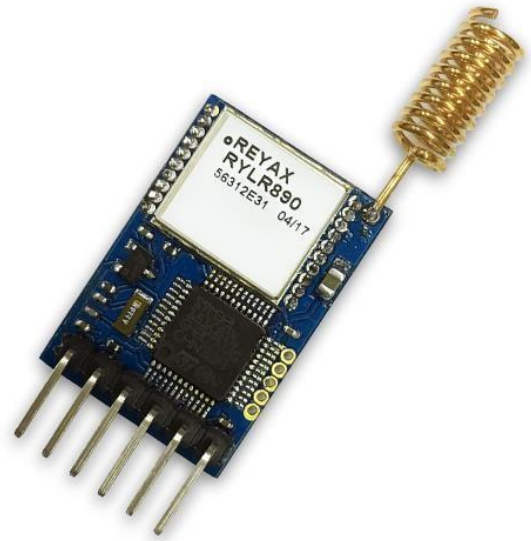


# RYLR896

UART Interface  
868/915 MHz Lora  
Antenna Transceiver Module

Datasheet



## 产品介绍

RYLR896 收发模块的特点在于采用 LoRa 长距离调制解调器，提供超长距离扩频通信和高抗干扰性，并同时最大限度地降低其电流消耗。此模块已过 NCC 与 FCC 认证。

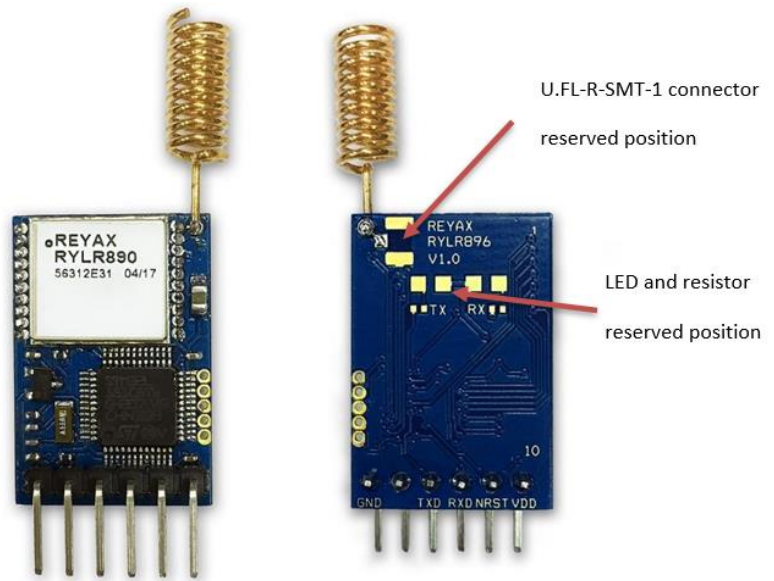
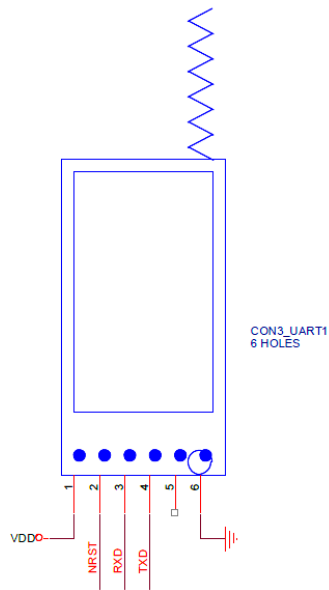
## 功能与特色

- Semtech SX1276 核心
- 优异的隔绝干扰抑制
- 低接收电流
- 高灵敏度
- 利用 AT Commands 控制，易于操作
- 127 dB RSSI 动态范围
- 设计集成天线
- AES128 数据加密
- 台湾 NCC，美国 FCC 认证

## 应用范围

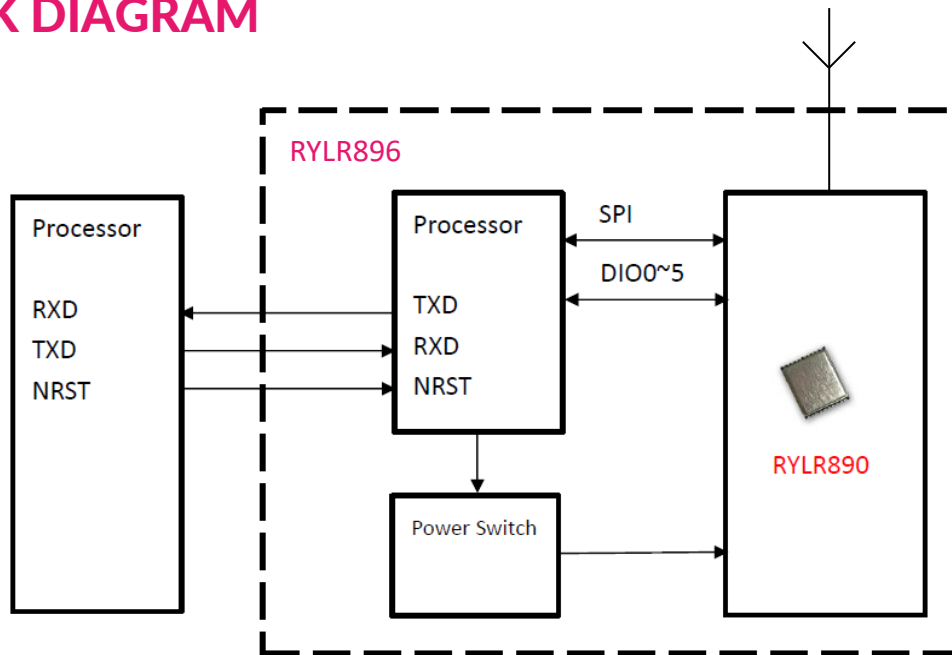
- 物联网应用
- 移动设备
- 家庭保全
- 工业监控和控制设备
- 汽车警报

