

N536ES , CC1314R10 Module



N536ES Module Introduce

N536ES CC1314R10 transceiver module based TI wireless MCU **CC1314R10RGZ** and **PA LNA** chip, designed for 868M and 915MHz band. Up to **+33 dBm** output power and down to -112 dBm sensitivity at **50kbps**.

N536ES is a low-cost and small size sub g transceiver module for transmitting and receiving digital data via radio frequency. All of the N536ES 's electronics (don't including an antenna) reside on a single PCB, and all operational power is derived from a single supply voltage.

The N536ES module design consists of a CC1314R10 low-power, integrated sub 1G transceiver RF chip , all IO pin of CC1314R10RGZ are brought out. The module available frequency is from 160 to 960Mhz. The hardware is designed for maximum range, 5000m + Range (Line of Sight).

N536ES module based TI CC1314R10RGZ transceiver.The module use SMD package. It has small size, the module is suitable for SMT production. Rapid development without understanding RF. The module supports WMbus and so on.

N536ES is suitable for ISM band in China, EU and USA at 868/915Mhz.

Module Parameter

| | |
|------------------------------|--------------------------------|
| Model | N536ES |
| Module Interface | SPI, UART |
| Frequency | 160-960 Mhz, 1200Mhz |
| RF Data Rate | 0-4000 kbps |
| 868Mhz Transmitting Power | +33 dBm |
| 868Mhz Receiving Sensitivity | -112 dBm at 50 kbps |
| 868Mhz TX Current | 900 mA (type) |
| 868Mhz RX Current | 12 mA |
| Frequency Deviation | +/- 10 khz, with TCXO |
| Communication Distance | 10 – 5 000 m (Visual distance) |
| Antenna Interface | RF pin, IPEX |
| Installation Mode | SMD |
| Volume (mm) | 36 mm x 24 mm x 3 mm |
| Operating Voltage | 2 - 3.6 V |

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|--|--|
| Working Temperature and Humidity Environment | Temperature: -30-70 °C; Humidity 10-95 %RH |
| Storage Temperature and Humidity Environment | Temperature: -40-80 °C; Humidity 10-95 %RH |
| Weight (kg) | ≈10g |

Module Pinout

| Pin Number | Function | Describe |
|------------|----------|---|
| 1 | GND | |
| 2 | GND | |
| 3 | VCCPA | PA power supply, 4.5V -- 5.5V, MAX current: 1200mA |
| 4 | VCCPA | PA power supply, 4.5V -- 5.5V, MAX current: 1200mA |
| 5 | GND | GND |
| 6 | DIO2 | MCU IO port |
| 7 | DIO3 | MCU IO port |
| 8 | DIO5 | MCU IO port |
| 9 | DIO6 | MCU IO port |
| 10 | DIO7 | MCU IO port |
| 11 | DIO8 | MCU IO port |
| 12 | DIO9 | MCU IO port |
| 13 | DIO10 | MCU IO port |
| 14 | VCC | CC1314R10 power supply, 2V -- 3.6V |
| 15 | GND | GND |
| 16 | DIO11 | TMS |
| 17 | DIO12 | TCK |
| 18 | DIO13 | MCU IO port |
| 19 | DIO14 | MCU IO port |
| 20 | DIO15 | MCU IO port |
| 21 | TMS | MCU IO port |
| 22 | TCK | MCU IO port |
| 23 | RESET | MCU IO port |
| 24 | DIO16 | MCU IO port |
| 25 | DIO17 | MCU IO port |
| 26 | DIO18 | MCU IO port |
| 27 | DIO19 | MCU IO port |
| 28 | DIO20 | MCU IO port |

| | | |
|----|-------|-------------|
| 29 | DIO21 | MCU IO port |
| 30 | DIO22 | MCU IO port |
| 31 | DIO23 | MCU IO port |
| 32 | DIO24 | MCU IO port |
| 33 | DIO25 | MCU IO port |
| 34 | GND | |
| 35 | RF | |

