

# Product Specification

**Product Name: Medical Portable Gateway**

**Model Name:DSGW-340**

## Revision History

Specification		Sect.	Update Description	By
Rev	Date			
1.0	2022-4-6		New version release	

## Approvals

Organization	Name	Title	Date



**Model List**

Feature Mode	LTE Cat1	Bluetoth5.2	WiFi
DSGW-340-1	●	●	●

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# 1 Introduction

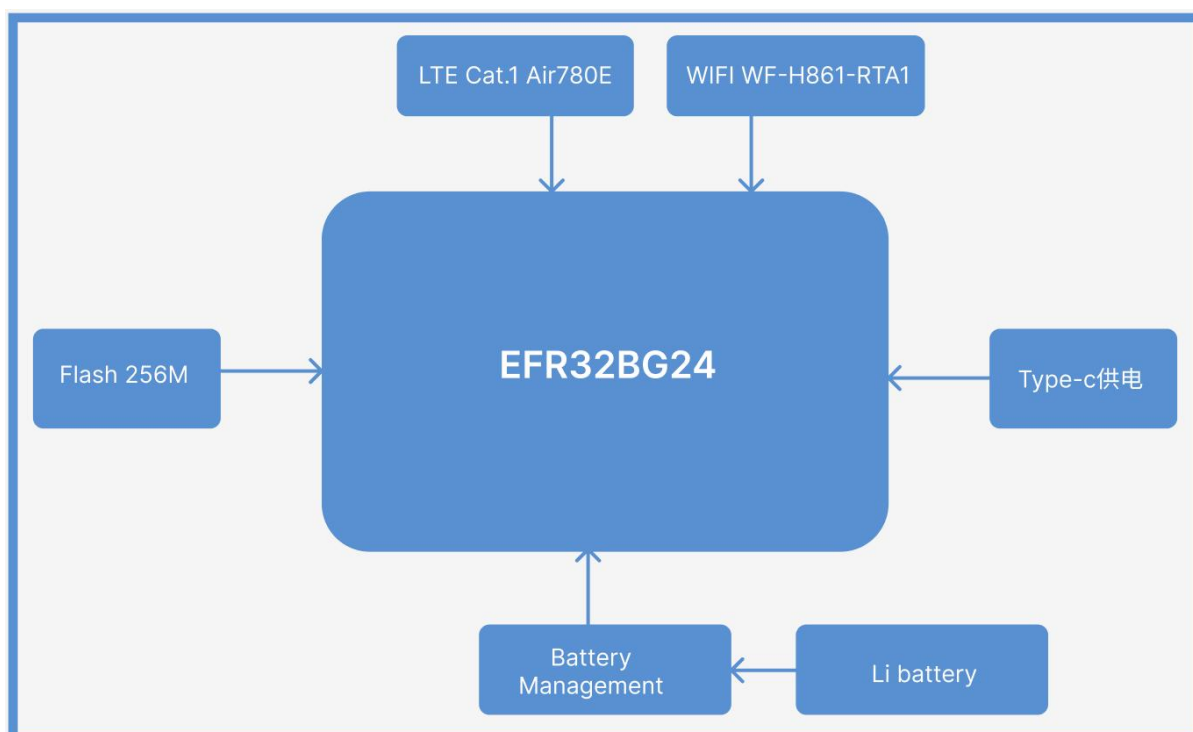
## 1.1 Purpose& Description

DSGW-340 is a small Bluetooth portable gateway that connects to medical devices via Bluetooth. And reports medical information to the cloud via WiFi or LTE, making it easy to monitor your health at any time, and can connect to medical health devices such as ECG, blood Oxygen, and blood glucose.

