

Module Series

Sub-GHz FSK Transceiver Module for 868MHz Band



ITM-8639

- RF Chipset: AMICCOM A7139
- Frequency band: 868 MHz
- Programmable data rate from 2Kbps to 100Kbps
- Programmable TX power level from -34dBm to 16dBm
- Easy to use

- On chip regulator, supports input voltage 1.9 ~ 3.6 V
- Ultra low deep-sleep mode current consumption 0.3uA
- RX mode current consumption (AGC Off): 3.8mA
- High RX sensitivity -102dBm@100Kbps data rate

The ITM-8639 SIP module is designed for 868MHz ISM band wireless applications using AMICCOM's A7139 FSK/GFSK transceiver chipset. This compact module features a fully programmable frequency synthesizer by SPI interface. The maximum data rate is up to 100kbps (by using 12.8MHz crystal, or 250kbps by using 16MHz crystal)

ITM-8639 is optimized for very low power consumption. In addition, it can offer a very good link budget with a high efficient class-E power amplifier up to 16dBm and a low phase noise receiver. Therefore, ITM-8639 is very suitable for battery powered application with a nice LOS (line-of-sight) wireless range.

Main Specification

Main Chip	A7139
Type	Sub-1GHz (868MHz) Wireless Module
Memory	Embedded SRAM
Modulation	FSK
Host Interface	SPI
Application	IOT, low data-rate wireless communication
Antenna_Type	External
Tx Power	16.0 dBm (TBG=7, TDC=3, PAC=1)
Rx Sensitivity	-116 dBm @ 2 Kbps mode, Dev = 8 KHz, IFBW=50KHz -112 dBm @ 2 Kbps mode, Dev = 8 KHz, IFBW=100KHz -112 dBm @ 10 Kbps mode, Dev = 1875 KHz, IFBW=50KHz -110 dBm @ 10 Kbps mode, Dev = 37.5 KHz, IFBW=100KHz -105 dBm @ 50 Kbps mode, Dev = 18.75 KHz, IFBW=50KHz -102 dBm @ 100 Kbps mode, Dev = 37.5 KHz, IFBW=100KHz -102 dBm @ 150 Kbps mode, Dev = 56.25 KHz, IFBW=150KHz -99 dBm @ 250 Kbps mode, Dev = 93.75 KHz, IFBW=250KHz
Operation Temp	-40~85°C
Dimension	12mm(L)*12mm(W)*1.5(H) mm
Power Supply	3.3VDC