

N515 Narrowband SPI Module

CC1120 FSK Narrowband RF Module,162-174Mhz,384-464Mhz,860-960Mhz



INTRODUCTION

N515 is a low-cost and small size narrowband RF module for transmitting and receiving digital data via radio frequency. All of the N515's electronics (don't including an antenna) reside on a single PCB, and all operational power is derived from a single supply voltage.

The transceiver module design consists of a CC1120 low-power, integrated sub 1G transceiver RF chip, all IO pin are brought out. The module available frequency is from 162-174Mhz, 384-464Mhz, 860-960Mhz, The hardware is designed for maximum range. The module output power is +24dbm(at +3.3V), +27dbm(at +5V), the visual distance up to 2000m.

Technical specifications

Hardware Information

Interfaces: SPI, IIC, UART
Dimension: 30 x 23mm x 3mm
Operating voltage: 2 - 3.6V
PA Operating voltage: 3 - 5V
Operating temperature: -30°C to +80°C

Consumption(Sleep) : 2uA
Consumption (RX): 35mA
Consumption (TX): 400mA
RF chip: CC1120
Mounting: SMD

Software

Asynchronous Transparent mode
Low Power mode
Secure mode

RSSI mode
Serial bootloader
Adjustable packet size

Wireless Interface

RF pin
Frequency: 162-174Mhz, 384-464Mhz, 860-960Mhz
Modulation: narrowband FSK
RF deviation: ± 1 KHz

RF data rate: 1 - 200Kbps
RF output power: up to 24dBm(3.3V)
RF sensitivity: -122dBm

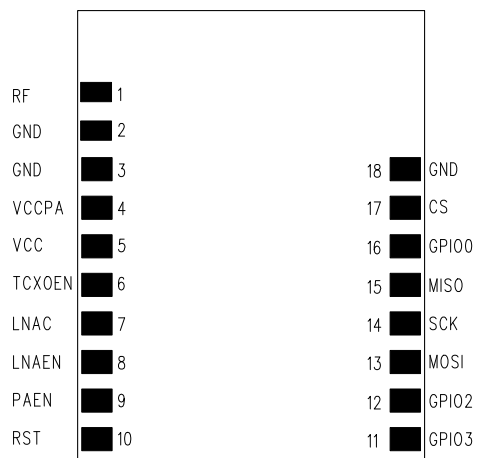
Pin interface

pin	name	define	pin	name	define
1	RF	Antenna interface	10	REST	reset pin
2	GND	GND	11	GPI03	connect to mcu IO
3	GND	GND	12	GPI02	connect to mcu IO
4	VCCPA	PA power, 3-5V	13	MOSI	connect to mcu IO
5	VCC	IC power, 2-3.6V	14	SCK	connect to mcu IO
6	TCXOEN	connect to mcu IO	15	MISO	connect to mcu IO
7	LNAC	connect to mcu IO	16	GPI00	connect to mcu IO
8	LNAEN	connect to mcu IO	17	CS	connect to mcu IO
9	PAEN	connect to mcu IO	18	GND	GND

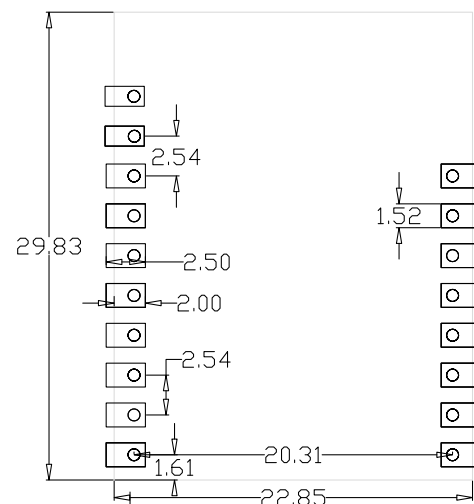
RF T/R Logic

name	TCXOEN	LNAC	PAEN	LNAEN
Transmitt	1	1	1	0
receive	1	0	0	1
sleep	0	1	0	0

Pin configuration & Dimensions



PIN define



PCB LAYOUT(mm)

Part numbers

N515-A-S-434M RF Module N515-A-S-434M – 200mW – 410-480Mhz

OTHER MODULES OF BANDS RANGE

N515-A-S-868M RF Module N515-A-S-868M – 200mW – 860-960Mhz

N515-A-S-169M RF Module N515-A-S-169M – 200mW – 162-174Mhz

Manufacturer

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