

# Wistron Corporation

## PRODUCT SPECIFICATION

<b>MODEL</b>	<b>BlueSlim2</b>
<b>PRODUCT DESCRIPTION</b>	<b>Bluetooth USB module compliant with BT 2.1+EDR / 3.0+HS / 4.0</b>
<b>TYPE</b>	<b>6pin connector</b>
<b>DIMENSION</b>	<b>6.5mm*30mm*2mm</b>
<b>MAIN CHIPSET</b>	<b>CSR8510A10</b>

Revision: V0.92

## REVISION HISTORY

Revision	Issue Date	Change Note
0.90	Aug.28, 2014	Preliminary release
0.91	Sep.01, 2014	Correct Chapter 3.4 pin assignment: pin5,6 are unused.
0.92	Mar.19, 2015	Correct Q'TY/TRAY.

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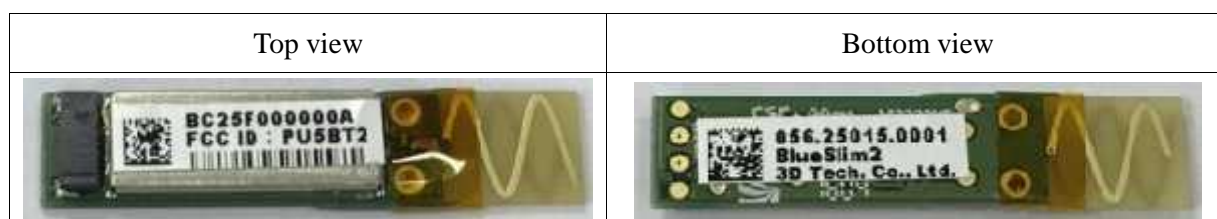
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## 1. INTRODUCTION

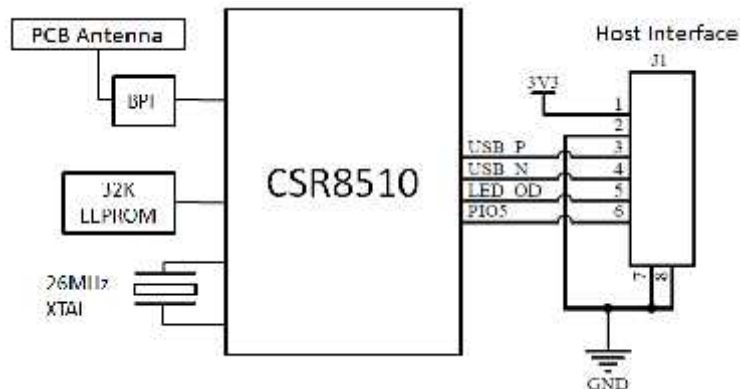
BlueSlim2 is a USB Bluetooth module from official CSR reference design; it is fully compatible with the Bluetooth v3.0 + High Speed and Bluetooth v4.0 standards, offering high-speed data transfer and Bluetooth low energy for PC products. Through products based on BlueSlim2, consumers can take full advantage of the Bluetooth low energy ecosphere, connecting peripherals such as mice and keyboards and benefiting from Bluetooth low energy's enormous power efficiency.

BlueSlim2 utilizes USB, the dominant standard interface for most PC platforms, so it can be easily connected to a vast range of PC devices. The applications can be Laptops, Tablet, All-in-one, digital TV, set-top box, and versatility of consumer products.

### 1.1 APPEARANCE



### 1.2 BLOCK DIAGRAM



## 2. FEATURES

- 6 pin connector.
- HCI mode operation with USB2.0 full speed (12Mbps).
- Fully qualified Bluetooth® spec v2.1/2.1+EDR/3.0/3.0+HS/4.0,
- Dual-mode Bluetooth
- Support for Bluetooth basic rate / EDR and low energy connection.

- Powered by +3.3V.
- Onboard Printed antenna.
- Class1, Class2, Class3 supported.
- Measured Max. TX output power up to 6dBm, max. distance range 30 meters (Class1).
- ROHS compliance.

### 3. SPECIFICATIONS

#### 3.1 GENERAL SPECIFICATIONS

Model Name	BlueSlim2	
Main Chipset	BlueCore® CSR8510A10	
EEPROM	32Kbit	
Standard	Bluetooth spec v2.1, v2.1+EDR, v3.0, v3.0+HS, v4.0,	
Bus Interface	USB2.0 full speed	
Connector	6 pins, pitch=0.6	ACES (50376-00601-001) 1*6 P=0.6mm R/A SMD HF , or equivalent.
Antenna	Printed antenna	
Shielding case	Yes	
Dimensions (L*W*H)	6.5mm*30mm*2mm	
Surface mount	single side Surface Mount	
Operating voltage	3.3 V $\pm$ 10%	

**Integrated linear regulators:**

USB: USB bus supply to 3.3V

High-voltage: 2.3V to 4.8V input to 1.85V

Low-voltage: VDD\_DIG, VDD\_RADIO and

VDD\_AUX regulators

Power-on-reset cell detects low supply voltage

Arbitrary sequencing of power supplies is permitted

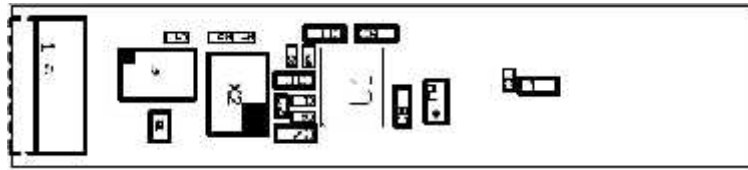
### 3.2 ELECTRICAL CHARACTERISTICS

<b>Frequency Range</b>	2.402GHz to 2.480GHz, ISM band
<b>Radio Technology</b>	FHSS (Frequency Hopping Spread Spectrum)
<b>Basic Data Rate</b>	1Mbps (GFSK)
<b>Enhanced Data Rate</b>	2Mbps (DQPSK); 3Mbps (8-DPSK)
<b>Channel Number</b>	79 Channels, 1MHz bandwidth

