MS-6837

Bluetooth Module

General Description

The Bluetooth module, MS-6837 is a general purpose module available right now. It is a SMT component design with 35 pins. It is implemented by CSR Blue-Core2-External solution and already certified with Bluetooth 1.1 and compliant with Bluetooth 1.2. It features an mouse, keyboard, joystick and the HID profile is certified by BQB testing lab.

The MS-6837 module also provides all the enriched HCI features, such as LAN, PAN, Headset, FTP, FAX...functions.

Applications

HID Products (PC Client, 4M is requested)
- Mouse
- Keyboard
- Key Pad
- Game Pad
- Hand writing Pad
- Printer
- Heath Care device
- Force feedback Joystick

HCI Products (PC Host: 8M is requested)
- WiFi-BT PCI
- WiFi-BT USB dongle
- WiFi-BT MiniPCI
- Bluetooth Gateway/AP
- Bluetooth embedded USB HUB
- Bluetooth embeded Card Reader
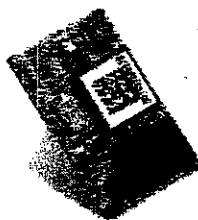- Personal Digital Assistants

Video/Audio Products (Standalone device)
- Web Cam
- Digital Camera
- Remote Controller

Ordering Information

- HID Module (4M) P/N: 605-6837-010
- HCI Module (8M) P/N: 605-6837-020
- Order base: 1200pcs / reel
- Suggestion: 6,000pcs (5 reels / Carton)
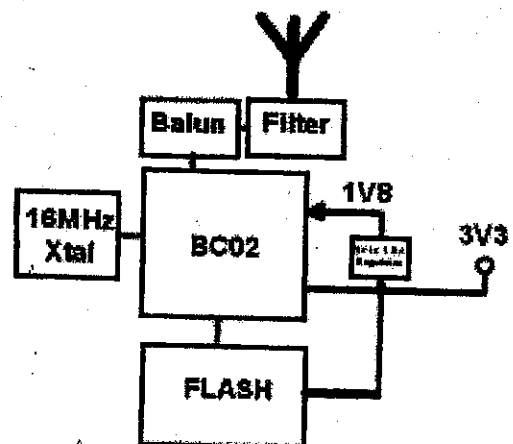
Bluetooth Qualified

Features

- CSR BlueCore2-External solution
- Bluetooth SIG specification 1.2
- Compliance with HID 1.0
- Built-in-test and auto-calibration routines
- UART, I^2C, SPI, USB interfaces
- 12-pin PIO and 2-pin AIO for programming
- 0~4 dBm output power (Class 2)
- -80 dBm receiving sensitivity
- 2.7~3.6V Operating Voltage
- Up to 20 meters range (Open Space)
- 0°C~65°C Operating Temperature
- 21.2 x 13.2 mm, 6 Layers
- Support power management

BQB Certifications

- **QPLN Ref no: BC0603_MS6837_SGS**
  MS-6837 : Bluetooth HID Module
  http://qualweb.bluetooth.org/Template2.cfm?
  LinkQualified=QualifiedProducts&Details=
  Yes&ProductID=1556

- **QPLN Ref no: Q20104_MSBTMS_SGS**
  Bluetooth Mouse with MS-6837 module
  http://qualweb.bluetooth.org/Template2.cfm?
  LinkQualified=QualifiedProducts&Details=
  Yes&ProductID=1611

