Bluetooth Emitter Board

Model : BM-LDS401

Part No. : EBR76363001

September 2012

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Introduction

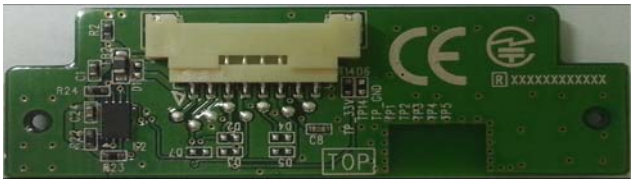
The module is an embedded Bluetooth module based on the BCM20705, standalone Bluetooth baseband processor with an integrated 2.4 GHz transceiver.
The module is fully compliant with the Bluetooth radio specification and incorporates new modulation schemes to support 2M and 3 Mbps Enhanced Data Rates (EDRs).
The module supports UART and is fully compatible with the host controller interface (HCI) Specification.
The module includes serial flash memory, a crystal oscillator, and a Chip antenna.

Features

Programmable collaborative coexistence interface
Class 1 output power capable
Scatternet operation, with up to 4 active piconets
(with background scan and support for ScatterMode)
2M and 3 MBps EDR support
High-speed HCI UART transport support
- H4 five-wire UART (four signal wires, one ground wire)
Full support for power saving modes
Firmware upgrades through runtime RAM, serial flash memory download.

Hardware Description

The Emitter Board can be built in Magic Remocon system and 3D Glasses system for PDP.



Product Specifications

■ Bluetooth + EDR compliant

■ Support for Bluetooth + EDR including the following options:
A whitelist size of 25.
Enhanced Power Control
HCI Read Encryption Key Size command

■ Full support for Bluetooth 2.1 + EDR additional features:
Secure Simple Pairing (SSP)
Encryption Pause Resume (EPR)
Enhance Inquiry Response (EIR)
Link Supervision Time Out (LSTO)
Sniff SubRating (SSR)
Erroneous Data (ED)
Packet Boundary Flag (PBF)

■ 1Mbit Flash Memory

■ Standard HCI support (UART)

■ Integrated RF section
Single-ended, 50 ohm RF interface
Built-in TX/RX switch functionality
TX Class 1 output power capability
RX sensitivity basic rate of .88 dBm

■ 20MHz Crystal Oscilator

■ Module is designed to fit following applications

• TV
• Blue-ray Disc Player (BDP)
• Set Top Box (STB)
• Monitor
• Projector
• Smart Box

Physical Characteristics

Pin Assignment

Pin 1	VCC (3.3V)
Pin 2	RTS
Pin 3	Uart RX
Pin 4	Uart TX
Pin 5	Reset
Pin 6	CTS
Pin 7	3D Sync
Pin 8	GND

Dimensions

45(L)x15(W)x5.25(H) mm

Weight

2.46 g

Part	Specification
Bluetooth Spec	Bluetooth Specification V3.0
Frequency Range	2.4 GHz ISM Band
Sensitivity	-80
Output Power	10dBm Max.(GFSK) 8.0dBm Max. (EDR)
Support Bluetooth Profile	HID , A2DP , AVRCP
Input Power	3.3V
Current Consumption	Max 75mA
Operating Temperature	-10 ~ 60
Antenna	Chip Antenna
Interface	UART
Crystal Frequency	20 MHz
Frequency Channel	79

Approval Statements

CE approval

Hereby, we declare that this device is in compliance with the essential requirements and other relevant provisions of directive 1999/5/EC.

Restrictions of use: In France, this device must not be used outdoors.

FCC approval

This device complies with Part 15 of the FCC`s 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 undesirable operation.

To satisfy FCC exterior labeling requirements, the following text must be placed on the exterior of the end product.
Contains Transmitter module FCC ID: BEJLDS401

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.

IC approval

This device complies with Industry Canada license-exempt RSS standard(s). Operation is subject to the following two conditions: (1) this device may not cause interference, and (2) this device must accept any interference, including interference that may cause undesired operation of the device.

Cet appareil est conforme avec Industrie Canada exempts de licence standard RSS (s). L'opération est soumise aux deux conditions suivantes: (1) cet appareil ne peut causer d'interférences, et (2) cet appareil doit accepter toute interférence, y compris les interférences qui peuvent causer un mauvais fonctionnement de l'appareil.

The host device must be labeled to display the Industry Canada certification number of the module.
Contains transmitter module IC: 2703H-LDS401

Le dispositif d'accueil doivent être étiquetés pour afficher le numéro de certification d'Industrie Canada du module.
Contient module émetteur IC : 2703H-LDS401

User information

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

Attention: Toute changé ou modifications non expressément approuvés par la partie responsable de la conformité pourraient annuler l'utilisateur `autorité de faire fonctionner cet équipement.

IMPORTANT NOTE

This device complies with FCC & IC radiation exposure limits set forth for an uncontrolled environment. This device should be installed and operated with minimum distance 20cm between the radiating element of this device and the user. This device must not be co-located or operating in conjunction with any other antenna or transmitter.

This device is intended only for OEM integrators under the following conditions:

1) The antenna must be installed such that 20cm is maintained between the antenna and users.
2) This module may not be co-located with any other transmitters or antennas.

As long as 2 conditions above are met, further transmitter test will not be required. However, the OEM integrator is still responsible for testing their end-product for any additional compliance requirements with this module installed.

In the event that these conditions cannot be met, then the FCC & IC authorizations are no longer considered valid and the FCC ID cannot be used on the final product. In these circumstances, the OEM integrator will be responsible for re-evaluating the end product including this module and obtaining separate FCC & IC authorizations.

NOTE IMPORTANTE

Cet appareil est conforme aux limites de la FCC et IC exposition aux radiations dans un environnement non contrôlé. Cet appareil doit être installé et utilisé avec distance minimum de 20cm entre l'élément rayonnant de cet appareil et l'utilisateur. Cet appareil ne doit pas être co-localisés ou fonctionnant en conjonction avec une autre antenne ou transmetteur.

Cet appareil est conçu uniquement pour les intégrateurs OEM dans les conditions suivantes :

1) L 'antenne doit être installée de telle sorte que 20cm est maintenue entre l'antenne et les utilisateurs
2) Ce module ne peut pas être co-localisés avec les autres émetteurs ou les antennes.

Aussi longtemps que deux conditions précitées sont remplies, le test du transmetteur supplémentaires ne seront pas tenus. Toutefois, l'intégrateur OEM est toujours responsable de tester leurs produits finis pour toutes les exigences de conformité supplémentaires avec ce module installé.

Dans le cas où ces conditions ne peuvent pas être remplies, alors la FCC et IC autorisations ne sont plus considérés comme valides et l'ID de la FCC ne peut pas être utilisé sur le produit final. Dans ces circonstances, l'intégrateur OEM sera responsable de réévaluer le produit final, y compris l'obtention de ce module et séparée de la FCC et IC autorisations

Label and manual requirements for the End Product

For an end product using the BM-LDS401 there must be a label containing, at least, the following information:

For FCCID

This device contains FCC ID: BEJLDS401

For IC Certification No

This device contains IC ID: 2703H-LDS401