

RYLR998

UART Interface
868/915 MHz LoRa®
Antenna Transceiver Module

Datasheet



PRODUCT DESCRIPTION

The RYL998 transceiver module feature the LoRa® long range modem that provides ultra-long range spread spectrum communication and high interference immunity whilst minimizing current consumption.

FEATURES

- NUVOTON MCU & Semtech LoRa® Engine
- Excellent blocking immunity
- Smart receiving power saving mode
- High sensitivity
- Control easily by AT commands
- Built-in antenna

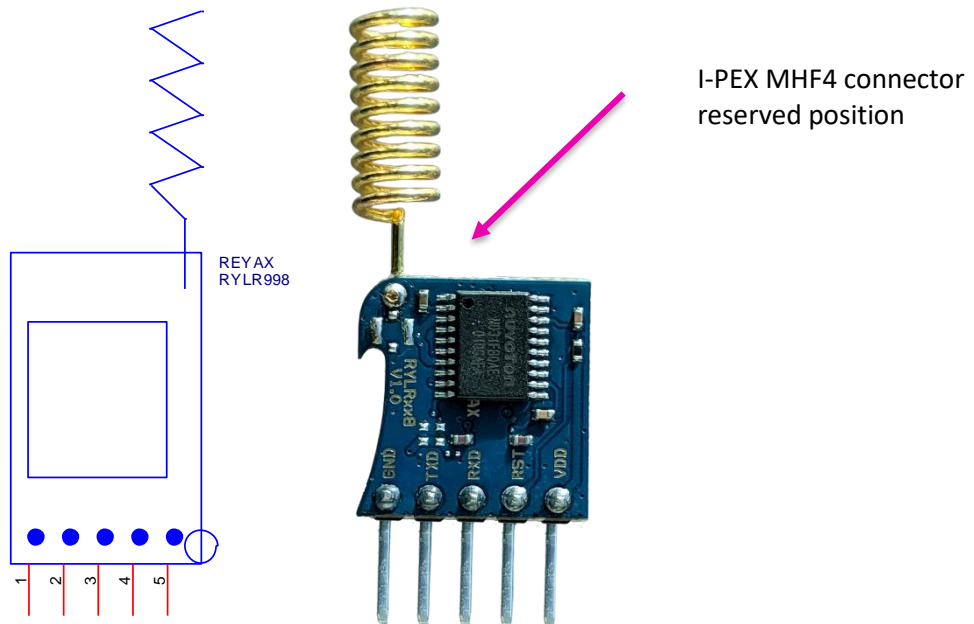
APPLICTIONS

- IoT Applications
- Mobile Equipment
- Home Security
- Industrial Monitoring and Control Equipment

CERTIFICATION

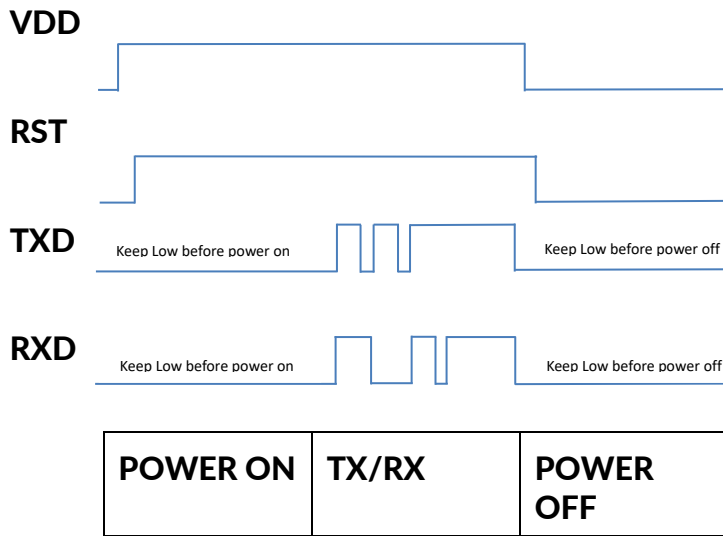
- FCC (Under test)
- NCC (Under test)

