



CYPRESS

**PRELIMINARY**

**CYWM6934**

# WirelessUSB LS™ Radio Module

## 1.0 Features

- The CYWM6934 LS™ 2.4-GHz DSSS Radio SoC Module includes radio (CYWUSB6934), antenna, and all external components
- Complete Radio Module with PCB Trace Antenna
- Operates in the unlicensed Industrial, Scientific, and Medical (ISM) band (2.4 GHz–2.483 GHz)
- –90-dBm receive sensitivity
- Up to 0-dBm output power
- Range of up to 10 meters or more
- Data throughput of up to 62.5 kbytes/sec
- SPI microcontroller interface (up to 2 MHz data rate)
- Operating voltage from 2.7V to 3.6V
- Small PCBA Design: 0.975" (24.38 mm) by 0.65" (16.25 mm) by 0.212" (5.3 mm) (L x W x H)
- FCC Modular Approval Grant to meet FCC Part 15, EN 300 328-1, EN 301 489-1, and Industry Canada RSS-210 standards
- An FCC Module Approval (MA) Grant provides customers significant cost savings, by allowing customers to adopt the CYWM6934 FCC ID into their own products

## 2.0 Functional Description

The CYWM6934 WirelessUSB LS™ Radio Module offers a complete radio module solution for integration into existing or new 2.4-GHz products.

The CYWM6934 is tested for functional operation and is FCC/ETSI(EU)/Industry pre-certified. The module is supplied with an integrated PCB trace antenna.

The CYWM6934 is available in a small PCBA design and can be mounted horizontally to the device PCB via a 12-pin header. The pin-out of the header is shown in *Figure 4-1*.

## 3.0 Applications

- PC Human Interface Devices (HID)
  - Mice
  - Keyboards
  - Joysticks
- Peripheral Gaming Devices
  - Game Controllers
  - Console Keyboards
- General
  - Presenter Tools
  - Remote Controls
  - Consumer Electronics
  - Barcode Scanners
  - POS Peripherals
  - Toys

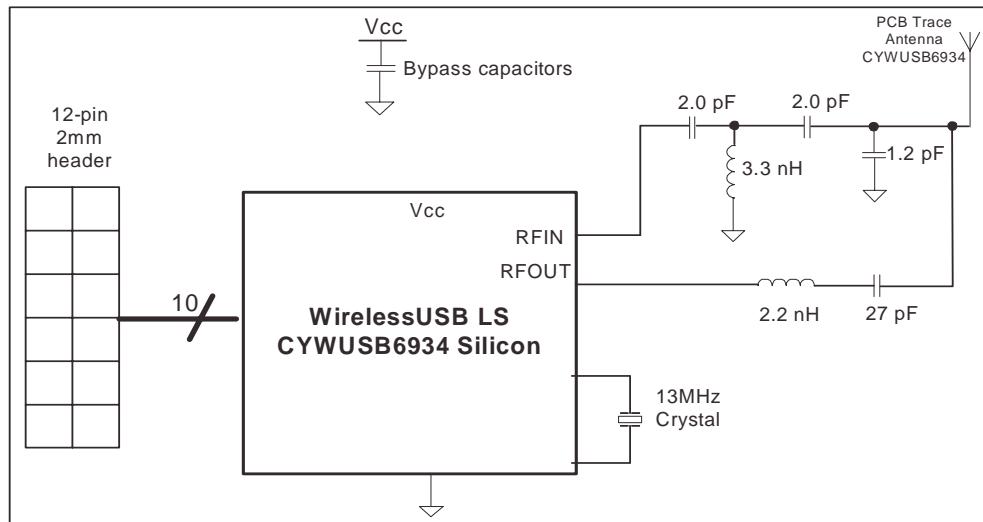


Figure 3-1. CYWM6934 Module

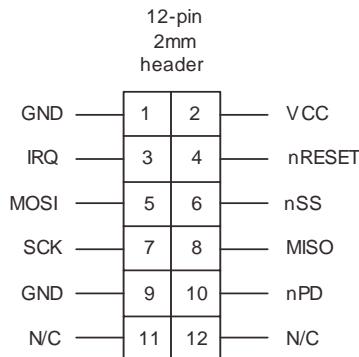
### 3.1 Reference Documentation

For information on technical details of the WirelessUSB LS™ 2.4-GHz DSSS Radio SoC such as register settings, timing, application interfaces, clocking, and power management, refer to the data sheet of the CYWUSB6934 Radio SoC.

