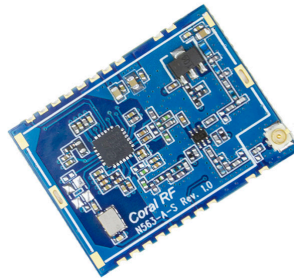


N561

S2-LP Narrowband SPI RF Module, 868 to 960Mhz, 24 dBm



INTRODUCTION

N561 is a low-cost and small size narrowband module for transmitting and receiving digital data via radio frequency. All of the N561'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 S2-LP low-power, integrated sub 1G transceiver RF chip, all IO pin are brought out. The module available frequency is from 410 to 960Mhz, The hardware is designed for maximum range. The visual distance up to 5 000m.

Technical specifications

Hardware Information

Interfaces: SPI
Dimension: 31 x 23mm x 3mm
Operating voltage: 2 - 3.6V
PA Operating voltage: 3 - 6V
Operating temperature: -40°C to +80°C
TCXO DEV: 0.5PPM

Consumption(Sleep) : 1uA
Consumption (RX): 10mA
Consumption (TX): 300mA(24dbm,3.3V)
RF chip: S2-LPQTR
Mounting: SMD

Software

Asynchronous
Transparent mode
Low Power mode
Secure mode

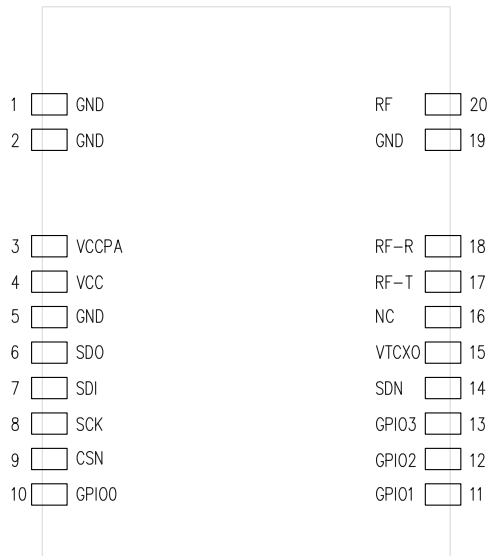
RSSI mode
Serial bootloader
Adjustable packet size

Wireless Interface

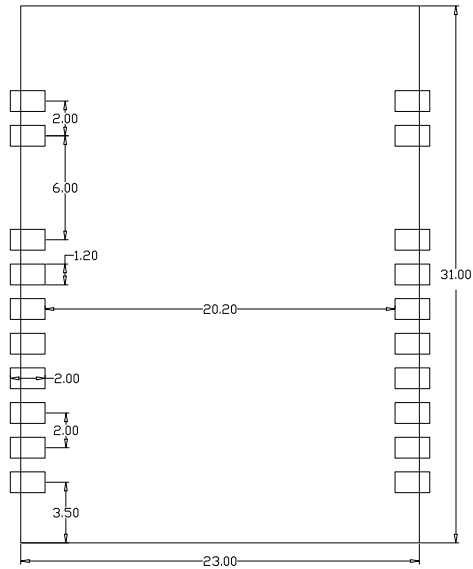
RF pin, IPEX
Frequency: 860-960Mhz
Modulation: FSK, Narrowband

RF data rate: 1.2 - 500kbps
RF output power: up to 24dBm(3.3V)
RF sensitivity: -122dBm
Freq. Deviation: +/-1 KHz

Pin configuration & Dimensions



PIN define



PCB LAYOUT(mm)

Pin Definition

| Pin | Name | Definition | Pin | Name | Definition |
|-----|-------|----------------|-----|--------|------------------------------|
| 1 | GND | GND | 20 | RF I/O | Connect to antenna |
| 2 | GND | GND | 19 | GND | GND |
| 3 | VCCPA | Power of PA | 18 | RF-R | RF Switch |
| 4 | VCC | Power of S2-LP | 17 | RF-T | RF Switch |
| 5 | GND | GND | 16 | NC | Not connect |
| 6 | SDO | SPI SDO | 15 | VTCX0 | TCX0's power, connect MCU IO |
| 7 | SDI | SPI SDI | 14 | SDN | SDN |
| 8 | SCK | SPI SCK | 13 | GPI03 | GPI03 |
| 9 | CSN | CS | 12 | GPI02 | GPI02 |
| 10 | GPI00 | GPI00 | 11 | GPI01 | GPI01 |

Transmitt and Receive Logic

| | RF-R | RF-T | VTCX0 |
|-----------|------|------|-------|
| Transmitt | 0 | 1 | 1 |
| Receive | 1 | 0 | 1 |
| Sleep | 0 | 0 | 0 |

Part numbers

N563-A-S-868M Narrowband RF Module N563-A-S-868M – 200mW – 860-928Mhz

OTHER MODULES OF BANDS RANGE

N561-A-S-868M Narrowband RF Module N561-A-S-868M – 1000mW – 860-928Mhz

Manufacturer

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