

# Module CC1101

SKU:M146

MODULE  
**CC1101**

M5STACK



PA: +10dBm  
855 ~ 925MHz  
Sub-1GHz Transceiver  
2-FSK / 4-FSK /  
GFSK / MSK / ASK / OOK





## Description

Module CC1101 is a high-performance wireless communication module. It adopts the E07-900M10S module solution (built-in CC1101 low-power Sub-1 GHz RF transceiver) with an operating frequency range of 855 ~ 925MHz. It supports 2-FSK, 4-FSK, GFSK, MSK, ASK, and OOK modulation methods, providing stable wireless data transmission while maintaining low power consumption. The module uses an SPI communication interface and features onboard DIP switches for flexible pin switching, supporting multiple stacked modules for functional expansion. It is suitable for wireless control applications such as industrial automation, smart homes, automatic lighting, and robotics.

## Features

- SPI serial communication protocol
- E07-900M10S module (based on CC1101)
- Built-in DIP switch for pin selection
- Supports multiple module stacking
- CC1101 low-power Sub-1 GHz RF transceiver
- Independent 64-byte RX FIFO and TX FIFO
- Supports RSSI (Received Signal Strength Indicator) and LQI (Link Quality Indicator)
- Operating frequency range: 855 ~ 925 MHz
- Supports 2-FSK, 4-FSK, GFSK, MSK, ASK, OOK modulation methods
- Receiving sensitivity: up to -109 dBm (at 1.2kbps rate)
- Low power consumption in sleep mode
- External SMA antenna interface

- Development Platform:
  - Arduino
  - UiFlow2

## | Includes

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- 1 x Module CC1101
- 1 x SMA rubber antenna

## | Applications

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- Industrial automation
- Smart home systems
- Automatic lighting
- Robotics

