

Product Specification

Product Name: S-Serial Smart Gateway

Model Name: DSGW-034

Revision History

Specification		Sect.	Update Description	By
Rev	Date			
1.0	2022-05-27		New version release	

Approvals

Organization	Name	Title	Date

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1 Introduction

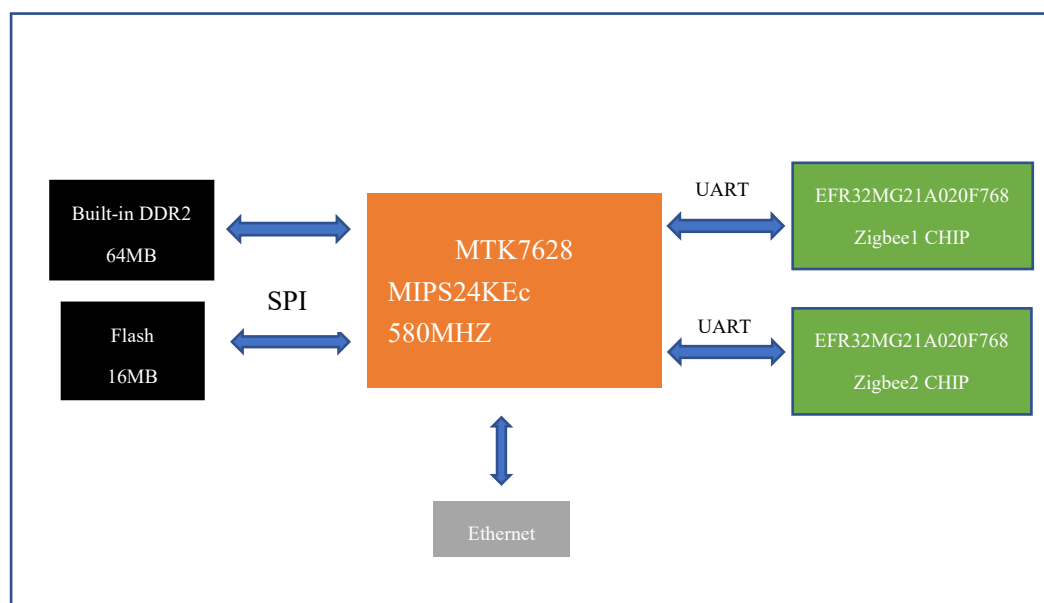
1.1 Purpose& Description

The Smart Gateway DSGW-034 is a gateway product used in the smart home, intelligent security industry, pension services. It a central device, support multiple wireless protocols including Wi-Fi and zigbee3.0. The gateway is equipped with two Zigbee modules, one zigbee module functions as a coordinator, and the other functions as an end device. Users can connect the network through Wi-Fi and Ethernet. Besides, smart sensors can be connected through zigbee3.0.

1.2 Product Feature Summary

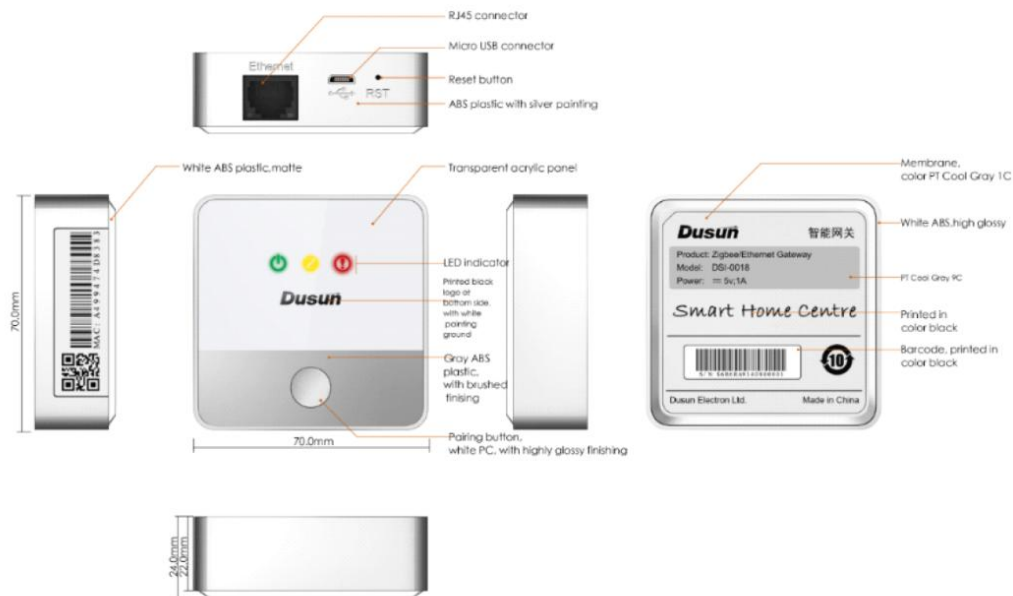
- OS: Linux@ OpenWrt
- Processor: MTK7628 (MIPS24KEc (580MHZ))
- RAM: 64MB Free Space: 16MB (development Space for user)
- Flash: 16MB (up to 64MB) Free Space: 8MB~54MB (development Space for user)
- Support IEEE802.11n, IEEE802.11g,IEEE 802.11b Protocol
- Support ZigBee3.0
- One WAN/LAN variable network port

