

➢ **SSID:** This name is visible to other WIFI-enabled devices, and is used to identify your WIFI network.

➢ **Frequency Band:** You can choose "2.4GHz" "5GHz(W52)" "5GHz(W56)".

➢ **Wireless Mode:** You can choose "802.11b" "802.11b/g" "802.11b/g/n".

➢ **Band width:** You can choose "HT20" "HT20/40".

➢ **Channel:** Different domain has different channels.

➢ **Channel Search:** You can choose to "Enable" or "Disable".

➢ **Beacon interval:** Beacon interval is the frequency of broadcast packets from the device which is used to synchronize wireless networks. Set lower value for finding and connecting to the device fast when higher value helps to save power.

➤ **Max Number of users:** Set the maximum number of WIFI users. If your network has problems, you may want to decrease the number of WIFI users allowed to connect to the device.

➤ **Security Mode:** This part helps you configure the security of the wireless network. Select an encryption mode in the list and set your password.

➤ **Password:** Set WIFI password.

**MAC Filtering**
➤ **MAC Filter:** MAC filtering is used to control specific MAC addresses to access. You can choose to "Allow" or "Deny" or "Disable".
Allow: Only devices in this list are allowed to access the network.
Deny : All terminal devices are allowed to access the network except ones in this list.

➤ **MAC Filter List:** MAC Address display. You can select to add new configuration in the list (no more than 32), edit or delete exist ones

**DHCP**
With DHCP, IP addresses are assigned dynamically; devices typically don't have a permanent IP address. But sometimes you may want to assign a static IP address to a device, while still using DHCP for the rest of the devices on your network.

You may want to do this with, for example, a Web server, FTP server, media server.
➤ **IP Address**: input the permanent IP Address that you want to assign to the device.

➤ **Subnet Mask**: input the permanent Subnet Mask that you want to assign to the device.

➤ **DHCP Server**: You can choose to "Enable" or "Disable".

➤ **DHCP IP Pool**: You can set Starting address and ending address of the range of IP addresses available for the device to dynamically (that is, not permanently) assign to computers connected to it.

➤ **DHCP Lease Time**: You can set DHCP lease time.
➤ **DNS Settings**: You can set Auto/ Manual/Select DNS server.

**DHCP Fixed Setting**

This page can set "Device Name", "MAC Address", "LAN IP Address", "Status".

**Site Block Setting**

This page setting can block access to harmful sites and enhance security.You can choose to "Cloudflare" "OpenDNS" or "Quad9" or "Disable".

**Privacy Separater**

You can choose to "Device isolation" "Network isolation" or "Disable".

**WPS**

➢   WPS (WIFI Protected Setup) provide a more intuitive way of wireless configuration between your device and the wireless client. Please make sure that the WIFI-enabled devices you want to connect support this function. Enable WPS firstly before you want to use it. If you select the "PIN" way, input the client's PIN to the "Client PIN" frame. If you select the "PBC" way, press the "WPS" button on wireless device in 120 seconds to establish WPS connection after you have pressed the "WIFI/WPS" button on your device or clicked "Save". Click "Save" to save your settings and start connecting when you select PIN or PBC way. You can also choose "No Connection" and click "Save" to save your settings without connecting.

**USB Tethering**

You can choose to "Enable" or "Disable".

**PMF Setting**

You can choose to "Enable" or "Disable".

**Communication Schedule**

You can limit the date and time when Internet communication can be used for each connected device name.
You can also change the SSID password to a random value at regular intervals.

# 5.3. Router Settings

**IP Filtering**

IP filtering is used to control specific IP addresses to access.
➢   Select "Disable" to disable this function.
➢   Select "Allow" to allow IP addresses that you have set in the IP filtering list to access.

➢   Select "Deny" to deny IP addresses that you have set in the IP filtering list to access.
You can determine to allow it or not, and can also add new client and edit or delete existing ones.

**Port Mapping**

➢   Port Forwarding is used to forward incoming traffic to specific ports or Internet addresses on your network.
You can select to add new configuration in the list (no more than 30), edit or delete exist ones.

