

Wistron Corporation

PRODUCT SPECIFICATION

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

Revision: V0.93

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.
0.93	Jan.23, 2017	Add Halogen free/ROHS compliance. Software ver: to be confirmed.

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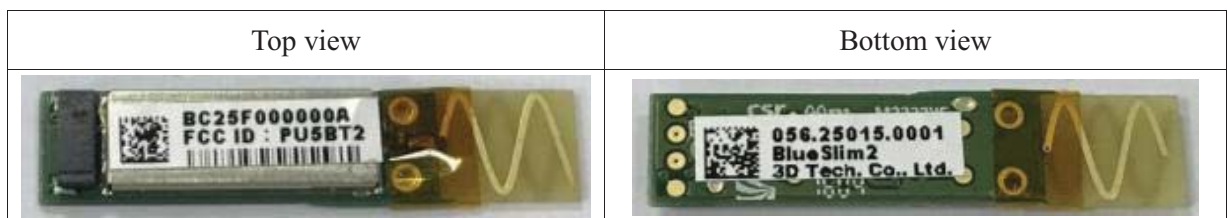
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1. INTRODUCTION

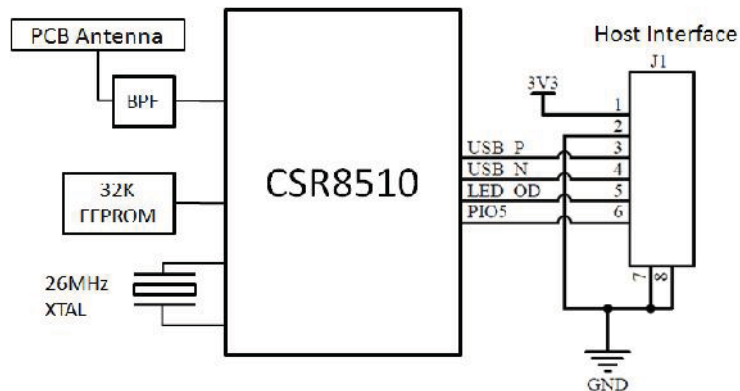
BlueSlim2 is a USB Bluetooth module from official CSR reference design; it is fully compatible with the Bluetooth v3.0 + High Speed and Bluetooth v4.0 standards, offering high-speed data transfer and Bluetooth low energy for PC products. Through products based on BlueSlim2, consumers can take full advantage of the Bluetooth low energy ecosystem, 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, and LE.
- Dual-mode Bluetooth/Bluetooth Low Energy operation.
- 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).
- Halogen free / 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, LE(Low Energy)	
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 ±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

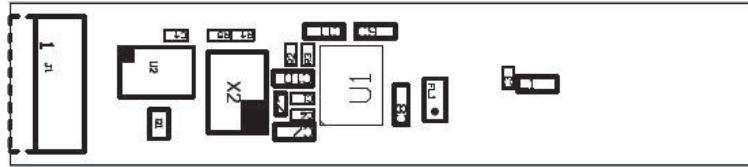
3.2 ELECTRICAL CHARACTERISTICS

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

3.3 POWER MEASUREMENT

Supply voltage	+3.3V (Min. 3.0V; Max. 3.6V)
Continuous TX supply current	57mA
Continuous RX supply current	46mA
Bluetooth Power ON (RF off)	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 3rd-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: PU5BT3”

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.

3.9 IC Statement

This device complies with Industry Canada licence-exempt RSS standard(s). Operation is subject to the following two conditions:

- This device may not cause interference
- This device must accept any interference, including interference that may cause undesired operation of the device

Le présent appareil est conforme aux CNR d'Industrie Canada applicables aux appareils radio exempts de licence. L'exploitation est autorisée aux deux conditions suivantes:

- l'appareil ne doit pas produire de brouillage, et
- l'utilisateur de l'appareil doit accepter tout brouillage radioélectrique subi, même si le brouillage est susceptible d'en compromettre le fonctionnement.

Caution: Exposure to Radio Frequency Radiation.

To comply with RSS 102 RF exposure compliance requirements, a separation distance of at least 20 cm must be maintained between the antenna of this device and all persons.

Pour se conformer aux exigences de conformité CNR 102 RF exposition, une distance de séparation d'au moins 20 cm doit être maintenue entre l'antenne de cet appareil et toutes les personnes.

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 IC: 4182A-Z01C"

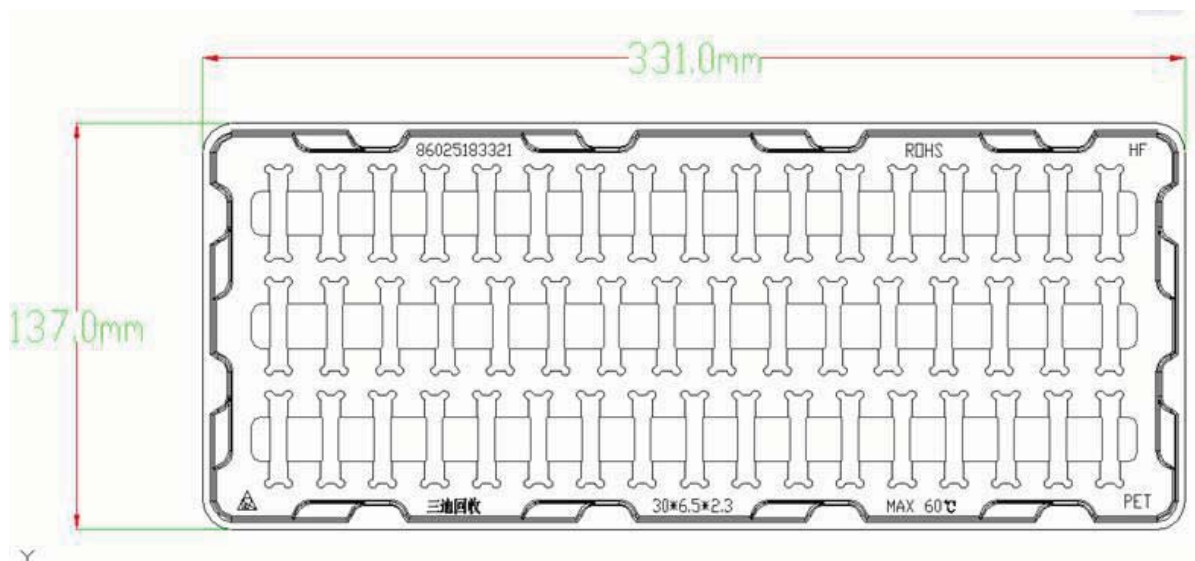
3.10 根據 NCC 低功率電波輻射性電機管理辦法規定

第十二條 經型式認證合格之低功率射頻電機，非經許可，公司、商號或使用者均不得擅自變更頻率、加大功率或變更原設計之特性及功能。

第十四條 低功率射頻電機之使用不得影響飛航安全及干擾合法通信；經發現有干擾現象時，應立即停用，並改善至無干擾時方得繼續使用。前項合法通信，指依電信法規定作業之無線電通信。低功率射頻電機須忍受合法通信或工業、科學及醫療用電波輻射性電機設備之干擾。

此模組於取得認證後將依規定於模組本體標示審驗合格標籤，並要求平台廠商於平台上標示。
「本產品內含射頻模組：ID 編號 XXXXX」字樣

4. PACKAGE



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