

Product Specification

Product Name: Smart Gateway
Model Name: DSGW-211

Revision History

Specification		Sect.	Update Description	By
Rev	Date			
1.0	2022-05-30		New version release	

Approvals

Organization	Name	Title	Date

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1. Introduction

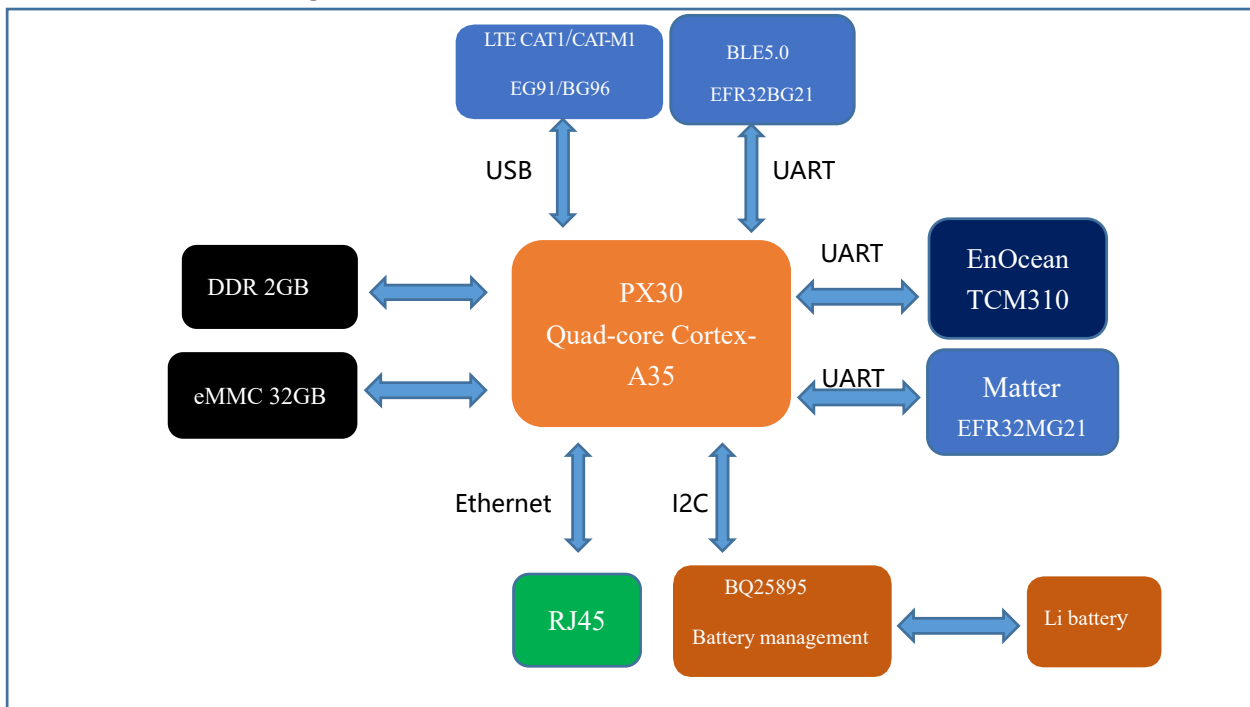
1.1 Purpose& Description

DSGW-211 is EnOcean gateway. It works with OpenHAB. It provides reliable connectivity for a wide range of EnOcean IoT devices. Once started, OpenHAB will automatically scan your network for known devices and allow you to easily set them up.

1.2 Product Feature Summary

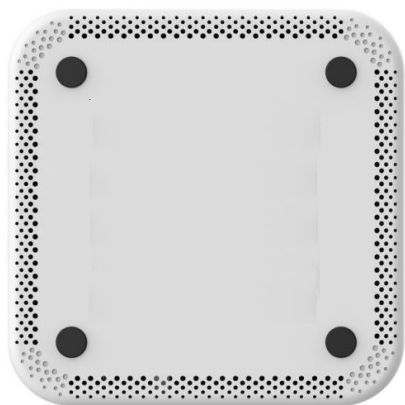
- Support 5V USB type-c power supply
- Support EnOcean, TCM310
- One WAN/LAN variable network port
- RGBs indicator ring
- Support USB2.0
- Support backup Li battery, last 12 hours
- Support LTE cat1/LTE catM1
- Support BLE 5.0
- Support Matter

1.3 Hardware block diagram



2. Mechanical Requirement

2.1 Drawings



3. Specifications

3.1 Technical Specification

Category	Specifications
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Power Supply	USB type-C 5V/3A
Reset button	The reset button is hole button, hardware reset.
Button	Software custom button.
Network Interface	RJ45
USB	USB2.0
SIM card	Micro SIM card, 12mm*15mm
SD card	Up to 128GB SD card (Design reserved, not required for this project)
Indicator LEDs	RGB indicator ring
Li battery	6000mAh (last 12 hours at 25°C)
Wireless protocol	EnOcean
Antenna	External antenna (SMA connector)
Installation method	Flat,Ceiling,DIN
RTC	Real Time Clock operated from on board battery
Operating Temperature	0°C~55°C
Storage Temperature	-10°C~60°C
Operating humidity	10%~90%
IP rating	IP22
Cooling	Heat dissipation silicone/aluminum
Current	300mA@5V

3.2 Performance Requirement

CPU	<ul style="list-style-type: none"> Quad-core Cortex A35
RAM	<ul style="list-style-type: none"> 2GB
eMMC	<ul style="list-style-type: none"> 32GB
EnOcean	<ul style="list-style-type: none"> Radio frequency: 868 MHz for Europe and other countries adopting RED 902 MHz for USA (FCC specification) and Canada (IC specification) EnOcean interface: TCM 310 Transmit power: 3dBm maximum Receive sensitivity: -97 dBm
Bluetooth	<ul style="list-style-type: none"> TX Power: 6dBm Range: 150 meters minimum, open filed Receiving Sensibility: -93dBm@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

	<ul style="list-style-type: none"> Modulation: GFSK
Matter	<ul style="list-style-type: none"> TX Power: 17.5dBm Range: 100 meters minimum, open filed Receiving Sensibility: -94dBm 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)<100mW Bandwidth (MHz):5MHz Modulation: OQPSK
LTE Cat M1	<ul style="list-style-type: none"> Operation Frequency Band: 850/900/1800/1900MHZ Global: LTE: FDD: B1/B2/B3/B4/B5/B8/B12/B13/B18/B19/B20/B26/B28 North America: LTE TDD: B2/B4/B12/B13 LTE TDD:B39(for cat.M1 only)
LTE Cat1	<ul style="list-style-type: none"> LTE FDD: B1/B3/B7/B8/B20/B28 WCDMA: B1/B8 LTE FDD Data rate:10(DL)/5(DL)
WAN/LAN	<ul style="list-style-type: none"> 10/100M bps

3.3 Software Requirement

System	OpenHAB
Add-on	EnOcean Binding

Please refer to <https://www.openhab.org/addons/bindings/enoclean/>

4. QA Requirements

4.1 Quality and Testing Information

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

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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.

To comply with RF exposure requirements, a minimum separation distance of 20cm must be maintained between the user's body and the equipment, including the antenna.