**URL Filtering**

 URL filtering is used to control specific URL addresses to access.
➢   Select "Disable" to disable this function.
➢   Select "Allow " to allow URL addresses that you have set in the URL filtering list to access.

➢   Select "Deny" to deny URL addresses that you have set in the URL filtering list to access.
You can determine to enable it or not, and can also add new client and edit or delete existing ones.

**DMZ**

DMZ is a physical or logical sub-network that contains an organization's external services to a larger untrusted network, usually the Internet.

**NAT**

➢ **NAT:** You can choose to "Symmetric" , "Full Cone NAT", "Restrict Cone NAT", "Port Restrict Cone NAT".

➢ **TCP NAT Timer:** You can set the TCP NAT timer.

➢ **UDP NAT Timer:** You can set the UDP NAT timer.

**Pass Through**

➢ **UPnP:** You can choose to "Enable" or "Disable".

➢ **L2TP Pass-Through:** You can choose to "Enable" or "Disable".

➢ **PPTP Pass-Through:** You can choose to "Enable" or "Disable".

➢ **IPSec Pass-Through:** You can choose to "Enable" or "Disable".

➢ **Intrusion Detection:** You can choose to "Enable" or "Disable".

**Internet Access Restrictions**

➢ **Internet Access Restrictions:** You can choose to "Disable", Allow", "Deny".

# 5.4. Cradle Setting

**Connect Type**

You can choose to "Router Mode" or "Apmode(DHCP)" or "Apmode(Static)".

➢ Router Mode: connects to the Internet using 3G / LTE network.You can use an Ethernet cable connected to your computer etc.

➢ AP mode:can be used as a wireless LAN access point by connecting broadband router and cradle with Ethernet cable.

# 5.5. System Settings

**Login Password**

Function: Current password, New Password, Confirm New Password.

**Display Settings**

➢ Turn Off Backlight: Control the LCD backlight display time.

➢ Toggle display: You can choose to "Enable" or "Disable" to the LCD screen display switch.

➢ Power LED Light: You can choose to "Enable" or "Disable" .

**Lock Settings**

You can choose to "Enable" or "Disable".

**Sleep**

You can choose to "Enable" or "Disable".

**Charge Settings**

You can choose to "Enable" or "Disable".
➢ Long Life Battery Mode: You can choose to turn "Enable" or "Disable".
➢ Battery Supply: You can choose to turn "Enable" or "Disable".
➢ Automatic boot: You can choose to turn "Enable" or "Disable" .

**Time Settings**
➢ NTP Server Address: NTP server address of the router received time.
➢ Time Setting: You can choose to "Auto" or "Manual". If you select "Manual",you
    can set the "Time Zone Setting".

**Backup & Restore**

➢ Backup: Click "Backup" to Backup Software Settings.

➢ Restore: Click "Restore" to restore the settings from the configuration file backed
    up in the local PC.

**SFE Settings**

You can choose to "Auto" or "OFF".
"Auto" : Usually, please use initial setting(Auto).
"OFF" : In the ping latency is slow, it may improve the ping latency.But,It may affect
communication speed.

**Factory reset**

➢ Factory reset: Click "Reset" to reset the configuration to the factory settings.

**Restart**

➢ Restart: Click the "Restart" to restart the device.

➢ Auto Restart: You can choose to turn "Enable" or "Disable" ,Click the "Apply" to
restart the device.

## 5.6. Software Update

**Offline Update**
Function: It can update version by select update file.

**Online Update**
Function: It can update version by check update version.

## 5.7. Certification Information

**Certification Information**
Function: It can show the certification information in the LCD.
View Path: press "select" button to choose "Info"->press "power" button->press "select" button to choose "Certificate"->press "power" button, Finally you can see the certification information.

T  P 25-0003 202
R  202-JCE159

W52の屋外使用は法令
により禁止されています。
（登録局との通信を除く）

# 6.Warning and Precautions

- Please do not prohibit the use of the device or use may cause interference or danger occasions boot.

