



A7125 Firmware Introduction

RF feature

- Frequency bands: 2400 – 2483MHz ISM band @ FSK,GFSK
- RX : Low current consumption(15mA) and high sensitivity
(500Kbps @ AMICCOM -96dbm[15mA], Chipcon : TI -81dbm[22mA])
(10Kbps @ AMICCOM -110dbm[15mA], Chipcon : TI -100dbm[22mA])
(1Mbps @ AMICCOM -94dbm[15mA], Nordic -85dbm[11mA])
(2Mbps @ AMICCOM -90dbm[15mA], Nordic -82dbm[12mA])
- Programmable RF TX output power: 0 ~ -10dbm
- Distance VS RF_TRX:
500Kbps :
TI RX : -81dbm[22mA], TX : +1dbm[23mA] → $-(-81)+1 = 82\text{dbm}$
AMICCOM RX : -96dbm[15mA], TX : -4dbm[13mA] → $-(-96)+(-4) = 92\text{dbm}$
1Mbps :
Nordic RX : -85dbm[11mA], TX : 0dbm[12mA] → $-(-85)+0 = 85\text{dbm}$
AMICCOM RX : -94dbm[15mA], TX : -4dbm[13mA] → $-(-94)+(-4) = 90\text{dbm}$

RF feature

- On chip regulator, supply voltage 1.9 ~ 3.6V.
- On chip low power RC oscillator.
- Build in WWS(wireless wakeup system) for reduce power consumption
- Low current (< 1uA) in sleep mode
- Need only one crystal while working together with MCU
- Support 4 wire(SPI) and 3 wire interface to access RF control
- Build in RSSI, temperature sensor function
- Build in battery detection and 1ch external ADC function
- 64 bytes TX/RX FIFO buffer
- Build in FIFO extension function with up to 256 bytes FIFO No
- Optional Manchester Data / FEC / CRC / data whitening (encryption)
- Oscillator clock out / External clock in