PIN DESCRIPTION

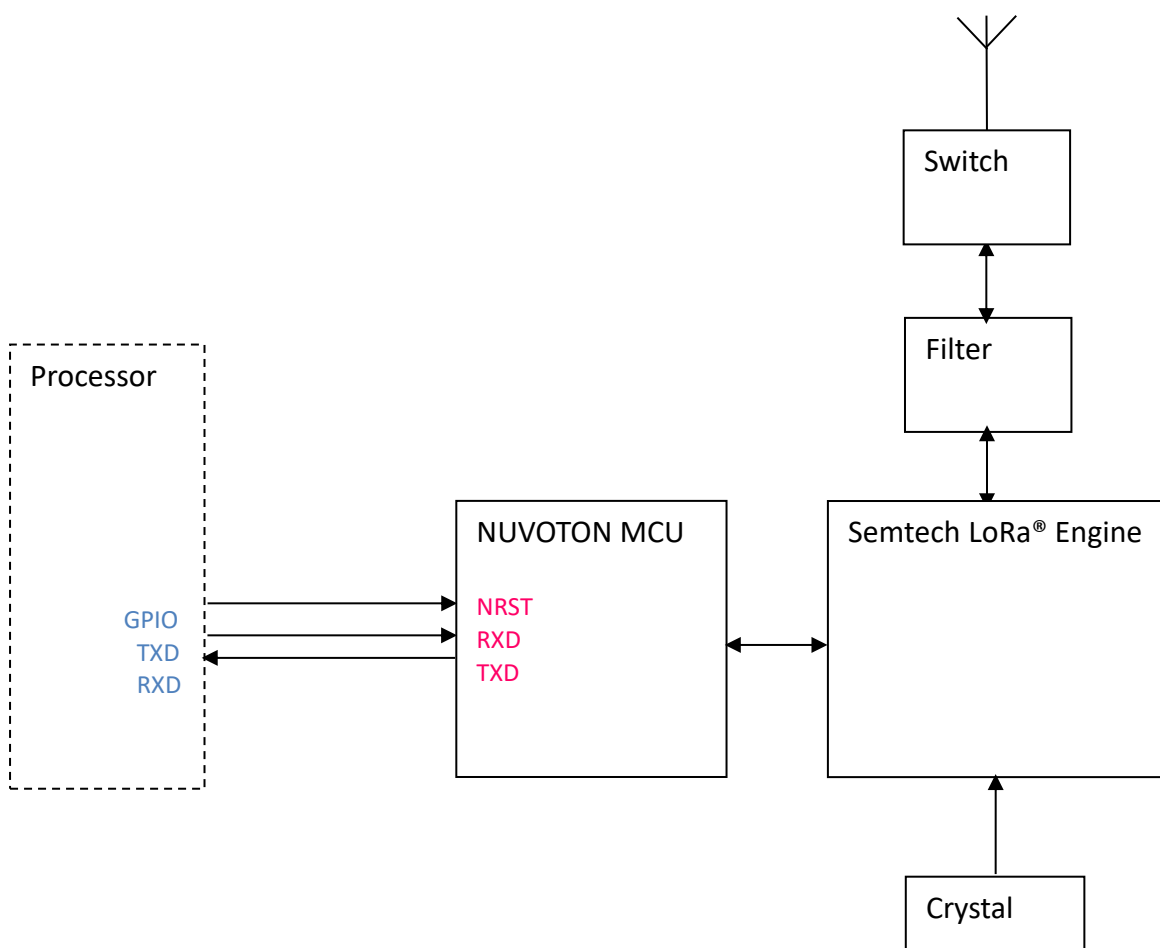


Pin	Name	I/O	Condition
1	VDD	I	Power Supply
2	NRST	I	RESET(Active Low) 100KΩ Internal pull up, Pull down at least 100ms
3	RXD	I	UART Data Input
4	TXD	O	UART Data Output
5	GND	-	Ground