- Please abide by the Code of hospitals and health care facilities. Please turn off near medical equipment.

- Interfere with the aircraft control system to prevent wireless devices, turn the device off at the airport.

- All wireless devices may be susceptible to interference, which could affect the use of performance.

- Near high-precision electronic instrument, turn off the wireless devices. It may affect the performance of these devices (such as: the embedded medical equipment).

- Do not place magnetic storage media such as magnetic cards and floppy disks placed near wireless devices. The radiation emitted by the wireless device may erase the information.

- Do not attempt to disassemble the router and its accessories. The professionals only able to provide service and repair for the device.

- Do not use your wireless device in potentially explosive space.

- Do not use your device at high temperatures or flammable gas spaces (such as: gas stations).

- Only use original batteries and chargers. In order to avoid damage to the equipment or explosion.

- Do not place your device on flammable liquids, gases or explosive objects nearby.

- Do not store the device in high temperature environments, and will shorten the life of electronic devices, damage the battery or melted accessories.

- Do not store the device at low temperatures, when the device back to normal operating temperature, water vapor will enter inside the device, damage the device circuit board.

- Compliance with relevant laws and regulations when using the device. Respect the privacy and legitimate rights and interests of others.

- Do not expose your device in strong sunlight, to avoid the heat.

- Keep the device dry, and avoid all types of liquids into the inside of the machine, so as to avoid damage.

- This product is carefully designed and high-tech production, use with caution.

- Do not allow children or pets contact equipment may cause choking or damage to the equipment.

- Do not wet hands to operate the equipment, may cause an electric shock.

- Do not drop knock, Rough handling can break internal circuit boards and the use of performance.

- Equipment to work long hours, the signal is weak or at room temperature under normal fever phenomenon, which does not affect the use of equipment and life.

- User minimum distance equipment physical distance should be 10mm.


Declaration of Conformity

Hereby, FUJI SOFT INCORPORATED declares that the radio equipment type FS045W is in compliance with Directive 2014/53/EU and this product is allowed to be used in all EU member states. The full text of the EU declaration of conformity is available at the following internet address:

https://fsi-plusf.jp/

Manufacturer information:

Company name: FUJI SOFT INCORPORATED

Address：1-1 Sakuragi-cho, Naka-ku, Yokohama-shi, Kanagawa 231-8008, Japan

Operation temperature: -10~55℃

Operation frequency

| Radio | Frequency | Max. power |
| --- | --- | --- |
| WiFi 2.4G | 2412-2472MHz | 13 dBm |

| WiFi 5G | 5150-5250MHz | 13 dBm |
|---------|--------------|--------|
|         | 5470-5725MHz | 13 dBm |
| WCDMA   | Bands 1/8    | 24 dBm |
| LTE FDD | Bands 1/3/8/28 | 23.5/23.5/24/24 dBm |

RF exposure statement

For the countries that adopt the SAR limit of 2.0 W/kg over 10 grams of tissue. The device complies with RF specifications when used at a distance of 0.0 cm from your body. The highest reported SAR value: body SAR: 0.57W/kg

The device is restricted to indoor use when operated in the European Community using frequency 5150MHz-5250MHz to reduce the potential for interference.

Restriction in BE, BG, CZ, DK, DE, EE, IE, EL, ES, FR, HR, IT, CY, LV, LT, LU, HU, MT, NL, AT, PL, PT, RO, SI, SK, FI, SE, UK(NI).

FCC regulatory conformance：

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two

conditions:

(1) This device may not cause harmful interference.

(2) This device must accept any interference received, including interference that may cause

undesired operation.

**NOTE:** This equipment has been tested and found to comply with the limits for a **Class B** digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation.

This equipment generates uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

  - Reorient or relocate the receiving antenna.

  - Increase the separation between the equipment and receiver.

  -Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.

  -Consult the dealer or an experienced radio/TV technician for help

**NOTE:** The manufacturer is not responsible for any radio or TV interference caused by unauthorized modifications to this equipment. Such modifications could void the user's authority to operate the equipment.

