

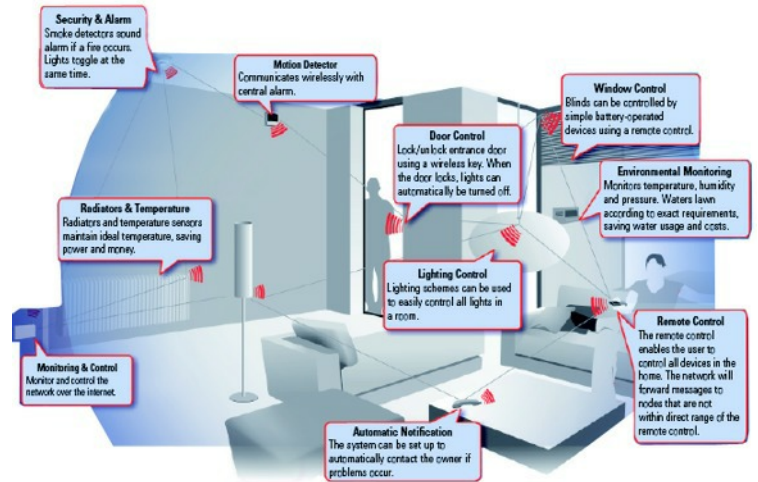


Your best partner  
for embedded  
RF design

## BITxxRM-LP

### BITxxRM-LP series 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 (15x28 mm)



### Highly Integrated RF solution

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

With only **15x28 mm footprint** the modules provide a real **cost effective** wireless solution.

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

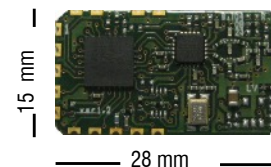
Module is SMT assembled.

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

BITxxRML 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.

Three different versions of the product are available for RF applications in the 433 and 868/915 MHz unlicensed ISM bands.



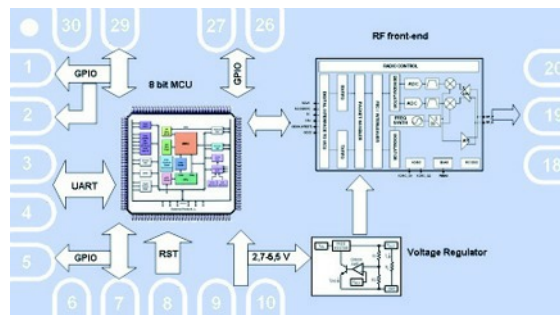
### Easy to use, low cost dev tools

The BITxxRML 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 5 pins 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.

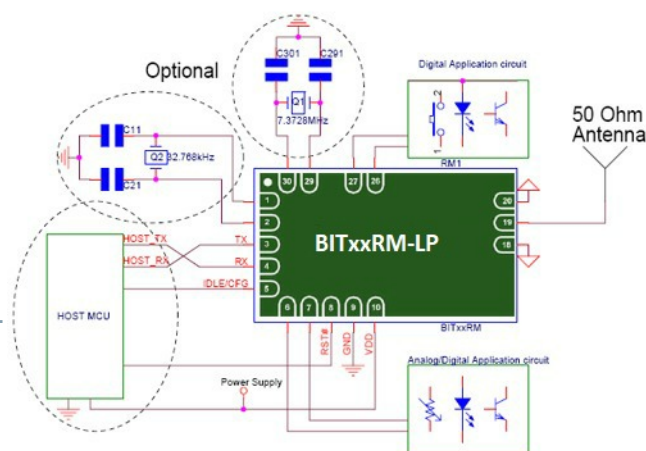
## Features

- True single module complete RF solution
- Small size (15 x 28 mm)
- High Sensitivity (-109 dbm @ 1.2 kbps, 1% PER)
- Programmable output power (up to 10 dBm)
- Low current consumption (RX: 17 mA, TX: 30 mA @ 10 dbm output power)
- 1.8 - 3.6 V Power Supply
- UART Baud rate up to 38.4 kbps
- RF Data Rate up to 250 kbps
- -40°C to +85°C operating temperature
- Powerfull, easy to use, low cost development tools
- Custom solutions on request

## Block Diagram



## 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	433.320	433.920	434.520	MHz	BIT04RML
	864.000	868.300	869.900	MHz	BIT08RML
	905.000	915.000	925.000	Mhz	BIT08RML
Operation temperature	-40		+85	°C	
Supply voltage Vdd	1.8		3.6	V	
Current Consumption		5		uA	Sleep Mode
		30		mA	Transmit mode @ max output power
		20		mA	Receive mode @ 1.2 kbps
Sensitivity		-109		dBm	@ 1.2 kbps
		-93		dBm	@ 125 kbps



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