Block Diagram

Operational Description of equipment

MSI ^{TM} Bluetooth Module provides wireless technology that revolutionizes personal connectivity. It is the solution for the seamless integration of Bluetooth technology into personal computers, enabling short-range wireless connections between desk-top/laptop computers, Bluetooth-enables peripherals (printers, faxes..), portable handheld devices, and connectivity to the internet.
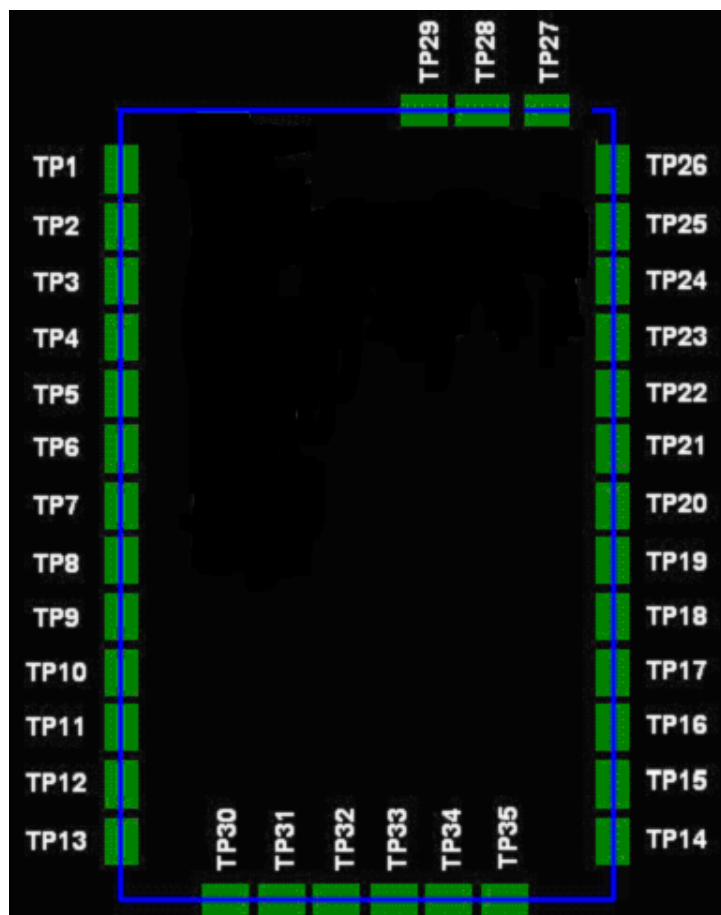
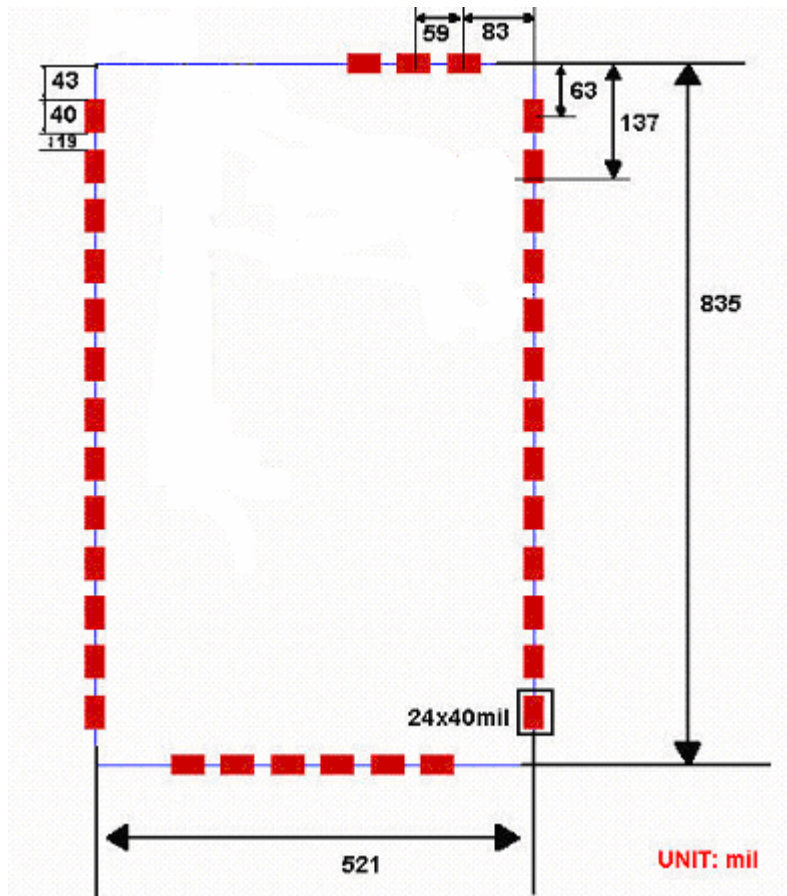| PRODUCT	Bluetooth Module
MODEL NO.	MS-6837
POWER SUPPLY	DC 3.3V, 6-11mA
CABLE	N/A
FREQUENCY BAND	2.402~2.480GHz
CARRIER FREQUENCY	2.402~2.480GHz
NUMBER OF CHANNEL	79
CHANNEL SPACING	1MHz
RATED RF OUTPUT POWER	0~+4dBm(1~2.5mW)
I.F. & L.O.	L.O.:16MHz
MODULATION TYPE	1Mbps (GFSK)
DUTY CYCLE	Max 1600 hops/sec
BIT RATE OF TRANSMISSION	1Mbps
OPERATION TEMPERATURE RANGE	0~65°C
MODE OF OPERATION	Duplex
ANTENNA TYPE	Dipole
ANTENNA GAIN	3dBi

Dimension and Pin Specification

Pin definition:

Green pad is on top side and blue pad is on the bottom side

TP1	UART_TX	**TP13**	GND	**TP25**	PIO10
TP2	UART_RX	**TP14**	GND	**TP26**	PIO11
TP3	UART_CTS	**TP15**	PIO0	**TP27**	GND
TP4	UART_RTS	**TP16**	PIO1	**TP28**	ANT
TP5	PCM_SYNC	**TP17**	PIO2	**TP29**	GND
TP6	PCM_IN	**TP18**	PIO3	**TP30**	USBDN
TP7	PCM_OUT	**TP19**	PIO4	**TP31**	USBDP
TP8	PCM_CLLK	**TP20**	PIO5	**TP32**	SPI-MOSI
TP9	AIO_0	**TP21**	PIO6	**TP33**	SPI-MISO
TP10	AIO_1	**TP22**	PIO7	**TP34**	SPI-CLK
TP11	AUX_DAC	**TP23**	PIO8	**TP35**	SPI-CSB
TP12	3V3	**TP24**	PIO9		

Ver:1.0 Aug 10.05 Rich Jan

MS6837B dimension (Unit:mil)

Federal Communications   Commission   (FCC)   Statement

RADIO FREQUENCY INTERFERENCE BTATEMENT

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 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 correct the interference by one or more of the following measures**:**

-   Reorient the receiving antenna.

-   Increase the separation between the equipment and receiver.

-   Connect the equipment into and outlet on a circuit different from that to which the receiver is connected.

-   Consult the dealer or an experienced radio/TV technician for help.

Warning: A shielded-type power cord is required in order to meet FCC emission limits and also to prevent interference to the nearby radio and television reception.   It is essential that only the supplied power cord be used.

Use only shielded cables to connect I/O devices to this equipment.

CAUTION:
   1.   Any changes or modifications not expressly approved by the party responsible for compliance could void your authority to operate the equipment.
   2.   The antenna(s) used for this transmitter must not be co-located or operating in conjunction with any other antenna or transmitter.
   3.   The modular transmitter must be labeled with its own FCC ID number, and if the FCC ID is not visible when the module is installed inside another device, then the outside of the device into which the module is installed must also display a label referring to the enclosed module. This exterior label can use wording such as the following:
   " Contains Transmitter Module FCC ID:XYZMODEL1" or "Contains FCC ID:XYZMODEL1."