

DR-CHG20 Series LoRaWAN Indoor Gateway



1. Product Description

The CHG20 series is a new generation of IoT gateway devices, widely used in Low Power Wide Area Networks (LPWAN). The gateway supports 4G, 10/100M Ethernet connectivity to cloud servers, and Wi-Fi for parameter configuration.

The device integrates the MT7688 chip as the core system processor and is equipped with an SX1302 baseband processing chip, enabling parallel 8-channel uplink and 1-channel downlink. The device operates in standard half-duplex mode and supports an embedded Network Server (NS) and Application Server (AS) software, eliminating the need to build a separate LoRaWAN server for direct data output.

2. Key Features

- **LoRa Performance:** Supports standard half-duplex LoRaWAN, 8 uplink channels, 1 downlink channel. Maximum transmit power up to 27dBm; receiver sensitivity reaches -142dBm@SF12.
- **Connectivity:** Supports Ethernet, Wi-Fi, and optional 4G.
- **Protocols:** Supports LoRaWAN standard protocols (Class A/B/C), UDP, and MQTT.
- **System Stability:** Features a watchdog design for system stability and a robust anti-drop mechanism to ensure terminal connectivity.
- **Management:** Supports Web interface configuration, as well as local and cloud-based upgrades.

3. Hardware Specifications

Feature	Specification
CPU	MT7688 (580MHz)
RAM	128Mb DDR2
Flash	32M Nand Flash
Wi-Fi	802.11 b/g/n/v; supports AP, STA, AP+STA, and WDS
4G (Optional)	Quectel EC20, supports CAT4

4. Communication Parameters

- **LoRa Frequency Range:** Supports global LoRaWAN frequency plans including EU433, CN470, CN779, EU868, AS923, AU915, and KR920.
- **LoRa Communication Range:** Up to 10km (line-of-sight), 5km (urban environment).
- **Wi-Fi Parameters:**
 - **Rate:** 150Mbps
 - **Antenna:** Built-in FPC high-gain antenna
- **4G Parameters:**
 - **Band:** LTE FDD: B1/B3/B8; LTE TDD: B38/B39/B40/B41; TDSCDMA:

B34/B39; WCDMA: B1/B8; CDMA: 1x/EVDO: BC0; GSM: 900/1800

- **Rate:** Uplink: 150Mbps; Downlink: 50Mbps

5. Electrical & Physical Characteristics

Category	Specification
Power Input	DC 5V
Current	Max. 3A
Power Consumption	<5W (average)
Dimensions	150mm * 150mm * 45mm
Weight	Approx. 0.4kg
Operating Temp.	-20~70°C
Storage Temp.	-40~85°C
Humidity	5~95% (non-condensing)

6. Interfaces

Interface Type	Specification
Power Interface	Micro USB
Ethernet Port	RJ45
LoRa Antenna	SMA folding rubber rod antenna *1
4G Antenna	SMA folding rubber rod antenna *1
SIM Card	Medium size