## 1.2 Product Feature Summary

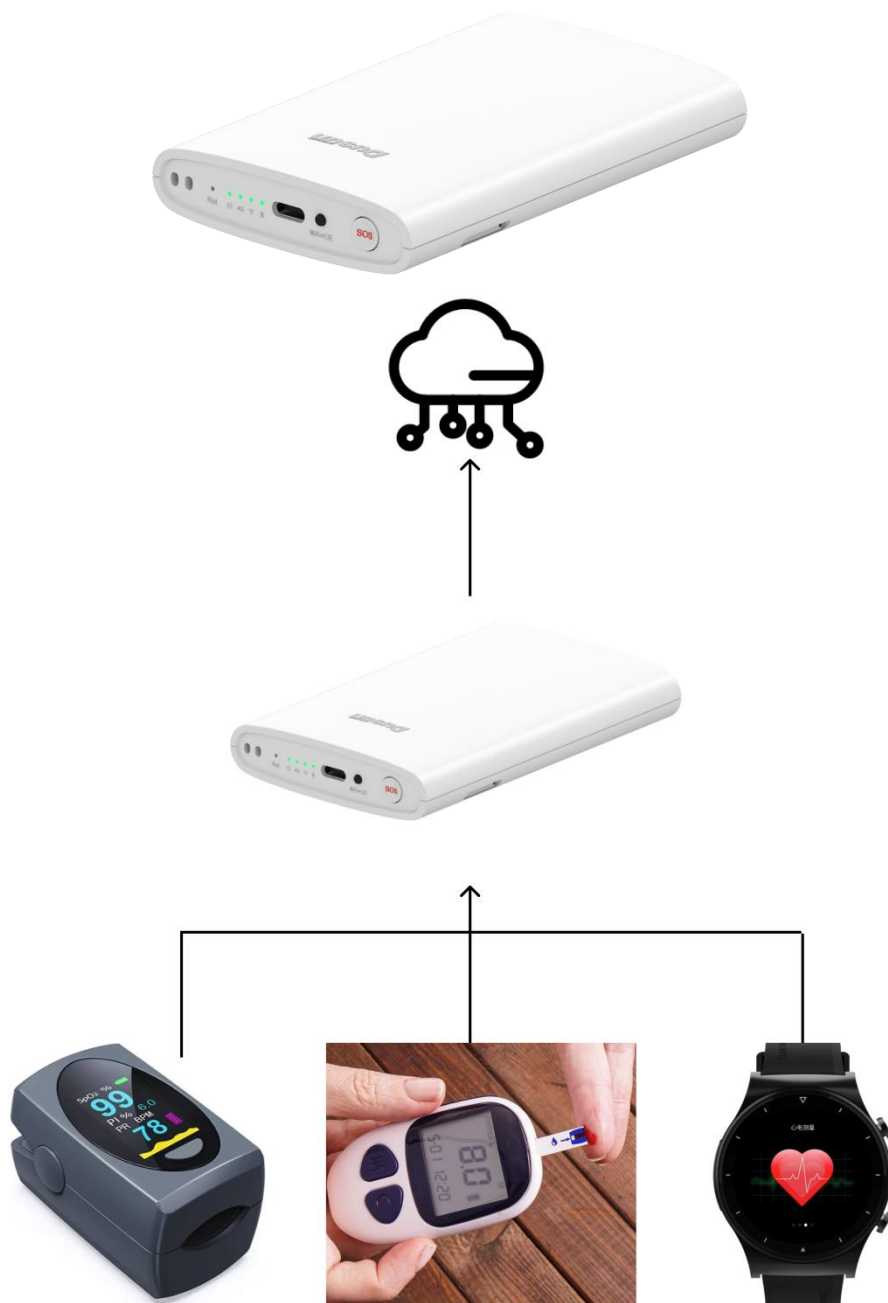
- USB 5V Type-C Power Supply
- Processor BG24
- Support Bluetooth 5.2
- Support LTE Cat.1
- Support WiFi 2.4G
- Support Li battery

## 1.3 Hardware block diagram



## 2 Mechanical Requirement

### 2.1 Drawings



### 3 Specifications

#### 3.1 Technical Specification

Power Adapter	<ul style="list-style-type: none"> <li>● Input:100V~240V AC/50~60HZ</li> <li>● Output:5V/1A, USB type C</li> </ul>
Indicator LEDs	<ul style="list-style-type: none"> <li>● Power indicator: on once (2s) when powered by battery, on once (2s) when powered off, 200ms on 2s off cycle when low (battery voltage around 3.35V); long on when powered externally; ----- color is green.</li> <li>● LTE network status indicator: on when switching to LTE/WIFI communication (2s), then off; long on when externally powered ----- colour orange.</li> <li>● WIFI network status indicator: on when switching to LTE/WIFI communication (2s), then off; external power supply long-lasting ----- coloured orange</li> <li>● Bluetooth indicator: on when Bluetooth device pairing is successful (2s), then off; external power supply with data is on for a long time ----- colour blue</li> <li>● All lights flash in emergency mode except the power light, 200ms on, 200ms off.</li> <li>● Device from top to bottom, the lights are arranged in the order of power light - LTE light - WIFI light - Bluetooth light.</li> </ul>
Reset Button	<ul style="list-style-type: none"> <li>● Emergency button, press for more than 2s to trigger the emergency event to be reported (this button should be easy to touch).</li> <li>● Distribution network + reset button: short press for more than 200ms to enter the distribution network, long press for more than 5s to restore the factory settings of the device (at this time, 256M external FLASH is not emptied).</li> <li>● LTE/WIFI switch + switch button: long press 2s (longer to prevent frequent network cuts leading to problems) cycle switching LTE/WIFI network, LTE/WIFI light linkage, long press 10s to switch off when the power is on, short press to switch on when the power is off</li> </ul>
Installation method	Portable
SIM card	micro SIM

