

LBM-002

UWB RF Module Users Manual

1. Introduction

LBM-002 RF module is a complete compact device radio reference design that enables quick design of UWB enabled products. LBM-002 combines the Samsung UWB chipset (S3C2680A, S5M8311X) along with on board power supplies, an antenna output and a USB 2.0 system interface.

2. Reference Design Feature

- Optimized Performance with S5M8311 (3.1GHz to 4.8 GHz) WiMedia BG#1,
- Complete Baseband Processor (BBP) and Media Access Controller (MAC)
- High Precision Data Path and Data Converters allowing reliable link at extended ranges
- Fully Integrated MAC Protocol Engine Supports All Industry Standards WiMedia protocols
 - Certified Wireless USB
 - WiMedia Link Layer Protocol
- Industry Standard Interfaces
 - USB 2.0 – Data
- Operates from a single (+5.0 V) supply
- Small Form Factor (Mini-card form factor)
- 5 GPIO lines for additional system control signals

3. Usage and Documentation

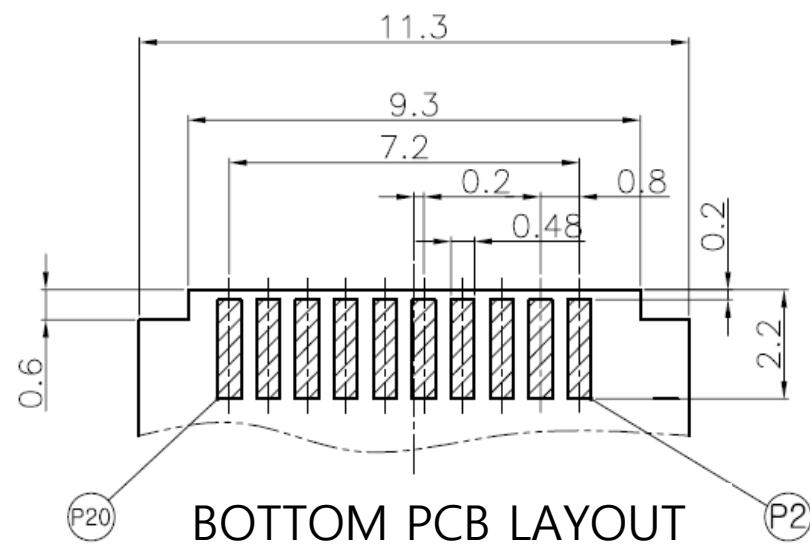
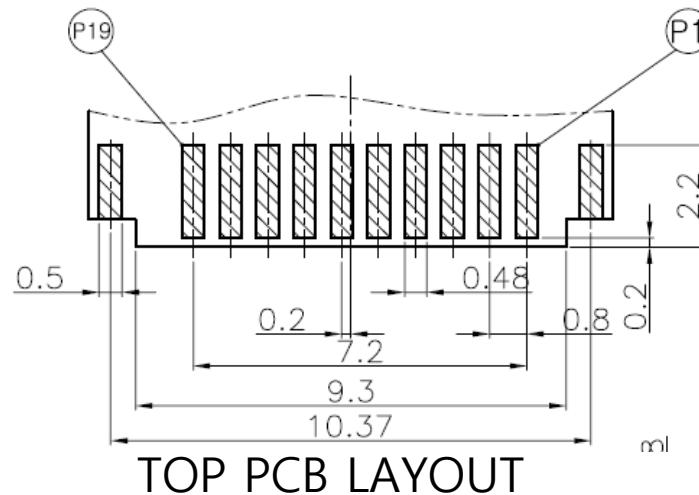
LBM-002 is a complete, self-contained UWB radio module requiring only +5V regulated power from the host system and providing USB 2.0 interface to the host system for data and the WUSB association function. The LBM-002 is intended to provide a simple path for a wired USB product design to migrate to a UWB enabled wireless USB product design.

LBM-002 is a wireless USB certified platform and will have received FCC approval as a Modular UWB transmitter under subpart F of the FCC rules. The product implementation will be able to apply these approvals to the product which incorporates the LBM-002