TIMING DIAGRAM



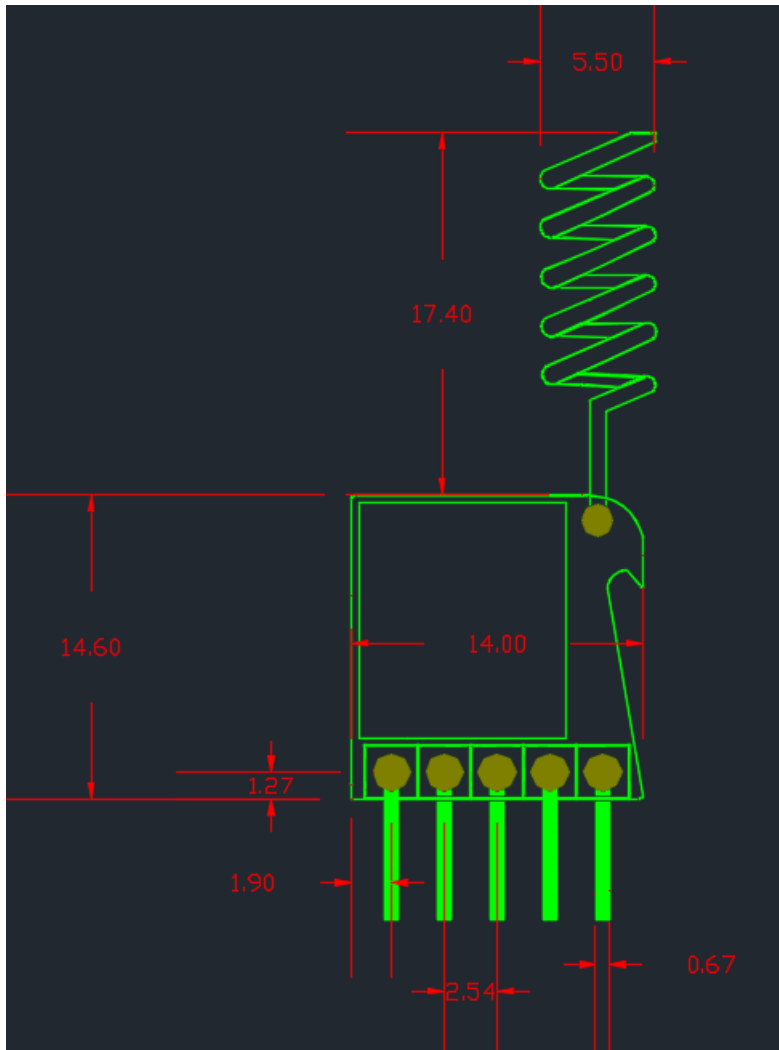
BLOCK DIAGRAM

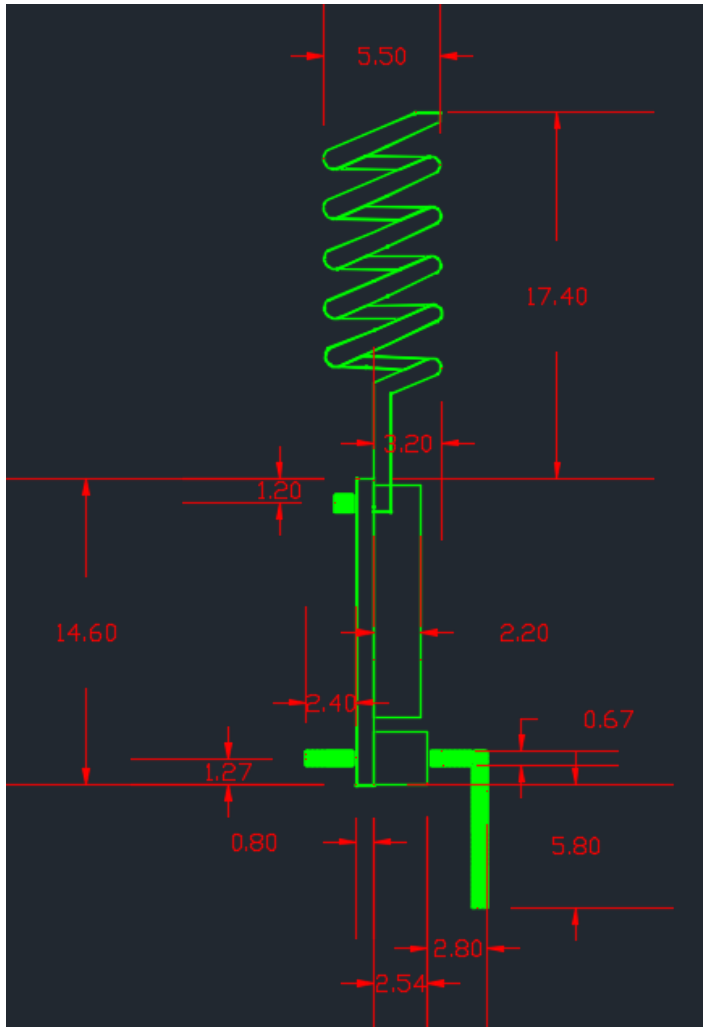


SPECIFICATION

Item	Min.	Typical	Max.	Unit	Condition
VDD Power supply	1.8	3.3	3.6	V	VDD
RF Output power range	-20		22	dBm	
Filter insertion loss	1	2	3	dB	
RF Sensitivity	-129			dBm	
RF Input level			10	dBm	
Frequency range	820	868/915	960	MHz	
Frequency accuracy		±10		ppm	
Transmit Mode current		140		mA	RFOP = +22dBm
Receive Mode current		17.5		mA	
Sleep mode current		15		uA	AT+MODE=1
Smart receiving power saving mode average current	0.02	2.7	5.5	mA	AT+MODE=2,3000,3000
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) Flash data memory		200		K	Cycles
Weight		2		g	
Operating temperature	-40	25	+85	°C	

DIMENSIONS





Unit : mm

ORDER INFORMATION

Ordering No.	Pin Header	Antenna or I-PEX MHF4 Connector
RYLR998	90 Degree Angle	Antenna
RYLR998_M4	90 Degree Angle	I-PEX MHF4 Connector
RYLR998_NP	Not mount	Antenna

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