## RF Exposure

The SAR limit adopted by FCC is 1.6 W/kg and 4.0 W/kg averaged over one gram of tissue. The highest SAR value reported to the FCC for this device type complies with this limit. The highest SAR value reported to the FCC for this device type when using in portable exposure conditions is Hotspot: 0.49 W/kg, Specific: 0.58 W/kg.

# 7. Schematic Diagram of Cradle

Indicator Description
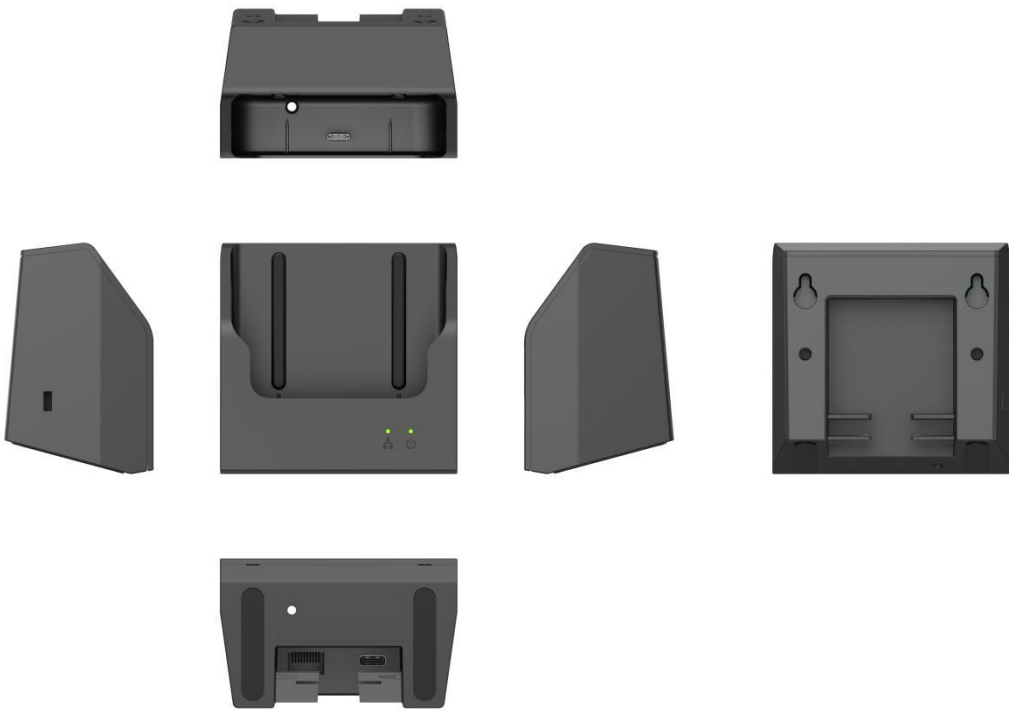


## 7.1. Interface Specification

| | ITEM | INTRODUCTION |
|---|---|---|
| 1 | Power indicator | ● Steady green : Power On<br>● Light off : Power Off |
| 2 | Link indicator | ● Steady green : The network cable is connected properly<br>● Light off : The network cable is not connected properly<br>● Flashing green: Data transmission |
| 3 | USB interface | ● Connect with FS045W<br>● Connect with power adpter |
| 4 | Ethernet | ● Connect with Ethernet cable |

# 7.2. Function Introduction

Through the RJ45 interface to achieve WAN and LAN switching. The default RJ45 LAN interface is working as LAN function, LTE data connection is working as WAN function. Through the WebUI options to achieve RJ45 network interface WAN and LAN switching. The wired WAN takes precedence over the LTE WAN, and when the RJ45 cable interface is used for WAN, the LTE data traffic is off. Just keep the network registration status and WIFI data connection maintained, in this state, if the RJ45 network line dropped, automatically switch to the LTE data connection which working as WAN, if the cable back to normal, automatically switch to the wired WAN connection.