### 3.3 POWER MEASUREMENT

<b>Supply voltage</b>	+3.3V (Min. 3.0V; Max. 3.6V)
<b>Continuous TX supply current</b>	57mA
<b>Continuous RX supply current</b>	46mA
<b>Bluetooth Power ON (RF off)</b>	14mA

### 3.4 MODULE PIN ASSIGNMENT



PIN	
1	VCC 3.3V
2	GND
3	USB D+
4	USB D-
5	Reserved; unused.
6	Reserved; unused.

### 3.5 Module Dimension

BlueSlim2	Length	Width	Height		
PCB Dimension	6.5mm ( $\pm 1.5\%$ )	30mm ( $\pm 1.5\%$ )	0.8mm ( $\pm 1.5\%$ )		
Module Dimension	6.5mm ( $\pm 1.5\%$ )	30mm ( $\pm 1.5\%$ )	Max. height of Shielding Case	TOP	1.15mm
				BOTTOM	0
			Total height = 2mm (Max. 2mm)		

### 3.6 ENVIRONMENTAL

Operating	Operating Temperature: 0°C to +70 °C Relative Humidity: 5-90% (non-condensing)
Storage	Temperature: -20°C to +85°C (non-operating) Relative Humidity: 5-95% (non-condensing)

### 3.7 SOFTWARE

OS supported: Linux / Android/ Windows

BT Stack: Please check the 3<sup>rd</sup>-party BT software utility or what stack which your OS has supported.

### 3.8 FEDERAL COMMUNICATIONS COMMISSION (FCC) STATEMENT

15.21

You are cautioned that changes or modifications not expressly approved by the part responsible for compliance could void the user's authority to operate the equipment.

15.105(b)

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 or more 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.

**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 of the device.



**FCC RF Radiation Exposure Statement:**

1. This Transmitter must not be co-located or operating in conjunction with any other antenna or transmitter.
2. This equipment complies with FCC RF radiation exposure limits set forth for an uncontrolled environment. This equipment should be installed and operated with a minimum distance of 20 centimeters between the radiator and your body.

**End Product Labeling**

This transmitter module is authorized only for use in device where the antenna may be installed such that 20cm may be maintained between the antenna and users.

The final end product must be labeled in a visible area with the following: “Contains FCC ID: PU5BT2”

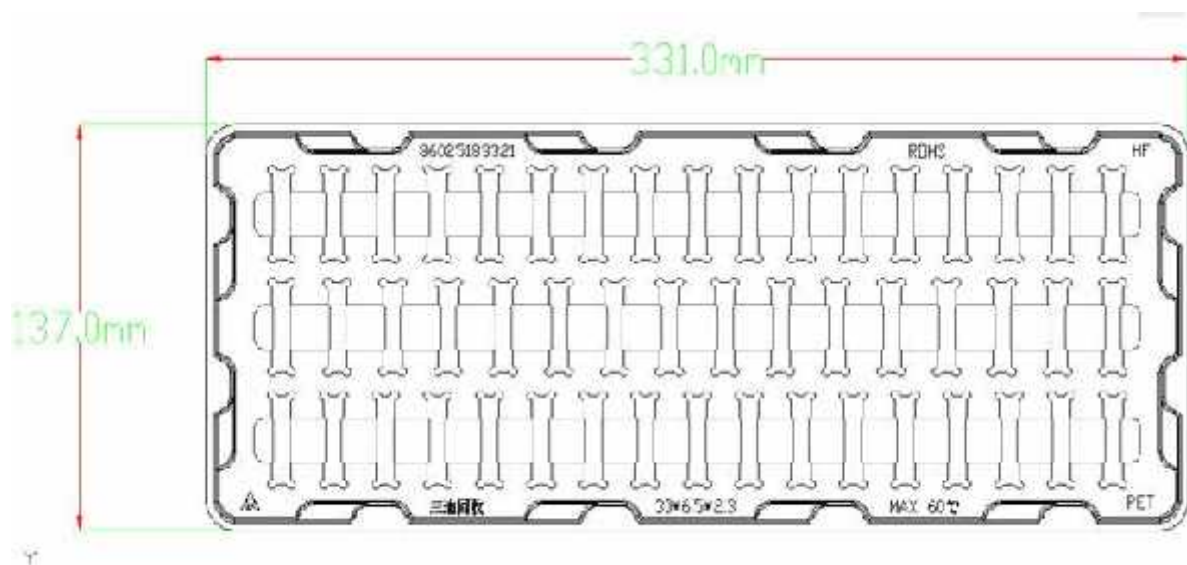
**Manual Information To the End User**

The OEM integrator has to be aware not to provide information to the end user regarding how to install or remove this RF module in the user’s manual of the end product which integrates this module.

The end user manual shall include all required regulatory information/warning as shown in this manual.

The end product may also subject to fulfill FCC part 15B (un-intentional emission) requirement while module is being installed.

## 4. PACKAGE



TRAY SPECIFICATION	Dimension: 331*137*97mm
CARTON SPECIFICATION	Dimension: 350*143*77mm
Q'TY/TRAY	800pcs/16+1 tray , TOTAL: 800pcs /Carton