HT-M00

LoRa Gateway

document version

Version	Time	Description
Rev. 1.0	2021-8-16	Preliminary version

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Content

1. Description

1.1 Overview

HT-M00 is a low-cost dual channel gateway.It is located to smart family LoRa applications that work with less than 30PCS LoRa nodes.This gateway is based on two SX1276 chips driven by ESP32. We wrote a software mixer (also called a baseband simulation program) to make it possible to achieve 125KHz SF7~SF12 spreading factor monitoring.

HT-M00 are available in three product variants:

Table 1.1 Product model list

No.	Model	Description
1	HT-M00-470T510	470~510MHz working LoRa frequency, used for China mainland (CN470) LPW band.
2	HT-M00 -863T870	863~870MHz working LoRa frequency, used for EU868, IN865 LPW bands.
3	HT-M00-902T923	902~923MHz working frequency, used for AS923, US915, AU915, KR920 LPW bands.

1.2 Product features

- CE Certificate,
- ESP32 + SX1276,
- Size: 75 x 30 x 13mm,
- Emulates LoRa demodulators,

- Automatic adaptive spread spectrum factor, SF7 to SF12 for each channel is optional,
- Maximum output: 18 ± 1dBm,
- Communication interface Type-C USB,
- The power supply voltage:5V,
- Support for LoRaWAN Class A, Class C protocols,
- Frequency range:
  - Europe – 868MHz ISM band (863MHz to 870MHz range),
  - Europe – 433MHz ISM band,
  - USA/Australia – 915MHz ISM band (902MHz to 928MHz range),
  - China – 470MHz ISM band (470MHz to 510MHz range).

2. Specifications

2.1 General specification

Table 2.1 General specification

Parameters	Description
MCU	ESP32-D0WDQ6
LoRa Chipset	SX1276
Receiving Sensitivity	-110dBm @ 300bps
Frequency	863～870MHz, 902～928MHz, 470～510MHz
Interface	Type-C USB x 1
Max. TX Power	17dB ± 1dB
Operating temperature	-20 ~ 70 ℃
Dimensions	30 x 76 x14 mm

2.2 Operating conditions

2.2.1 Power Supply

Table 2.2: Power supply range

Condition	Min.	Typical	Max.	Unit
USB powered（≥500mA）	4.80	5.00	6.00	V

2.2.2 Power consumption

Table 2.3: Working current

Condition	Min.①	Typical	Max.②
2 Channel Listening (Receive mode)		130mA	
LoRa 14dB Output(Typical)		189mA	

① Measured when connected to the Internet via Wi-Fi mode.

② Measured when connected to the Internet via ethernet mode.

3. Resource

3.1 Relevant resource

- Downloadable Resources: https://resource.heltec.cn/download/HT-M00

3.2 Heltec Contact Information

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