PRELIMINARY CYWM6935

WirelessUSB LR™ Radio Module

1.0 Features

- **The CYWM6935 LR™ 2.4-GHz DSSS Radio SoC Module includes radio (CYWUSB6935) , antenna, and all external components**
- **Complete Radio Module with Dual PCB Trace Antennas**
- **Operates in the unlicensed Industrial, Scientific, and Medical (ISM) band (2.4 GHz–2.483 GHz)**
- **–95-dBm receive sensitivity**
- **Up to 0-dBm output power**
- **Range of up to 50 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: 0.95” (23.75 mm) by 0.95” (23.75 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 CYWM6935 FCC ID into their own products**

2.0 Functional Description

The CYWM6935 WirelessUSB LR™ Radio Module offers a complete radio module solution for integration into existing or new 2.4-GHz products.

The CYWM6935 is tested for functional operation and is FCC/ETSI(EU)/Industry pre-certified. The module is supplied with dual integrated PCB trace antennas.

The CYWM6935 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

- Consumer / PC
  - Locator Alarms
  - Presenter Tools
  - Remote Controls
  - Toys
- Building/Home Automation
  - Climate Control
  - Lighting Control
  - Smart Appliances
  - On-Site Paging Systems
  - Alarm and Security
- Industrial Control
  - Inventory Management
  - Factory Automation
  - Data Acquisition
  - Automatic Meter Reading (AMR)
- Transportation
  - Diagnostics
  - Remote Keyless Entry

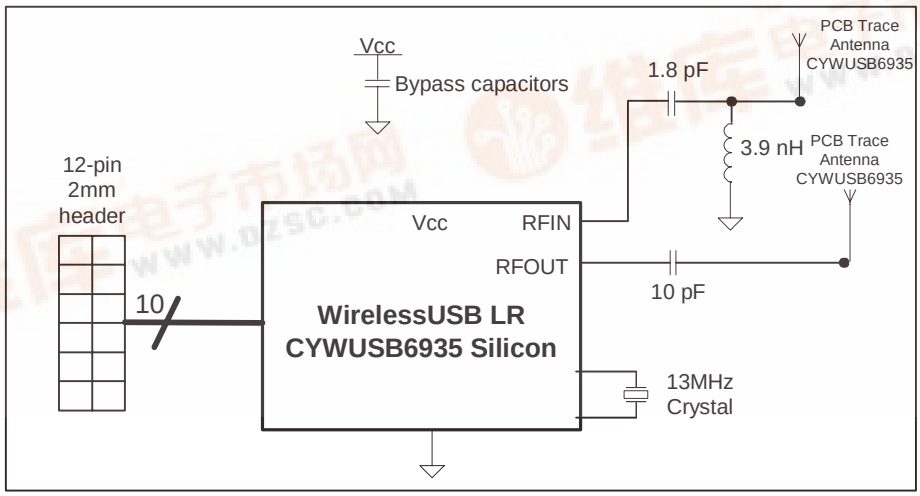

Figure 3-1. CYWM6935 Module

3.1 Reference Documentation

For information on technical details of the WirelessUSB LR™ 2.4-GHz DSSS Radio SoC such as register settings, timing, application interfaces, clocking, and power management, refer to the data sheet of the CYWUSB6935 Radio SoC.

3.2 Applications Support

The CYWM6935 is available as a reference design, complete with PCB layout files, schematics, and a bill of materials. The CYWM6935 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 CYWM6935

