

The background features a large, flowing blue arc that curves from the top left towards the right. Below this arc, there is a grid of small squares in various shades of blue and white, some of which are slightly offset or faded, creating a sense of depth and movement. The overall design is modern and technological.

LoRaWAN Module Catalogue

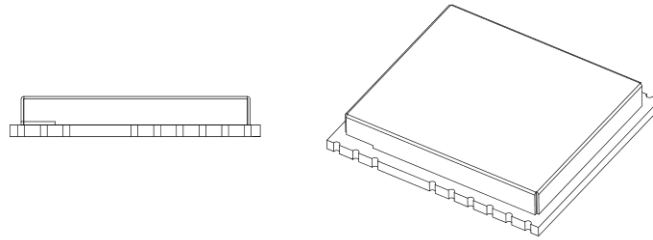
Model: MJP00.R920

MJP00

LoRaWAN Module

Product Overview

MJP00 LoRaWAN module is a high-performing, low-power consumption device designed for long-range wireless communication. It enables efficient data transmission in various IoT applications, offering reliable connectivity over extended distances.



Key Features

- **Long-Range Communication:** Capable of transmitting data over several kilometers in ideal outdoor conditions, ensuring wide - area coverage for your IoT deployments.
- **Low Power Consumption:** Optimized for energy efficiency, it allows devices to operate for extended periods on battery power, reducing maintenance costs and frequency.
- **High Data Rate:** Supports data rates suitable for various IoT applications, enabling quick and efficient transfer of information.
- **Robust Security:** Implements advanced encryption and security protocols to protect data transmitted over the network, ensuring the confidentiality and integrity of your information.
- **Easy Integration:** Designed with standard interfaces and protocols, making it simple to integrate into existing systems and applications.

Applications

- **Smart Water Meters:** Accurately measure and monitor water consumption in real - time, helping utility companies optimize water distribution, detect leaks, and improve billing accuracy. The module enables efficient data transmission from water meters to the central system, reducing the need for manual meter reading and enhancing water resource management.
- **Smart Gas Meters:** Facilitate remote monitoring of gas usage, enabling utilities to collect consumption data automatically. This helps in accurate billing, efficient gas distribution, and timely detection of potential gas leaks, enhancing safety and operational efficiency.
- **Smart Power Distribution:** Enhance the reliability and efficiency of power distribution systems. For example, in recloser, the module enables remote

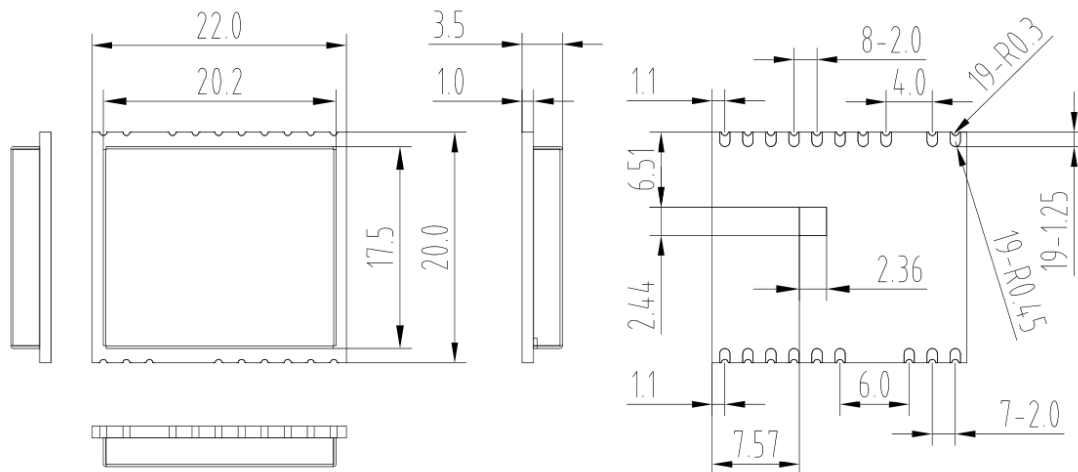
monitoring and control. It allows for real - time data collection on power flow, equipment status, and fault detection. This enables utilities to quickly respond to power outages, perform predictive maintenance, and optimize power distribution, reducing downtime and improving the overall efficiency of the power grid.

- **Industrial IoT:** Collect data from sensors and equipment in industrial settings for predictive maintenance, process optimization, and asset tracking.
- **Smart Cities:** Enable applications like smart parking, waste management, and environmental monitoring to enhance city infrastructure and services.

Product Specifications

Physical Specifications	
Dimensions	22mm × 20mm × 3.5mm
Storage Temperature	-40°C to 85°C
Operating Temperature	-25°C to 70°C
Power Supply	1.8~3.6 VDC
Transmitting(mA)	Vmin = 120 Vtype = 130 Vmax = 140
Receiving(mA)	Vtype = 7 Vmax = 8
Sleeping(μA)	Vtype = 2
LoRaWAN®	
Chipset	SX1262
Frequency	EU868/US915/AU915
Receiving Sensitivity	-124dBm@SF7_BW125KHz
Transmit Power	19±1 dBm
Protocol	Class A / Class C
Communication Distance	5km@SF8

Product Dimensions



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.

Warning: 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.

FCC Radiation Exposure Statement:

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 & your body.

The OEM must certify the final end product to comply with unintentional radiators (FCC Sections 15.107 and 15.109) before declaring compliance of the final product to Part 15 of the FCC rules and regulations. Integration into devices that are directly or indirectly connected to AC lines must add with Class II Permissive Change.

The OEM must comply with the FCC labeling requirements. If the module's label is not visible when installed, then an additional permanent label must be applied on the outside of the finished product which states: "Contains transmitter module FCC ID: 2AYHE-2402A". Additionally, the following statement should be included on the label and in the final product's user manual: "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 interferences, and (2) this device must accept any interference received, including interference that may cause undesired operation."

The module is limited to installation in mobile or fixed applications. Separate approval is required for all other operating configurations, including portable configuration with respect to Part 2.1093 and different antenna configurations.

A module or modules can only be used without additional authorizations if they have been tested and granted under the same intended end - use operational conditions, including simultaneous transmission operations.

When they have not been tested and granted in this manner, additional testing and/or FCC application filing may be required. The most straightforward approach to address additional testing conditions is to have the grantee responsible for the certification of at least one of the modules submit a permissive change application.

When having a module grantee file a permissive change is not practical or feasible, the following guidance provides some additional options for host manufacturers. Integrations using modules where additional testing and/or FCC application filing(s) may be required are: (A) a module used in devices requiring additional RF exposure compliance information (e.g., MPE evaluation or SAR testing); (B) limited and/or split modules not meeting all of the module requirements; and (C) simultaneous transmissions for independent collocated transmitters not previously granted together.

This Module is full modular approval, it is limited to OEM installation ONLY.

Integration into devices that are directly or indirectly connected to AC lines must add with Class II Permissive Change. (OEM) Integrator has to assure compliance of the entire end product include the integrated Module. Additional measurements (15B) and/or equipment authorizations (e.g. Verification) may need to be addressed depending on co-location or simultaneous transmission issues if applicable. (OEM) Integrator is reminded to assure that these installation instructions will not be made available to the end user