

Product Specification

Product Name: smart linux gateway

Model Name: DSGW-091

Revision History

Specification		Sect.	Update Description	By
Rev	Date			
1.0	2021-01-20		New version release	
1.1	2022-8-15		Delete wifi and lte	

Approvals

Organization	Name	Title	Date



Model List

Feature Mode	Ethernet	Bluetooth5.2	Zigbee3.0	Z-Wave	Lora
DSGW-091	●	●	●	●	●

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1 Introduction

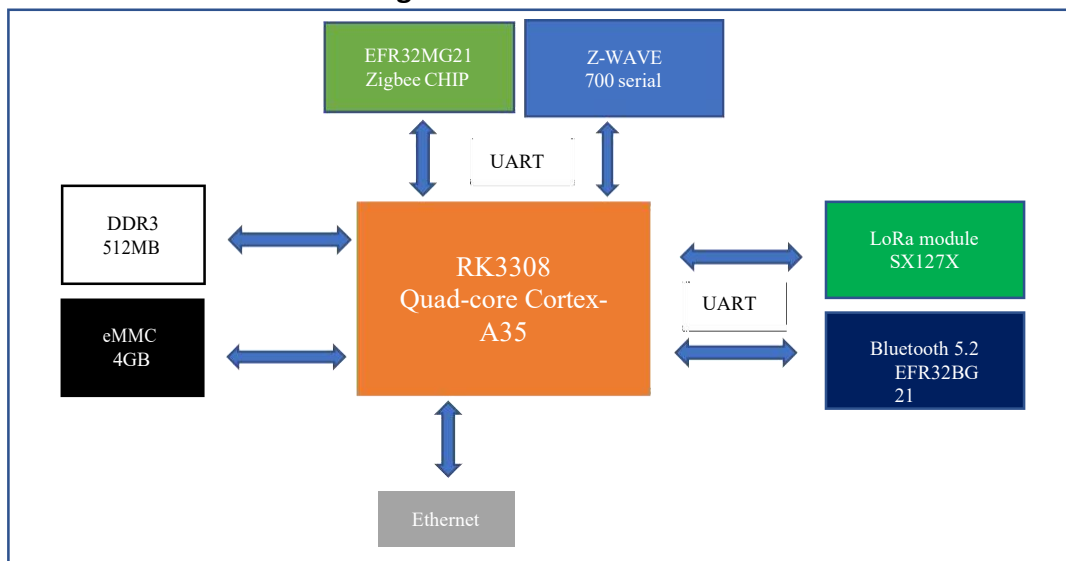
1.1 Purpose& Description

DSGW-091 is a IoT Linux Gateway that with multiple wireless protocol. It provides reliable connectivity for a wide range of wireless IoT devices. The gateway’s modular architecture provides the ability to customize many gateway features providing an off-the-shelf solution that meets your exact needs. Wireless protocol option including Bluetooth, Wi-Fi, Ethernet, USB, ZigBee, Z-wave, LoRa.

