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 kbits/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
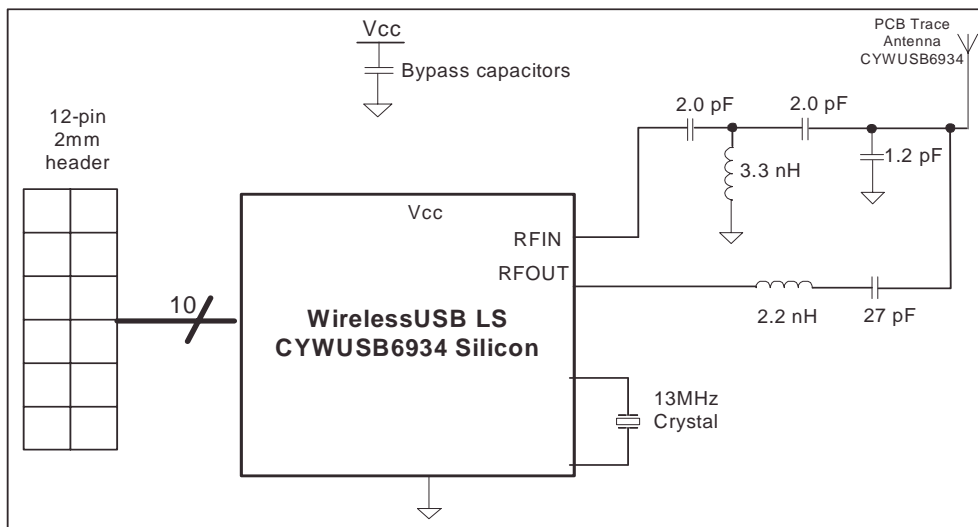 - Barcode Scanners
  - POS Peripherals
  - Toys

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.
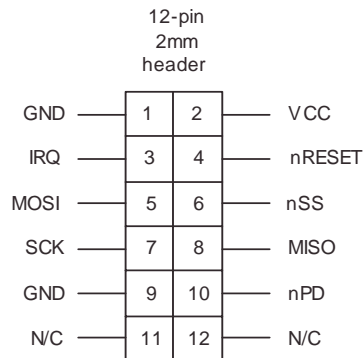
3.2 Applications Support

The CYWM6934 is available as a reference design, complete with PCB layout files, schematics, and a bill of materials. The CYWM6934 can be used with the CY3635 WirelessUSB N:1 sensor development kit, and the CY3632 WirelessUSB LS development kit via a 1 x 14 adaptor board.