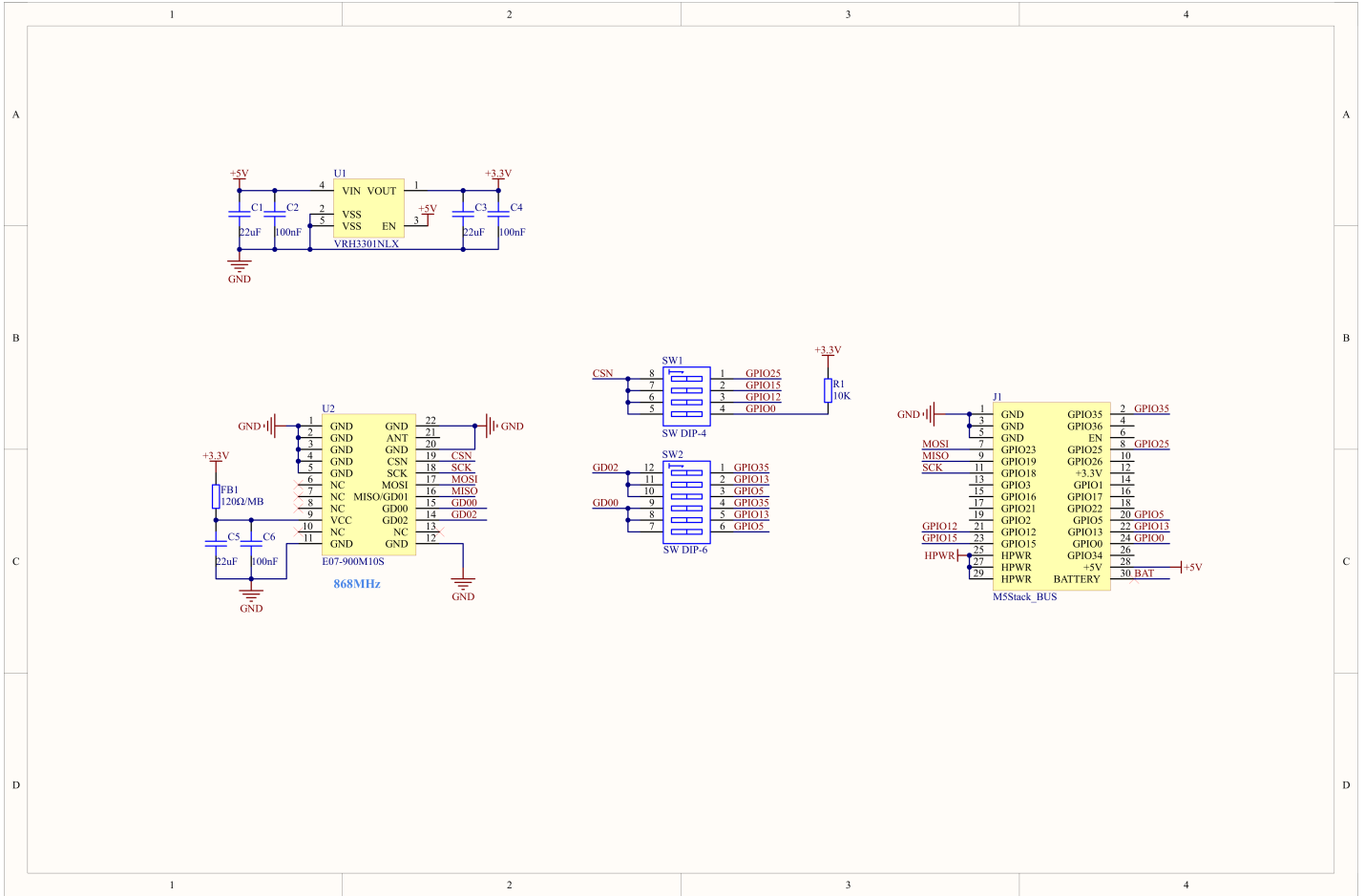
## | Specifications

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Specification	Parameter
RF Transceiver Module	E07-900M10S module (based on CC1101)
Operating Frequency	855 ~ 925 MHz
Communication Interface	SPI
Programmable Bit Rate	0.6 ~ 500kbps
Antenna	Rubber antenna @2.5dBi Length: 110 x 8mm
Communication Range	430m (Frequency: 868MHz, BW: 58kHz)
Transmit Power	+10 dBm
Receive Sensitivity	Up to -109 dBm
Sleep Power Consumption	DC 5V@26.48uA
Standby Power Consumption	DC 5V@1.74mA
Working Power Consumption	Receive mode: DC 5V@17.11mA Transmit mode: DC 5V@30mA Sleep mode: DC 5V@26.48uA
Product Size	54.0 x 63.6 x 13.1mm
Product Weight	15.8g
Package Size	134.0 x 95.0 x 15.7mm
Gross Weight	38.9g

## Schematics

- [Module CC1101 Schematics PDF](#)



