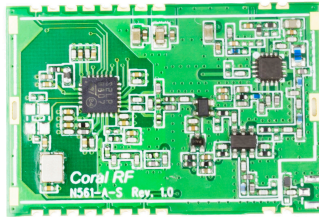


N561

S2-LP PA Narrowband SPI RF Module,860 to 960Mhz, 30dBm



INTRODUCTION

N561 is a low-cost and small size narrowband RF 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 20 000m.

Technical specifications

Hardware Information

Interfaces: SPI
Dimension: 36 x 24mm x 3mm
Operating voltage: 2 - 3.6V
PA Operating voltage: 3 - 5V
Operating temperature: -30°C to +80°C

Consumption(Sleep) : 1uA
Consumption (RX): 18mA
Consumption (TX): 1400mA
RF chip: S2-LPQTR
Mounting: SMD

Software

Asynchronous
Transparent mode
Low Power mode
Secure mode

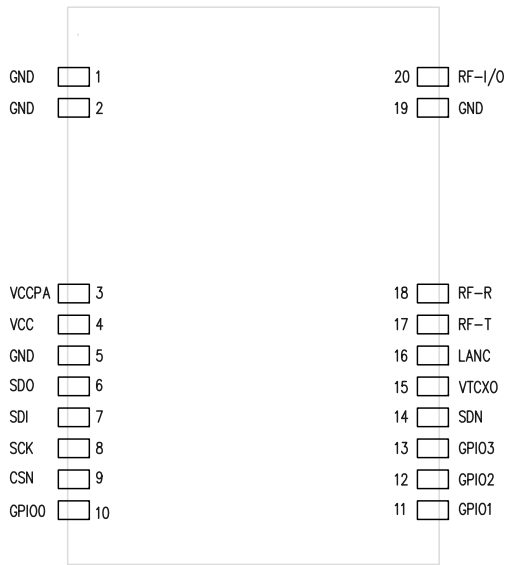
RSSI mode
Serial bootloader
Adjustable packet size

Wireless Interface

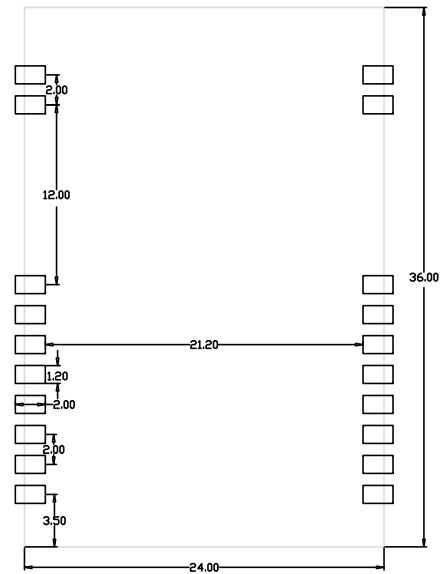
RF pin
Frequency: 860-960Mhz
Modulation: FSK, Narrowband
RF deviation: 1Khz

RF data rate: 1.2 - 500kbps
RF output power: up to 30dBm
RF sensitivity: -127dBm

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	LANC	LNA control pin
6	SDO	SPI SDO	15	VTCX0	TCXO's power, conect MCU IO
7	SDI	SPI SDI	14	SDN	SDN
8	SCK	SPI SCK	13	GPIO3	GPIO3
9	CSN	CS	12	GPIO2	GPIO2
10	GPIO0	GPIO0	11	GPIO1	GPIO1

Transmitt and Receive Logic

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

RF Output Power Table

1. S2LPRadioSetPALevelMaxIndex(0), output power: -11dBm;
2. S2LPRadioSetPALevelMaxIndex(1), output power: 2.5dBm;
3. S2LPRadioSetPALevelMaxIndex(2), output power: 8dBm;
4. S2LPRadioSetPALevelMaxIndex(3), output power: 20dBm;
5. S2LPRadioSetPALevelMaxIndex(4), output power: 25dBm;
6. S2LPRadioSetPALevelMaxIndex(5), output power: 28.8dBm;
7. S2LPRadioSetPALevelMaxIndex(6), output power: 29.3dBm;
8. S2LPRadioSetPALevelMaxIndex(7), output power: 30dBm.

Part numbers

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

OTHER MODULES OF BANDS RANGE

N563-A-S-868M Narrowband RF Module N563-A-S-868M – 200mW – 860-960Mhz

Manufacturer

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