Application Area

Ultra low-power wireless applications

Operating in the 315/433/868/915 MHz ISM/SRD bands

Wireless alarm and security systems

Industrial monitoring and control

Wireless sensor networks

AMR – Automatic Meter Reading

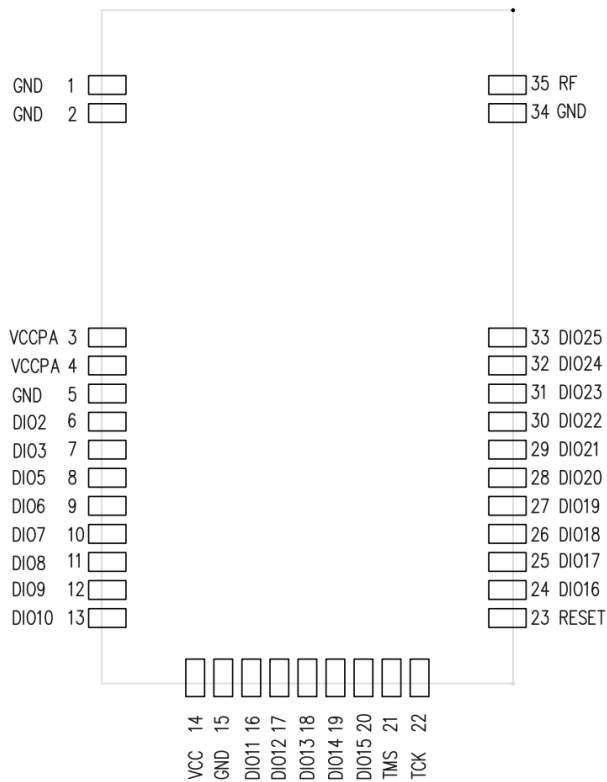
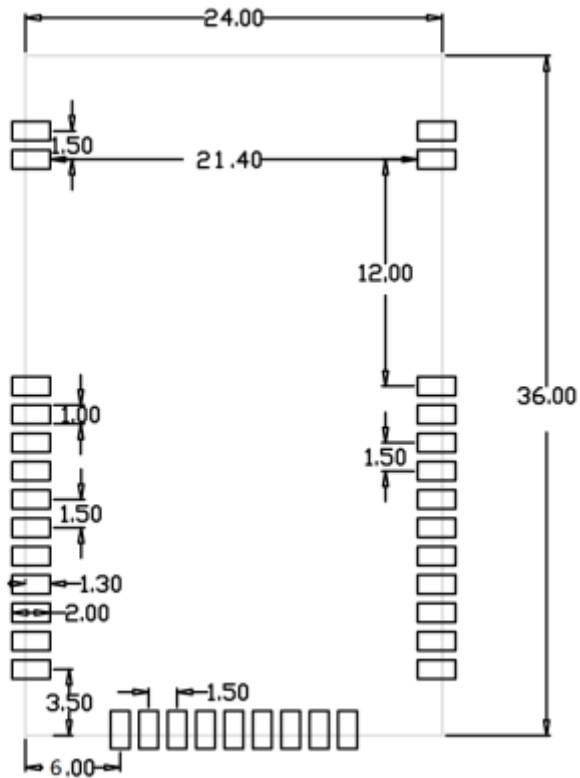
Home and building automation

Wireless MBUS

PALNA Logic

| | DIO27-TCXO | DIO28-LNAEN | DIO29-RXEN | DIO30-TXEN |
|--------|------------|-------------|------------|------------|
| Active | 1 | 1 | 0 | 0 |
| TX | 1 | 1 | 0 | 1 |
| RX | 1 | 0 | 1 | 0 |
| SLEEP | 0 | 1 | 0 | 0 |

N536ES Layout



Ordering Information

| | | | |
|-----------------------|-----------|-------|---------------------|
| N536HS-CC1314R10-433M | RF Module | 33DBM | 2000mW – 410-480Mhz |
| N536HS-CC1314R10-868M | RF Module | 33DBM | 2000mW – 860-880Mhz |