# PinMap

## M5-Bus

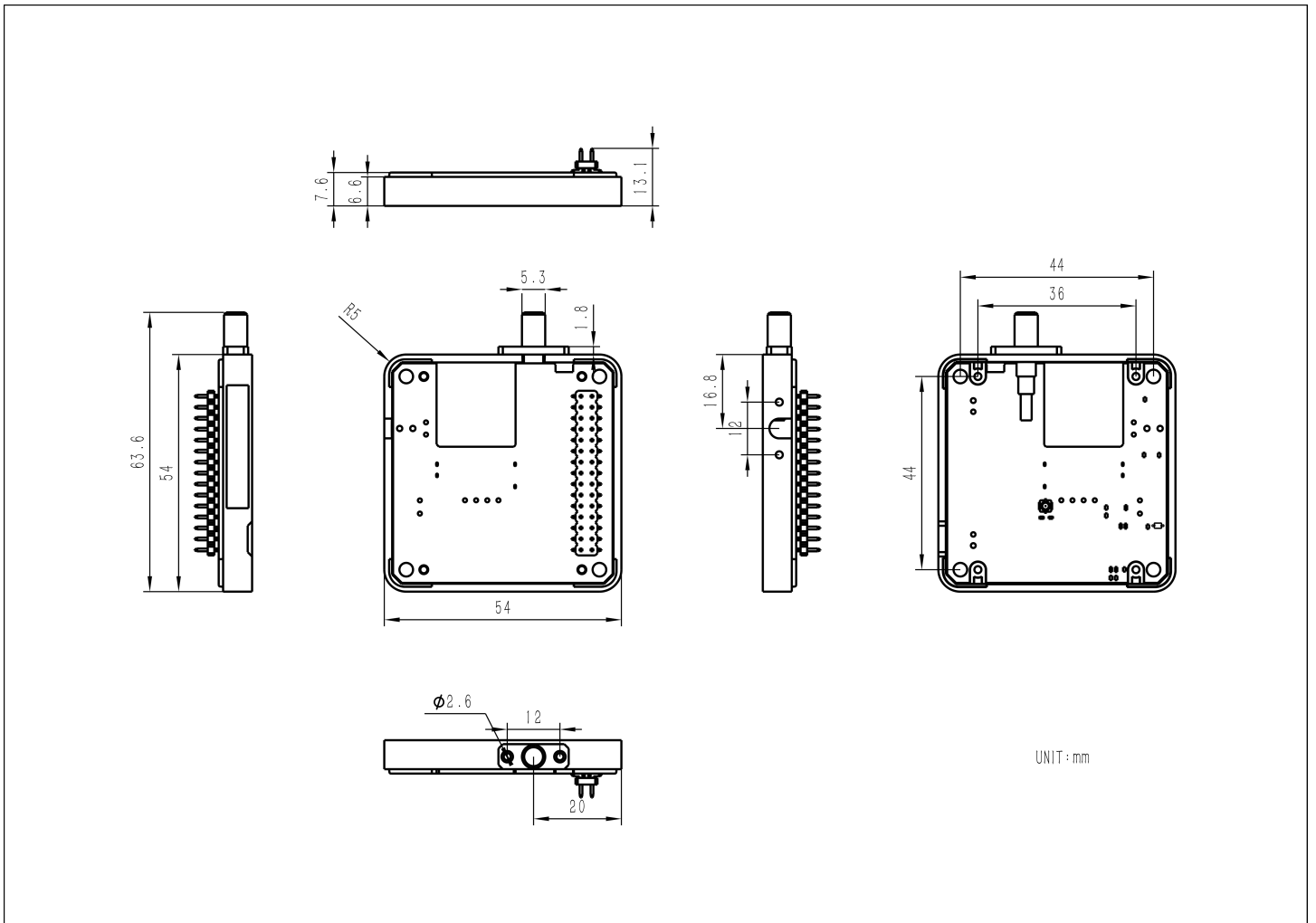
### DIP Switch

The **SW**-marked pins on the lower M5-Bus can be switched via the DIP switch to adapt to different controller devices. **GD00** and **GD02** pins share the same three selectable IOs, please choose different pins to avoid functional conflicts.

PIN	LEFT	RIGHT	PIN
GND	1	2	GD00 / GD02 (SW)
GND	3	4	
GND	5	6	
MOSI	7	8	CSN (SW)
MISO	9	10	
SCK	11	12	
	13	14	
	15	16	
	17	18	
	19	20	GD00 / GD02 (SW)
CSN (SW)	21	22	GD00 / GD02 (SW)
CSN (SW)	23	24	CSN (SW)
HPWR	25	26	
HPWR	27	28	5V
HPWR	29	30	

## | Model Size

- [Module CC1101 Model Size PDF](#)



## Datasheets

- [Module CC1101 Datasheet](#)
- [E07-900M10S](#)

## Softwares

### Arduino

- [Module CC1101 Arduino Library](#)
- [Module CC1101 Arduino Quick Start](#)

### UiFlow2

- [Module CC1101 UiFlow2 Docs](#)

## Video

- [Module CC1101 Product Introduction and Function Demonstration](#)

[M146-Module-CC1101-video-en.mp4](#)