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

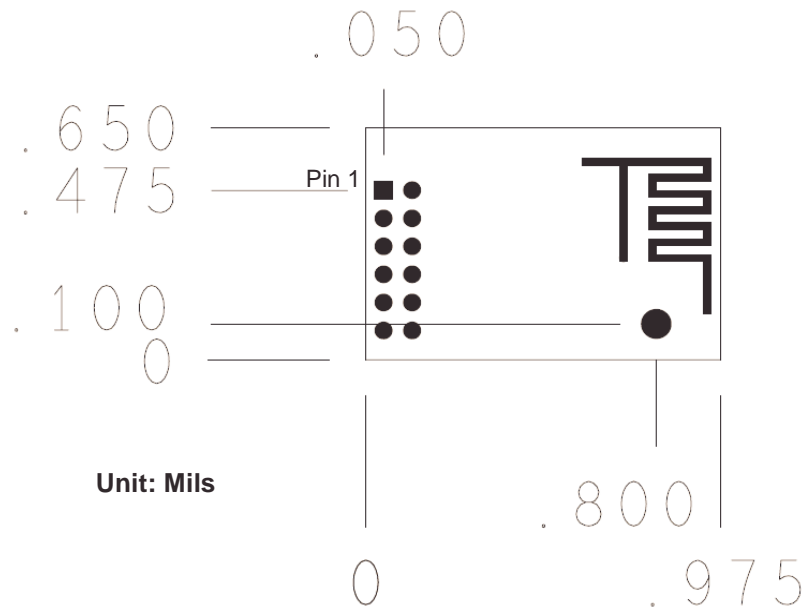**Figure 4-1. CYWM6934 Header Pin-out**

Figure 4-2. CYWM6934 Mechanical Drawing
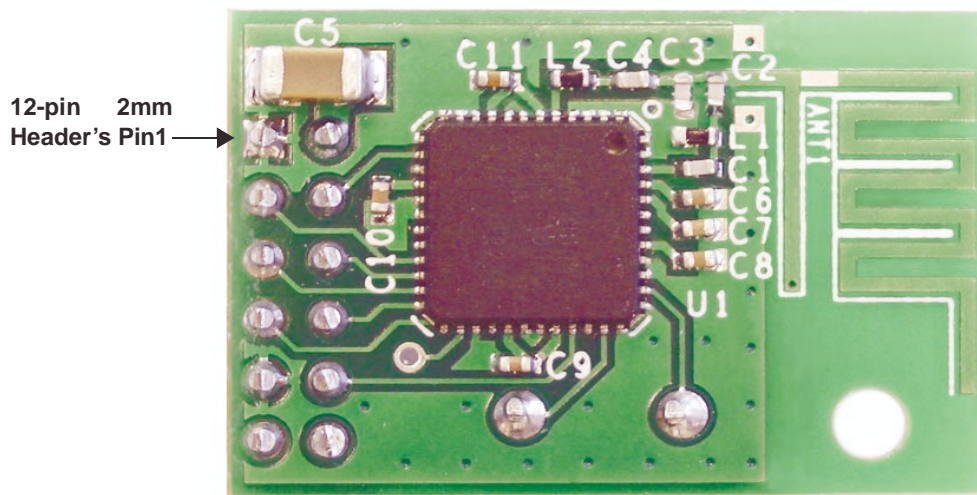
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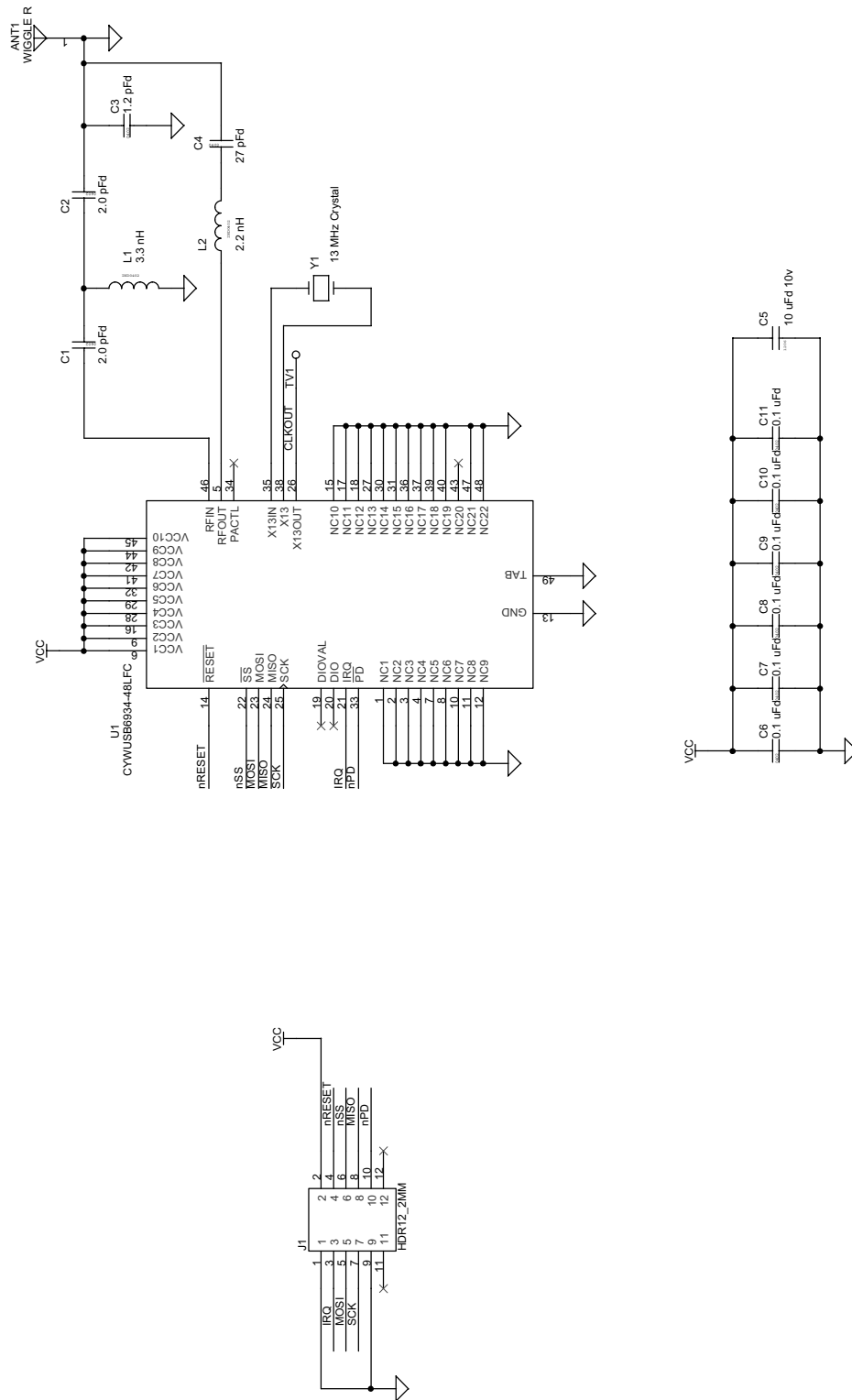

Figure 4-3. CYWM6934 Top View

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

Document Title: CYWM6934 WirelessUSB LS™ Radio Module Document Number: 38-16012				
REV.	ECN NO.	Issue Date	Orig. of Change	Description of Change
**	329977	See ECN	BON	New data sheet