

Product Specification

Product Name: Smart Touch Panel Gateway

Product Model: DSGW-120V2

Revision History

Specification		Sect.	Update Description	By
Rev.	Date			
1.0	2023-01-17		New version release	Li
1.1	2023-04-23		Delete tuya-zigbee function	Hubert

Approvals

Organization	Name	Title	Date

Model List



Feature \ Model	Wi-Fi 2.4G/5.0	LTE	Bluetooth 5.2	Zigbee 3.0	USB	Ethernet	RS485	Z-WAVE
DSGW-120V2-1	•	•	•	•	•	•	•	•
DSGW-120V2-2	•	•	•		•	•	•	

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1 Product Description

1.1 Purpose and Description

DSGW-120 Smart Touch Panel Gateway is a multi-functional control panel designed to manage and optimize your smart home experience, providing convenient control of all your devices from one place. It is designed for developers to use when developing their IoT gateway solutions.

1.2 Product Feature Summary

Unlock the Full Potential of Your Smart Home Automation with Powerful Hardware

Featuring a powerful PX30 processor, an 8-inch IPS capacitive touchscreen display, 2GB RAM, and 8GB eMMC storage, it offers seamless performance and ample storage space for all your smart home needs.

Multi-Protocol Support for Seamless Integration

With the ability to communicate using protocols such as Zigbee, Z-Wave, Bluetooth, and Wi-Fi. This device can work with various devices, regardless of their protocols.

Built-in Microphone and Speaker

With the built-in microphone and speaker, you can use voice commands to control your smart devices. Additionally, you can engage in two-way conversations with visitors through the camera doorbell utilizing the device.

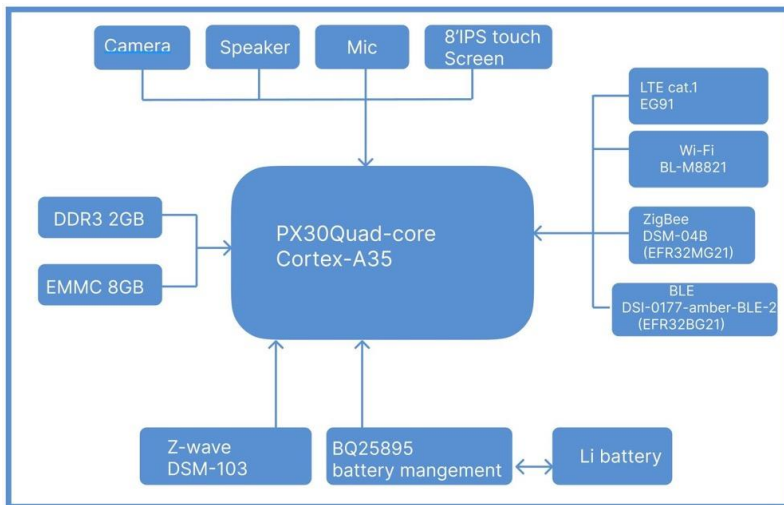
Compatible with various Home Automation Systems

Designed to be compatible with kinds of home automation platforms, such as Home Assistant and openHAB, which are widely used open-source solutions for home automation. These platforms can easily integrate and manage many smart home devices.

Effortless installation with convenient wall-mounting

Designed for easy installation using wall mounting, which provides a clean and streamlined look, reducing clutter and enhancing the overall appearance of the space.

1.3 Hardware Block Diagram



2 Mechanical Requirement

2.1 Drawings



2.2 Dimension



3 Specification

3.1 Technical Specification

Item	Parameter
CPU	PX30
RAM	2GB
eMMC	8GB
OS	Android 10/Debian 10
Power Adapter	DC/AC 12~24V/2A
Interface	1*WLAN/LAN port, 1*RS485
SIM slot	1
Camera	5 million pixels, Panoramic depth camera
SD card	1
Speaker	1
Microphone	1
RTC	Real-Time Clock operated from the onboard battery
Li battery	Embedded 2500mAh/ 4hr battery
Auto Power-On	When the main power is lost, the system's auto power-on feature activates the UPS mode and utilizes the battery. Similarly, it switches back to the primary power source when restored.
Reset Button	The reset button is the hole button; After pressing the reset button for more than 5 seconds, the Gateway will be restored to the factory settings.
Power switch	ON/OFF
Power LED	Green when plugged in and red if the battery is low.

3.2 Wireless Performance

<p>Wi-Fi Performance</p>	<p>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): 2412.0~2483.5 Low Frequency (MHz):2400 High Frequency (MHz):2483.5 E.i.r.p (Equivalent Isotopically Radiated power) (mW)<100mW Bandwidth (MHz):20MHz/40MHz Modulation: BPSK/QPSK, FHSSCCK/DSSS, 64QAM/OFDM</p>
<p>Zigbee3.0 Performance</p>	<p>Range: 100 meters minimum, open field Transmit Power:17.5dBm Highest Transmission Rate: 2Mbps Frequency offset: +/- 20KHZ Receiving Sensibility:-94dBm 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</p>

Bluetooth Performance	Bluetooth Protocol: Bluetooth 5.2 TX Power: 19.5dBm Range: 150 meters minimum, open filed Receiving Sensibility: -80dBm@0.1%BER Frequency offset: +/-20KHZ
Z-wave Performance	TX power up to13dBm (20mW) RX sensitivity: @100kbps-97.5dBm Range: 100 meters minimum, open filed Default Frequency: 916MHz(Different country with different frequency)
LTE Cat.1	-E(Europe LTE-FDD: B1/B3/B7/B8/B20/B28A;WCDMA: B1/B8;GSM: B3/B8 -EX(Europe)LTE-FDD: B1/B3/B7/B8/B20/B28: WCDMA: B1/B8: GSM: B3/B8 -NAXD(North America)LTE-FDD: B2/B4/B5/B12/B13/B25/B26;WCDMA: B2/B4/B5 -NA(North America)LTE-FDD: B2/B4/B5/B12/B13;WCDMA: B2/B4/B5 -NAX(North America)LTE-FDD: B2/B4/B5/B12/B13/B25/B26;WCDMA: B2/B4/B5 -VX (Verizon)LTE-FDD:B4/B13 -AUX(LAT /ANZ) LTE-FDD:B1/B2/B3/B4/B5/B7/B8/B28/B66;WCDMA: B1/B2/B5/B8: GSM: B2/B3/B5/B8
Ethernet	10/100M bps

4 QA Requirement

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

5 Installation (Wall Mounting)



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 **20 cm** must be maintained between the user's body and the **device**, including the antenna.