### 4.0 Pin Definitions

**Table 4-1. Pin Description Table for the CYWM6934**

Pin QFN	Name	Direction	Description
1	GND	–	Ground
2	VCC	–	Supply voltage for the entire Radio Module (2.7V-3.6V). It is recommended that 3.3V be used for most applications.
3	IRQ	Output	Interrupt signal from Radio Module to the MCU
4	nRESET	Input	Active low reset signal from MCU to Radio Module
5	MOSI	Input	Master out, slave in SPI signal from MCU to Radio Module
6	nSS	Input	Active low slave select signal from MCU to Radio Module
7	SCK	Input	SPI clock from MCU to Radio Module
8	MISO	Output	Master in, slave out SPI signal from Radio Module to MCU
9	GND	–	Ground
10	nPD	Input	Active low power-down signal from MCU to Radio Module
11	N/C	–	No connect—leave open
12	N/C	–	No connect—leave open



**Figure 4-1. CYWM6934 Header Pin-out**

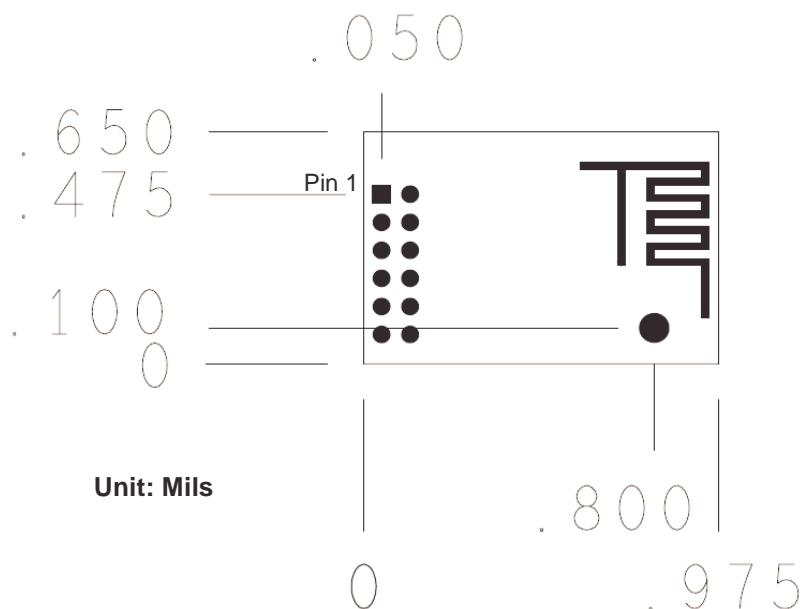


Figure 4-2. CYWM6934 Mechanical Drawing

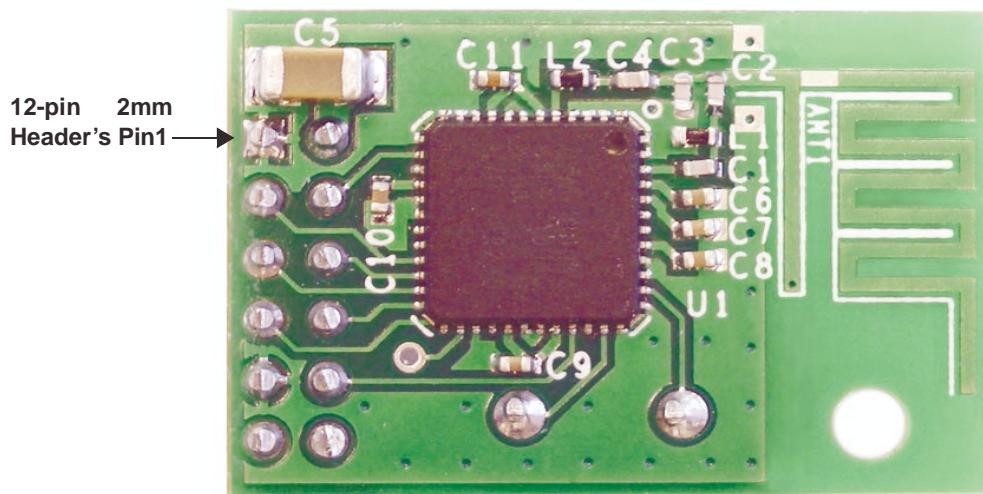
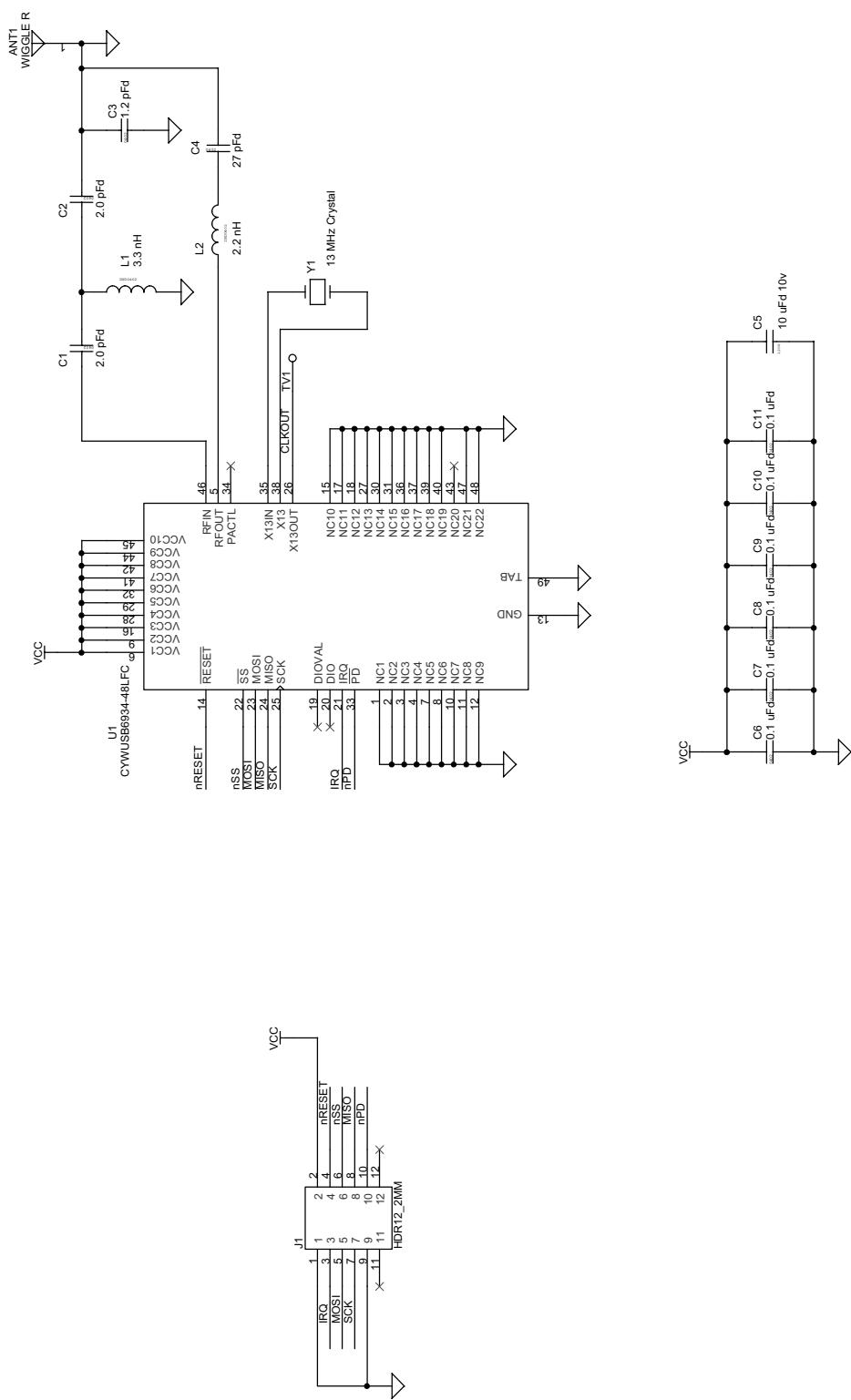


Figure 4-3. CYWM6934 Top View


**Figure 4-4. CYWM6934 Schematic**

## 5.0 Ordering Information

Table 5-1. Ordering Information

Part Number	Radio	Package Name	Package Type	Operating Range
CYWM6934	Transceiver Module	N/A	N/A	Commercial

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## Document History Page

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REV.	ECN NO.	Issue Date	Orig. of Change	Description of Change
**	329977	See ECN	BON	New data sheet