Operating Temperature	-0°C~40°C
Storage Temperature	-40°C~85°C

### 3.2 Performance Requirement

BLE Performance	<ul style="list-style-type: none"> <li>● TX Power: 8dBm</li> <li>● Range: 100 meters minimum, open filed</li> <li>● Receiving Sensitivity:</li> <li>● -103dBm at 125kbs,</li> <li>● -99dBm at 500kbs,</li> <li>● -96dBm at 1Mbs,</li> <li>● -92dBm at 2Mbs</li> <li>● Frequency offset: +/-50KHZ</li> <li>● Frequency Range (MHz):2400.0~2483.5</li> <li>● Low Frequency (MHz):2400</li> <li>● High Frequency (MHz):2483.5</li> </ul>
LTE Cat 1Performance	<ul style="list-style-type: none"> <li>● Frequency Band LTE-FDD: B1/B3/B5/B8 LTE-TDD: B34/38/39/40/41</li> <li>● Data Rate LTE-FDD: max. 10 Mbit/s (downlink) / max. 5 Mbit/s (uplink) LTE-TDD: 8.2 Mbit/s max (downlink) / 3.4 Mbit/s max (uplink)</li> <li>● Transmit power: 23 dBm ± 2 dBm</li> <li>● Receive sensitivity: less than -99 dBm</li> <li>● Antenna impedance 50Ω, external antenna required</li> </ul>
WiFi Performance	<ul style="list-style-type: none"> <li>● 802.11b/g/n</li> <li>● Data rates up to 150 Mbps in 802.11n mode</li> <li>● A-MPDU and A-MSDU aggregation support</li> <li>● 0.4 μs protection interval</li> <li>● Operating channel center frequency range: 2412~2484 MHz</li> </ul>

## 4 QA Requirements

### 4.1 Quality & Testing Information

Information Description	Standard (Yes) custom(No)
ESD Testing	YES
RF Antenna Analysis	YES
Environmental Testing	YES
Reliability Testing	YES
Certification	FCC, CE , IC



### **FCC Statement**

1. 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.

2. Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

#### **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.

### **SAR Information Statement**

Your wireless phone is a radio transmitter and receiver. It is designed and manufactured not to exceed the emission limits for exposure to radiofrequency (RF) energy set by the Federal Communications Commission of the U.S. Government. These limits are part of comprehensive guidelines and establish permitted levels of RF energy for the general population. The guidelines are based on standards that were developed by independent scientific organizations through periodic and thorough evaluation of scientific studies. The standards include a substantial safety margin designed to assure the safety of all persons, regardless of age and health. The exposure standard for wireless mobile phones employs a unit of measurement known as the Specific Absorption Rate, or SAR. The SAR limit set by the FCC is 1.6 W/kg. \* Tests for SAR are conducted with the phone transmitting at its highest certified power level in all tested frequency bands. Although the SAR is determined at the highest certified power level, the actual SAR level of the phone while operating can be well below the maximum value. This is because the phone is designed to operate at multiple power levels so as to use only the power required to reach the network. In general, the closer you are to a wireless base station antenna, the lower the power output. Before a phone model is available for sale to the public, it must be tested and certified to the FCC that it does not exceed the limit established by the government adopted requirement for safe exposure. The tests are performed in positions and locations (e.g., at the ear and worn on the body) as required by the FCC for each model. The highest SAR value for this model phone when tested for use on the body, as described in this user guide, is **1.190W/Kg**(Body-worn measurements differ among phone models, depending upon available accessories and FCC requirements). While there may be differences between the SAR levels of various phones and at various positions, they all meet the government requirement for safe exposure. The FCC has granted an Equipment Authorization for this model phone with all reported SAR levels evaluated as in compliance with the FCC RFexposure guidelines. SAR information on this model phone is on file with the FCC and can be found under the Display Grant section of <http://www.fcc.gov/oet/fccid> after searching on

FCC ID:2AUXBDSGW-340Additional information on Specific Absorption Rates (SAR) can be found on the Cellular Telecommunications Industry Association (CTIA) web-site at <http://www.wow-com.com>. \* In the United States and Canada, the SAR limit for mobile phones used by the public is 1.6 watts/kg (W/kg) averaged over one gram of tissue. The standard incorporates a substantial margin of safety to give additional protection for the public and to account for any variations in measurements.

### **Body-worn Operation**

This device was tested for typical body-worn operations. To comply with RF exposure requirements, a minimum separation distance of **10mm** must be maintained between the user's body and the handset, including the antenna. Third-party belt-clips, holsters, and similar accessories used by this device should not contain any metallic components. Body-worn accessories that do not meet these requirements may not comply with RF exposure requirements and should be avoided. Use only the supplied or an approved antenna.