## PIN DESCRIPTION



Pin	Name	I/O	Condition
1	VDD	I	Power Supply
2	NRST	I	RESET(Active Low) 100K $\Omega$ Internal pull up, Pull down at least 100ms
3	RXD	I	UART Data Input
4	TXD	O	UART Data Output
5	NC	-	
6	GND	-	Ground

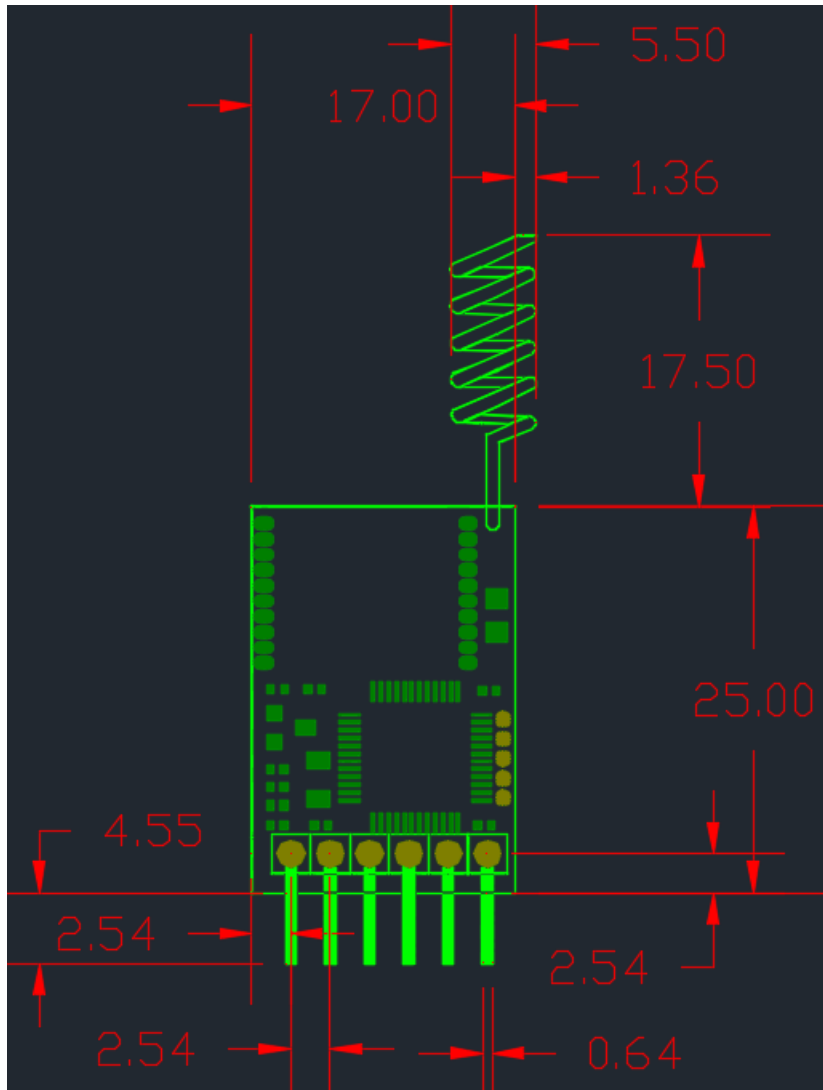
## BLOCK DIAGRAM



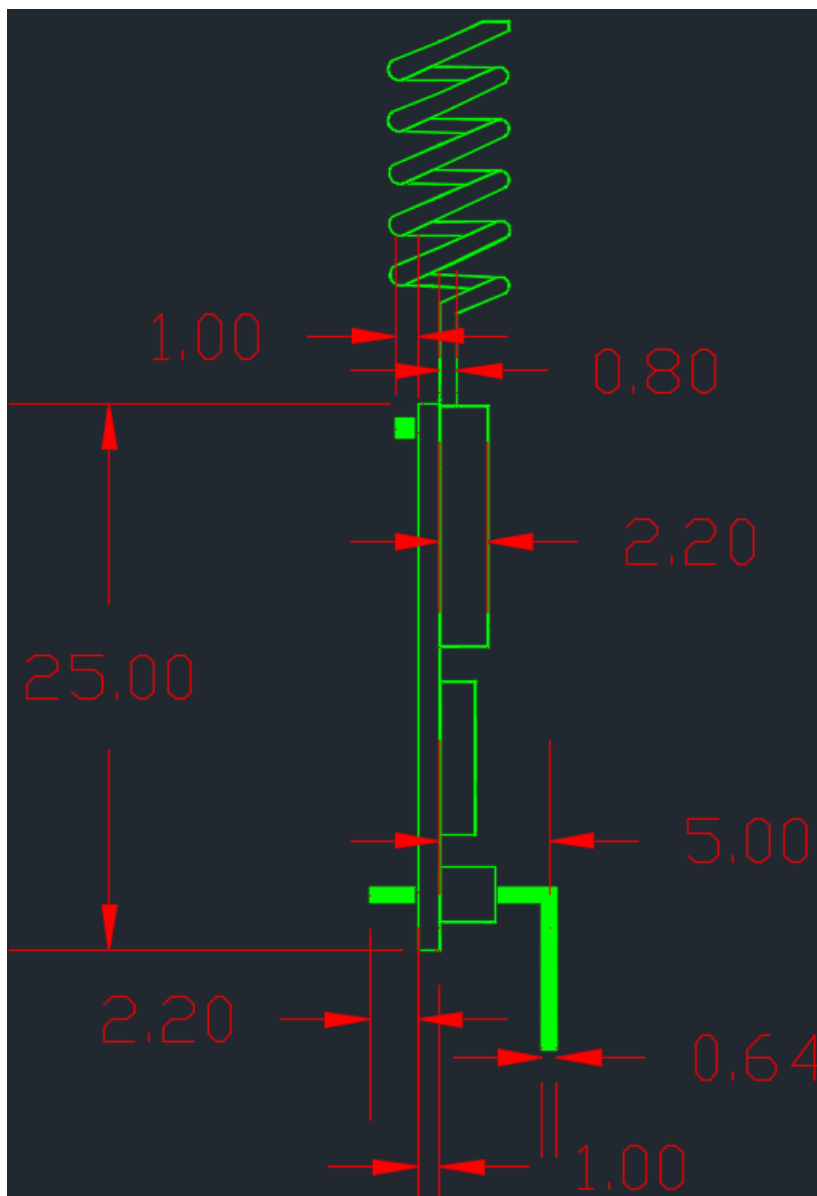
## SPECIFICATION

Item	Min.	Typical	Max.	Unit	Condition
VDD Power Supply	2	3.3	3.6	V	VDD
RF Output Power Range	-4		15	dBm	
Filter insertion loss	1	2	3	dB	
RF Sensitivity	-148			dBm	
RF Input Level			10	dBm	
Frequency Range	862	868/915	1020	MHz	
Frequency Accuracy		±2		ppm	
Communication Range		4.5	15	KM	Depend on RF parameter
Transmit Current		43		mA	RFOP = +15 dBm
Receive Current		16.5		mA	AT+MODE=0
Sleep Current		0.5		uA	AT+MODE=1
Baud rate	300	115200	115200	bps	8, N, 1
Digital Input Level High	0.7*VDD		VDD	V	VIH
Digital Input Level Low	0		0.3*VDD	V	VIL
Digital Output Level High	0.9		VDD	V	VOH
Digital Output Level Low			0.1	V	VOL
Cycling (erase / write) EEPROM data memory		300		K	Cycles
Weight		7		g	
Operating Temperature	-40	25	+85	°C	

## DIMENSIONS



Unit : mm



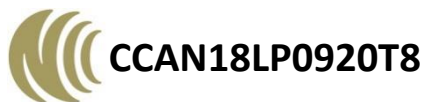
Unit : mm

## 认证信息

### Taiwan NCC Statement 低功率电波辐射性电机管理办法:

第十二条 经型式认证合格之低功率射频电机，非经许可，公司、商号或用户均不得擅自变更频率、加大功率或变更原设计之特性及功能。

第十四条 低功率射频电机之使用不得影响飞航安全及干扰合法通信；经发现有干扰现象时，应立即停用，并改善至无干扰时方得继续使用。前项合法通信，指依电信法规定作业之无线电通信。低功率射频电机须忍受合法通信或工业、科学及医疗用电波辐射性电机设备之干扰。



### 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.

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.

Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

### LABEL OF THE END PRODUCT:

The final end product must be labeled in a visible area with the following " Contains TX FCC ID : QLY-RYB070I ". If the size of the end product is larger than 8x10cm, then the following FCC part 15.19 statement has to also be available on the label: This device complies with Part 15 of 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.



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