BIT868RM20

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Radio Modem Modules

First world's low cost, 1,8- 3,6 V operating voltage, complete RF module ready for stand alone or host driven application in a very small package (19x19 mm)
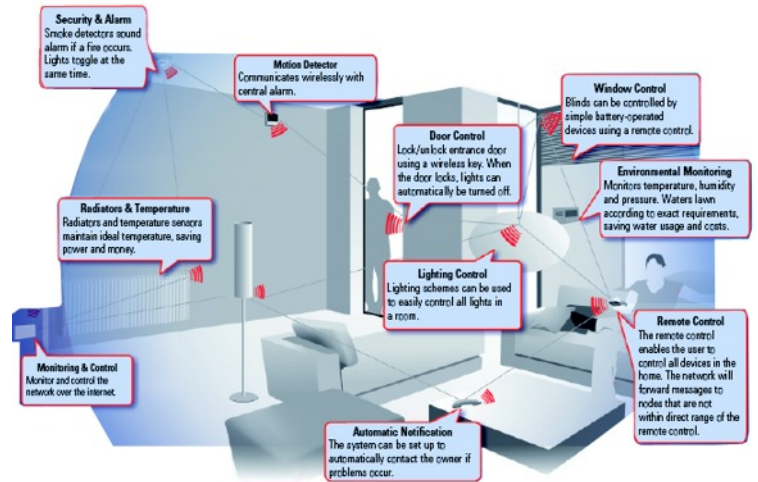
Highly Integrated RF solution

The **BIT868RM20** series of **Radio Modem** modules are very small complete and compact RF solutions with embedded MCU.

With only **19x19 mm footprint** the modules provide a real **cost effective** wireless solution.

No additional components are needed, except for a simple antenna.

Module is SMT assembled.

All the operating parameters are fully configurable: UART baud-rate, RF data-rate, output power, operating channel, Carrier sense, packet length, etc.

BIT868RM20 are ideal solution for home and building automation, control system, sensor networks, etc.

In a typical application they can be used both with a **host microcontroller** or also as a **stand alone module** battery powered.

Optional: Different version of the product are available for RF applications in the 433 MHz unlicensed ISM bands.
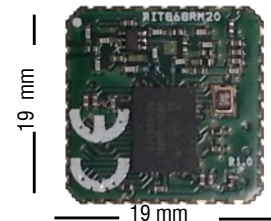

Easy to use, low cost dev tools

The BIT868RM20 modules are supported by a very low cost set of development tools for easy customization of the product. Integrated Development Environment and software for RF parameter calculation are free of charge; low cost in circuit debugger programmer is available for quick and **easy developing custom applications**.

Should you need any other information or customization don't hesitate to call us.

Features

BIT868RM20

- True single module complete RF solution
- Small size (19 x 19 mm)
- High Sensitivity (-121 dbm @ 2 kbps, 1% PER)
- Programmable output power (up to 20 dBm)
- Low current consumption (RX: 19 mA, TX: 85 mA @ 20 dbm output power)
- 1.8 - 3.6 V Power Supply
- UART Baud rate up to 115,2 kbps
- RF Data Rate up to 40 kbps
- -40°C to +85°C operating temperature
- Powerfull, easy to use, low cost development tools
- Custom solutions on request

Typical Application
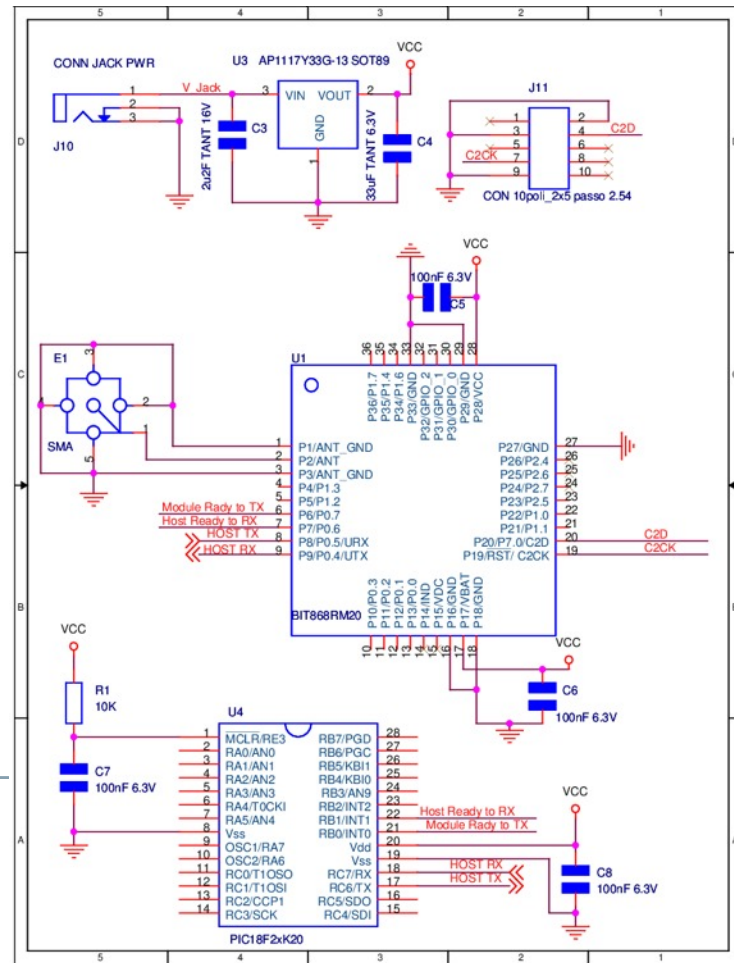
Applications

- OEM equipment
- Radio Modems
- Alarm and security systems
- Home and building automation
- Wireless sensor networks
- Telemetry Station

Operating Conditions and Specifications

Parameter	Min.	Typ.	Max.	Units	Remarks
RF Frequency Range	868.105	869.525	869.525	MHz	BIT868RM20
Operation temperature	-40		+85	°C	
Supply voltage Vdd	1.8		3.6	V	
Current Consumption		1		uA	Sleep Mode
		85		mA	Transmit mode @ max output power
		19		mA	Receive mode
Sensitivity		-121		dBm	@ 2 kbps
		-114		dBm	@ 20 kbps
		-108		dBm	@ 40 kbps