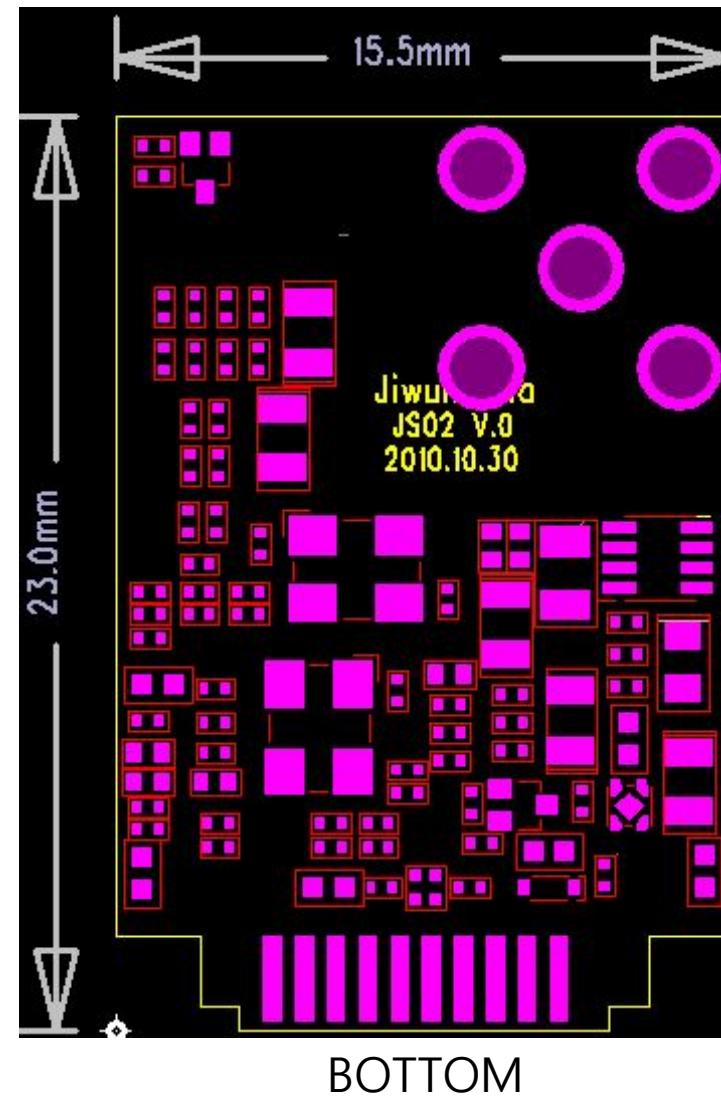
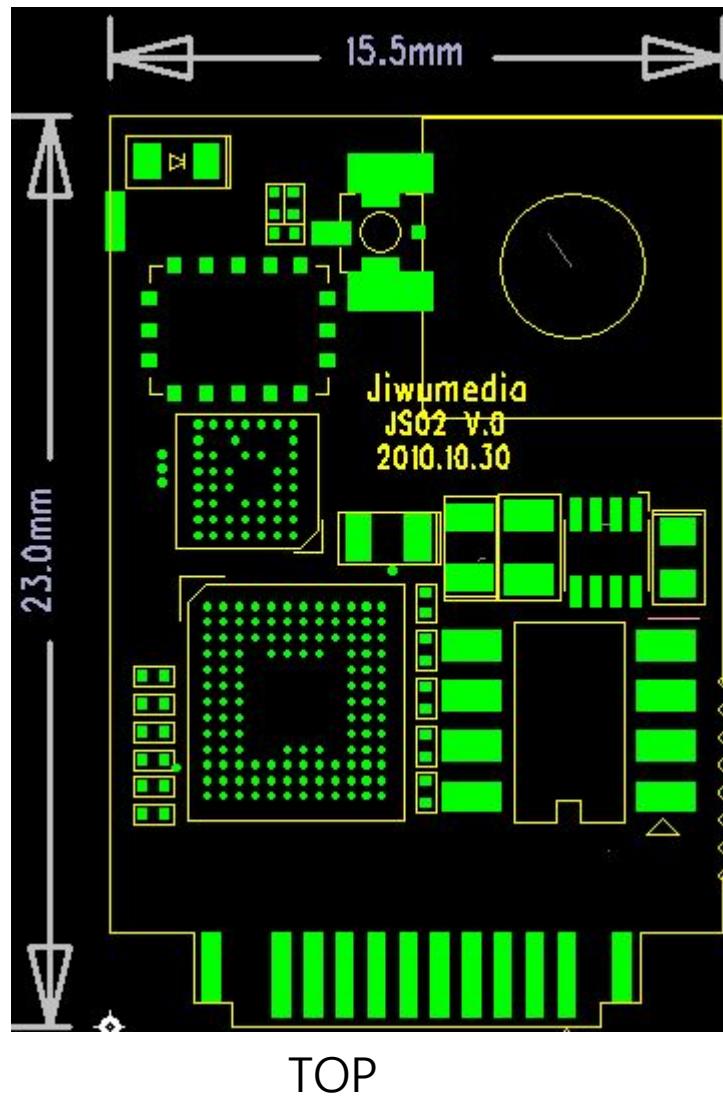
This document provides an outline of the purpose and functionality provided by LBM-002 complete information for the product system designer is contained .

4. User I/O Interface

Pin #	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
Func	GND	5V	5V	5V	5V		GND		GND	USB+		USB-	GND		GND		GND		GND	GND



5. Size



6. FCC STATEMENT

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

6. FCC STATEMENT

FCC Caution: Any changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate this equipment.

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

This device and its antenna(s) must not be co-located or operation in conjunction with any other antenna or transmitter.

A UWB device operating under the provisions of this section shall transmit only when it is sending information to an associated receiver. The UWB intentional radiator shall cease transmission within 10 seconds unless it receives an acknowledgement from the associated receiver that its transmission is being received. An acknowledgement of reception must continue to be received by the UWB intentional radiator at least every 10 seconds or the UWB device must cease transmitting.