1.2 Product Feature Summary

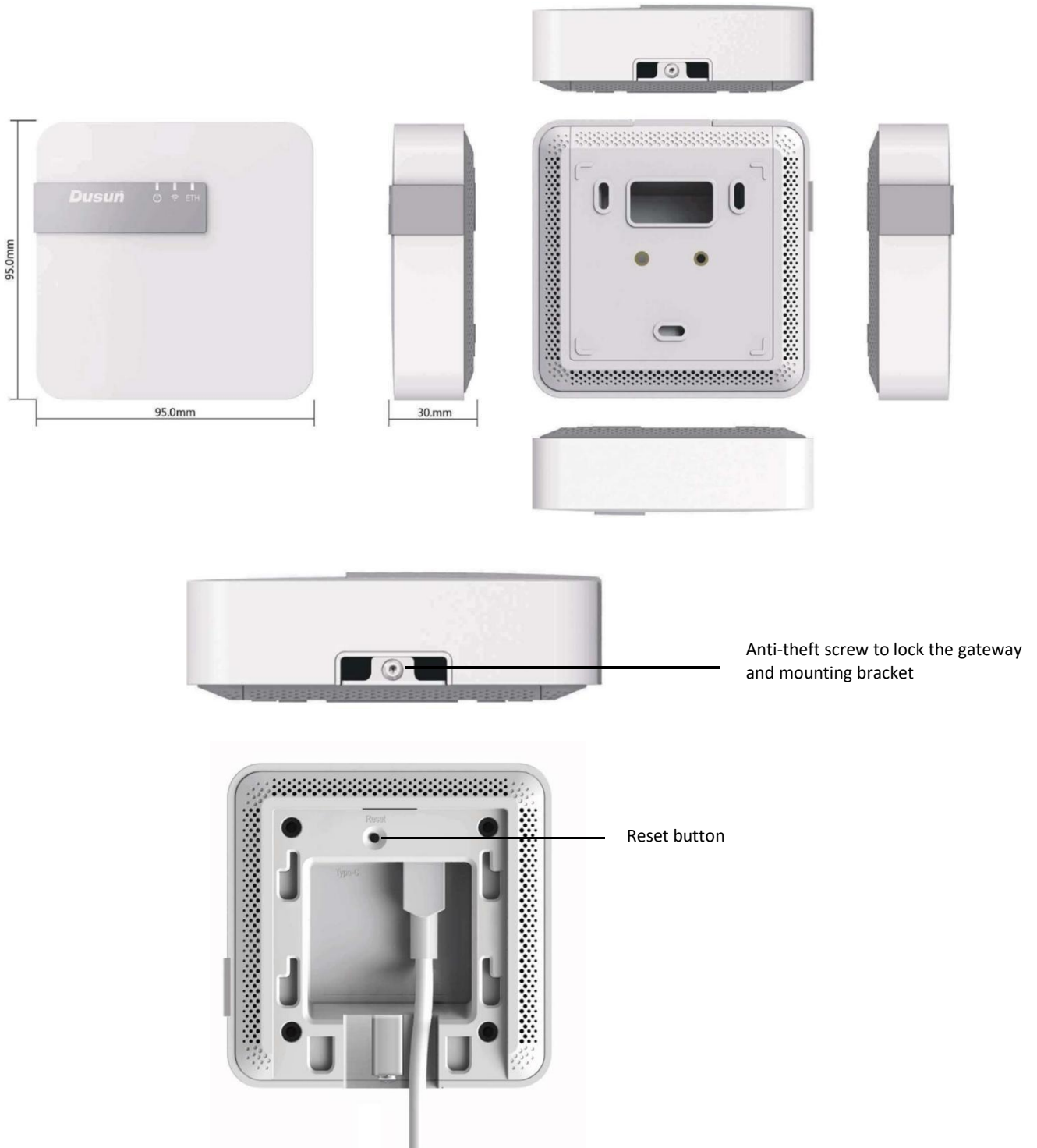
- OS: Linux
- USB 5V type C Power supply and PoE Power supply
- Processor: Quad-core Cortex-A35 up to 1.3GHz
- RAM: 512MB
- eMMC:4GB
- Support Z-WAVE
- Support Zigbee3.0
- Support Bluetooth 5.2
- Support Lora
- One WAN/LAN variable network port

1.3 Hardware block diagram



2 Mechanical Requirement

2.1 Drawings



3 Specifications

3.1 Technical Specification

Power Adapter	Input:100V~240V AC/50~60HZ Output:5V/3A, USB type C
Ethernet	The network interface supports CAT-5/CAT-5E to transmit data and POE Power Supply (voltage range is 44~ 57V). It is WAN/LAN variable.
Indicator LEDs	Power LED normally on when powered on Zigbee/Z-WAVE LED is flash when the signal come WAN LED normally on after connect for 1-2 sec
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.
Installation method	Flat, Ceiling, DIN
RTC	Real Time Clock operated from on board battery
Operating Temperature	-10°C~70°C
Storage Temperature	-40°C~85°C
Cooling	Heat dissipation silicone/aluminum

3.2 Performance Requirement

Zigbee3.0 Performance	<ul style="list-style-type: none"> ● TX Power: 19.5dBm ● Range: 100 meters minimum, open filed ● Receiving Sensibility:-94dBm ● Frequency offset: +/-20KHZ
BLE Performance	<ul style="list-style-type: none"> ● TX Power: 19.5dBm ● Range: 150 meters minimum, open filed ● Receiving Sensibility: -80dBm@0.1%BER ● Frequency offset: +/-20KHZ ● Frequency Range (MHz):2401.0~2483.5 ● Low Frequency (MHz):2400 ● High Frequency (MHz):2483.5 ● E.i.r.p (Equivalent Isotopically Radiated power)(mW)<10mW ● Bandwidth (MHz):2MHz ● Modulation: GFSK
Z-WAVE Performance	<ul style="list-style-type: none"> ● TX power: TX power up to 13dBm ● RX sensitivity: @100kbps -97.5dBm ● Range: 100 meters minimum, open filed ● Default Frequency: 916MHz(Different country with differentfrequency)
LoRa Performance	<ul style="list-style-type: none"> ● Frequency band support: US915 (902MHz-928MHz) ● TX power up to 20dBm

Ethernet	10/100Mbps
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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, Z-wave plus, RoHs

FCC Statement:

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 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.

Caution: Any changes or modifications to this device not explicitly approved by manufacturer could void your authority to operate this equipment.

This equipment complies with FCC radiation exposure limits set forth for an uncontrolled environment. This equipment should be installed and operated with minimum distance 20cm between the radiator and your body.