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

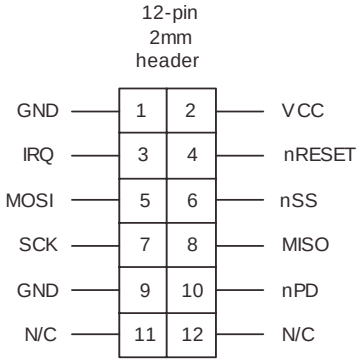

Figure 4-1. CYWM6935 Header Pin-out

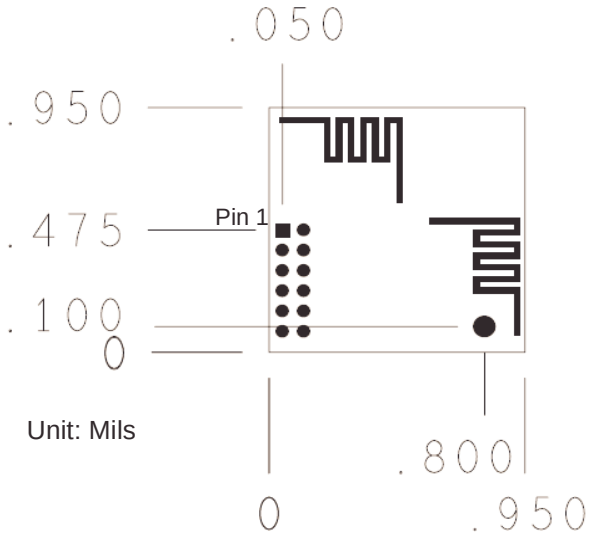

Figure 4-2. CYWM6935 Mechanical Drawing

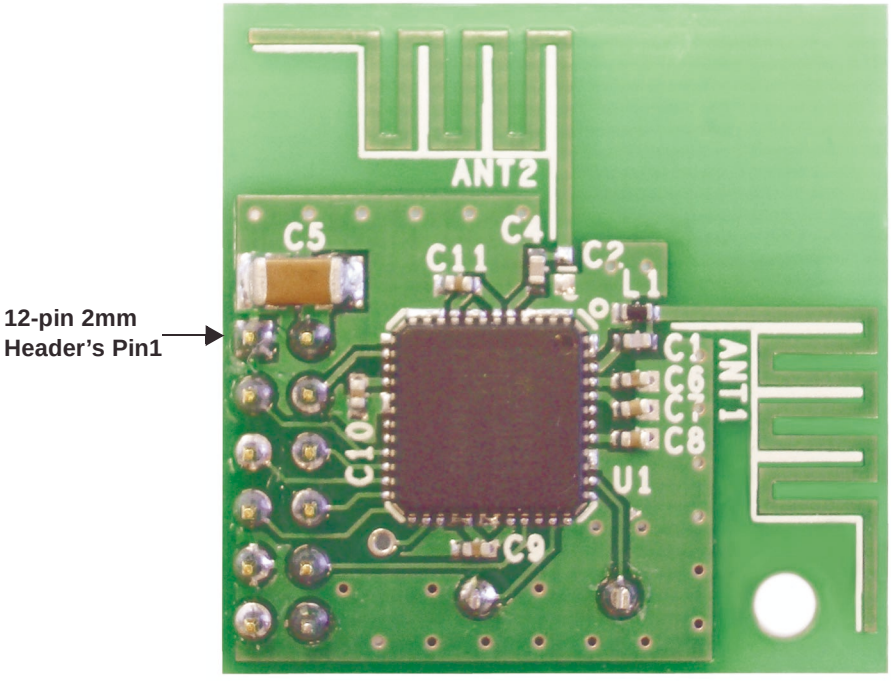

Figure 4-3. CYWM6935 Top View

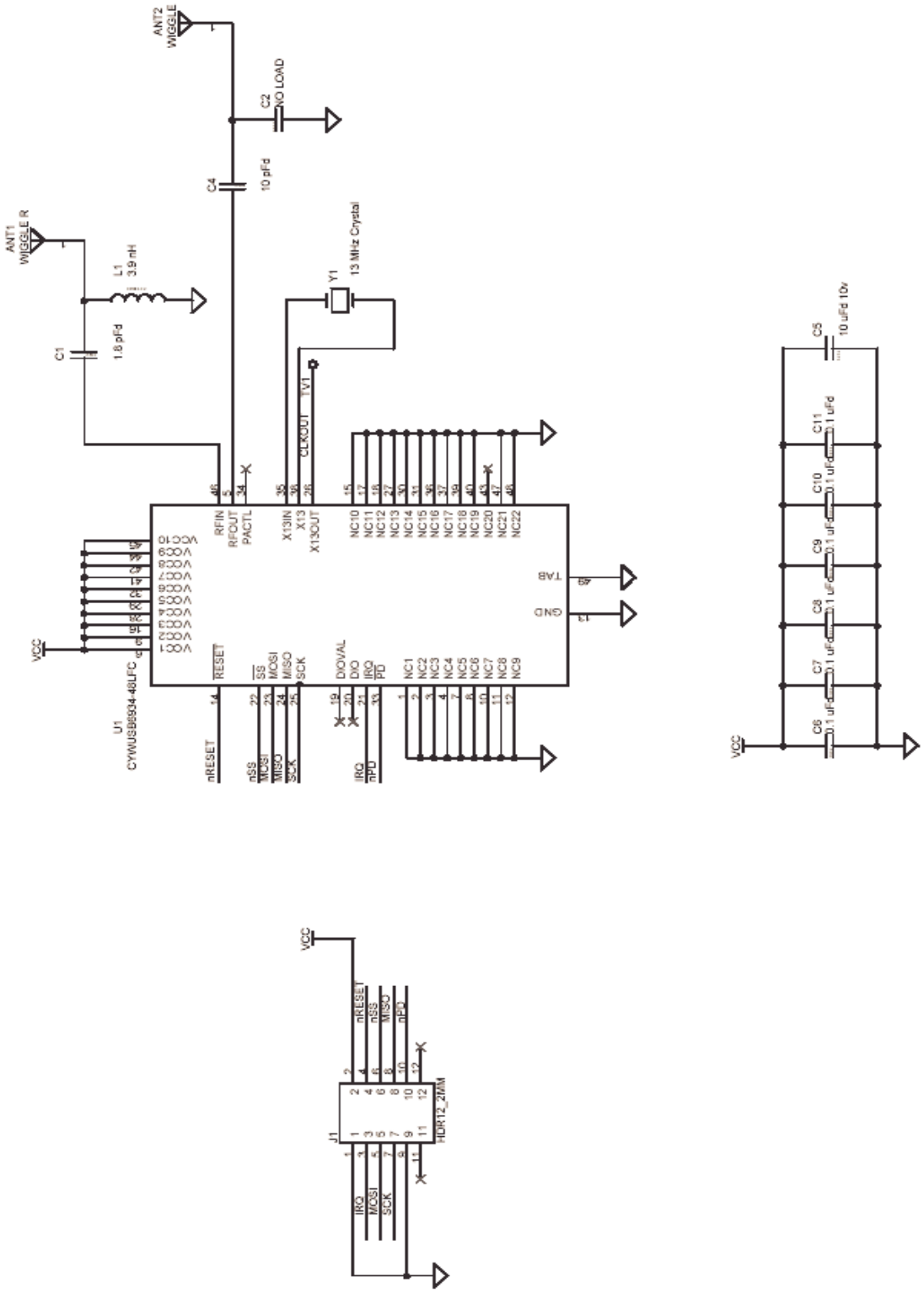

Figure 4-4. CYWM6935 Schematic

Document History Page

Document Title: CYWM6935 WirelessUSB LR™ Radio Module Document Number: 38-16013				
REV.	**ECN NO.**	**Issue Date**	**Orig. of Change**	**Description of Change**
**	329974	See ECN	BON	New data sheet