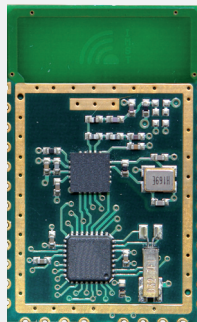


HIGH DATA RATE RADIO MODULE FOR THE 2.4 GHz ISM BAND

→ iM201A



radio module iM201A



OVERVIEW

The iM201A is a compact, high data rate radio module for the 2.4 GHz ISM band. It includes a transceiver, a micro-controller and a PCB antenna. With its high RF data rate (up to 2 Mbps) and a simultaneous multi channel receiver, it is specially designed for wireless star networks. The module is solderable like a SMD component and minimizes the need for an expensive and time-consuming RF development. To find out its capabilities a Starter Kit with sample applications is available. A bootloading functionality is included which allows a software update with no effort.

FEATURES:

- High data rate radio module for 2.4 GHz
- RF data rate up to 2 Mbps
- Output power up to 0 dBm
- Simultaneous channel reception (6 parallel RX data pipes on the same RF channel)
- 2-wire interface (TWI), compatible to Philips I²C protocol
- UART interface (also master SPI capable)
- Sample applications available
- Bootloading functionality for firmware update
- Solderable like a SMD component
- Integrated antenna or 50 Ohm pad

APPLICATIONS:

- Battery driven wireless sensor networks
- RF remote control
- Metering systems
- Home-, Building-, Industrial Automation
- Telemetry
- ...

The wide range of capabilities and functionalities provided by the iM201A can be tested by using our Starter Kit.

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→ Technical Data

General

Operating voltage:	2.0 V to 3.6 V, typ. 3.0 V
Supply current:	typ. 18 mA (receive) typ. 15 mA (transmit @ 0 dBm) typ. 3 mA (μ C active, transceiver off) typ. 1 μ A (power down)
Dimension (LxWxH):	approx. 20x32.5x5 mm
Operating temperature:	-20°C to +70°C

Radio

Frequency range:	2401 MHz to 2482 MHz
Operating channels:	82
Data rate:	250 kbps, 1 Mbps, 2 Mbps
Modulation:	GFSK
Output power:	typ. 0 dBm (50 Ω Pad)
Receiver sensitivity:	typ. -93 dBm @ PER ¹ < 1 % & 250 kbps
Antenna:	integrated PCB antenna or optional 50 Ω pad
Range:	up to 400 m (line of sight) @ 250 kbps

Interface

IO Ports:	6 general purpose IO (analog/digital/I ² C) 6 digital IO
UART:	2 analog input, 1 analog reference typ. 38.4 kBaud (can also be used for SPI in master mode)
TWI:	2-wire Serial Interface (Philips I ² C compatible)
HF:	Enhanced ShockBurst™

Certifications

Pre-qualified to ETSI EN 300 440
Lead-free and RoHs compliant

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