1.3 Hardware block diagram

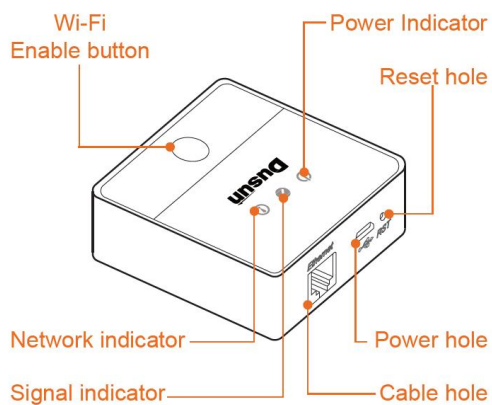


2 Mechanical Requirement

2.1 Drawings



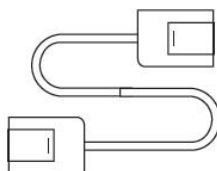
2.2 Interface



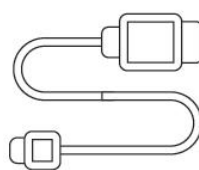
2.3 List of Items



Gateway x 1



Network cable x 1



USB Power cable x 1

3 Specifications

3.1 Technical Specification

Power Adapter	Input:100V~240V AC/50~60HZ Output:5V/2A, Micro USB
Interface	WLAN/LAN port, USB Port
Indicator LEDs	Power LED normally on when powered on Zigbee/BLE/Z-WAVE LED is flash when the signal come Wi-Fi LED normally on after connecting to Wi-Fi for 1-2 sec
Wi-Fi enable button	The Wi-Fi enable button is on the front of the product. After pressing the button, enable the Wi-Fi connection.
Reset Button	The reset button is hole button, After pressing the reset button for more than 5 seconds, the Gateway will be restored to the factory settings.
Wireless protocol	Wi-Fi/Zigbee
Antenna	Wi-Fi/Zigbee1 PCB Antenna; Zigbee2 FPC Antenna
Ethernet	One WAN/LAN variable network port
Operating Temperature	-10°C~70°C

3.2 Performance Requirement

<p>Wi-Fi Performance</p>	<ul style="list-style-type: none"> • IEEE wireless LAN standard: • IEEE802.11n; IEEE802.11g; IEEE 802.11b • Data Rate: IEEE 802.11b Standard Mode:1,2,5.5,11Mbps IEEE 802.11g Standard Mode:6,9,12,18,24,36,48,54 Mbps IEEE 802.11n: MCS0~MCS7 @ HT20/ 2.4GHz band • Sensitivity: HT40 MCS7 : -70dBm@10% PER(MCS7) /2.4GHz band HT20 MCS7 : -71dBm@10% PER(MCS7) /2.4GHz band • Transmit Power: IEEE 802.11n: 16dBm @HT20/40 MCS7 /2.4GHz band IEEE 802.11g: 16dBm @54MHz • IEEE 802.11b: 18dBm @11MHz • Wireless Security: WPA/WPA2, WEP, TKIP, and AES • Working mode : Bridge、Gateway、 AP Client • Range: 50 meters minimum, open field • Transmit Power:17dBm • Highest Transmission Rate: 300Mbps • Frequency offset: +/- 50KHZ • Frequency Range (MHz): 2412.0~2462 • Low Frequency (MHz):2402 • High Frequency (MHz):2462 • E.i.r.p (Equivalent Isotopically Radiated power) (mW)<100mW • Bandwidth (MHz):20MHz/40MHz • Modulation: BPSK/QPSK, FHSSCCK/DSSS, 64QAM/OFDM
<p>Zigbee3.0 Performance</p>	<ul style="list-style-type: none"> • Range: 100 meters minimum, open field • Transmit Power:17.5dBm • Highest Transmission Rate: 300Mbps • Frequency offset: +/- 20KHZ • Receiving Sensibility:-94dBm • Frequency Range (MHz):2405~2480 • Low Frequency (MHz):2405 • High Frequency (MHz):2480 • E.i.r.p (Equivalent Isotopically Radiated power) (mW)<100mW • Bandwidth (MHz):5MHz • Modulation: OQPSK
<p>Ethernet</p>	<p>10/100Mbps</p>

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, RCM

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, and (2) this device must accept any interference received, including interference that may cause undesired operation

This device 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 device 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 device does cause harmful interference to radio or television reception, which can be determined by turning the device 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 device and receiver.
- Connect the device 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

Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment FCC Radiation Exposure Statement The antennas used for this transmitter must be installed to provide a separation distance of at least 20 cm from all persons and must not be co-located for operating in conjunction with any other antenna or transmitter.

Please notice that if the FCC identification number is not visible when the module is installed inside another device, then the outside of the device into which the module is installed must also display a label referring to the enclosed module.

This device contains licence-exempt transmitter(s)/receiver(s) that comply with Innovation, Science and Economic Development Canada's licence-exempt RSS(s). Operation is subject to the

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following two conditions: (1) This device may not cause interference. (2) This device must accept any interference, including interference that may cause undesired operation of the device

Cet appareil contient des émetteurs / récepteurs exemptés de licence conformes aux RSS (RSS) d'Innovation, Sciences et Développement économique Canada. Le fonctionnement est soumis aux deux conditions suivantes : (1) Cet appareil ne doit pas causer d'interférences. (2) Cet appareil doit accepter toutes les interférences, y compris celles susceptibles de provoquer un fonctionnement indésirable de l'appareil

The distance between user and products should be no less than 20cm

La distance entre l'utilisateur et de produits ne devrait pas être inférieure à 20cm