# 规格承认书
# Spec for approval

客户名称：

我司料号：

贵司料号：

软件版本：

| 承认签章 | | | | | |
|---|---|---|---|---|---|
| 佳利承认 | | | 客户承认 | | |
| 拟制 | 审核 | 批准 | 拟制 | 审核 | 批准 |
| | | | | | |

**地址：**
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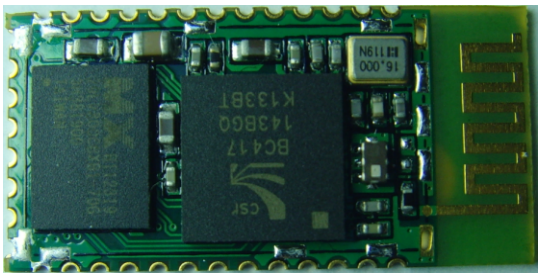
Electronics GLEAD 佳利电子



# ZYM-BT42 Module

**CSR BC417143B**

**Rev.1.0**

**May 2011**

Bluetooth

## Device Features

- Bluetooth Spec v2.0+EDR Compliant
- Class 2, up to 10-meter range
- Complete 2.4GHz Bluetooth® System
- Power management: low power 1.8V operation for Bluetooth® core
- Compact size: 26.9mm (L) x 13 (W) mm x 2.2mm (H)
- Bluetooth® Profile Supported: SPP,HSP, HFP, OPP,PBAP
- Internal antenna
- On-board flash memory (8Mbits)
- Support multiple connections
- Surface mount module for embedded applications
- Several firmware options
- Rewritable flash memory for easy upgrade route
- Custom firmware production available

## General Description

The BT42 V1 module from GLEAD is a complete Bluetooth® solution.It is built on CSR BC04-External Core and 8Mbit Flash memory.It's a short range,compact and cost effective module. Be able to be embedded into your any electronics devices which need Bluetooth® connection,such as industry handle devices,PND, HID applications…

The BT42 V1 module is a power class2 Bluetooth® device, and is in compliance with version 2.0+EDR of the Bluetooth® specification. It includes CSR BC04-External Core and 8Mbit Flash memory, internal attenna, supporting circuitry, together with some higher-level software protocols and applications such as L2CAP, SDP, GAP, HSP, HFP, OPP and PBAP resided in the flash memory.

## Applications

- Industry handle device
- Printer
- Personal Navigation Device
- PDAs and other portable terminals
- MP3 headset

# The User Guidelines about FCC Rules

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.

Changes or modifications not expressly approved by the part responsible for compliance could void the user's authority to operate the equipment.

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. The 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 interference by one or more of the following measures:

-- Reorient or relocate the receiving antenna.

-- Increase the separation between the equipment and receiver.

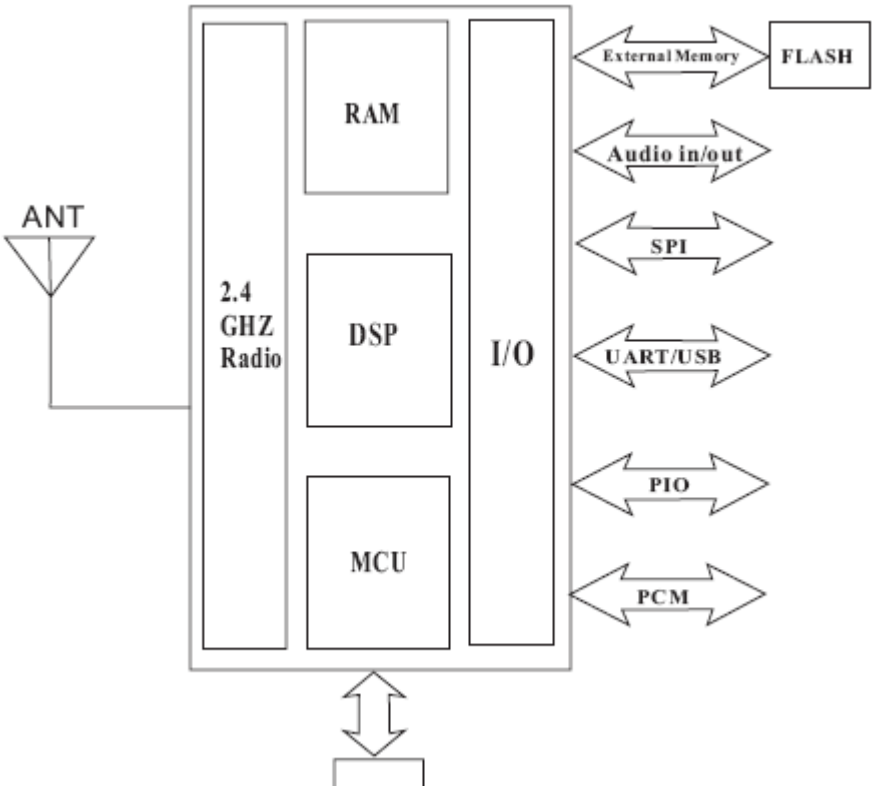
-- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.

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

Please notice that if the FCC identification number 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 FCC ID:A8S-JLBM4" any similar wording that expresses the same meaning may be used.

# Content

# System Architecture




# Specifications

| | |
|---|---|
| Operating Frequency Band | 2.4GHz -2.48GHz unlicensed ISM band |
| Bluetooth Specification | V2.0+EDR |
| Output Power Class | Class 2 |
| Operating Voltage | 3.3V |
| Host Interface | USB 1.1/2.0 or UART |
| Audio Interface | PCM |
| Flash Memory Size | 8Mbit |
| Dimension | 26.9mm (L) x 13 (W) mm x 2.2mm (H) |
| Crystal | 16MHz |

NOTES:Specifications are subject to change without prior notice

# Electrical Characteristics

| **Absolute Maximum Ratings** | | |
|---|---|---|
| **Rating** | **Min** | **Max** |
| Storage temperature | -40℃ | +150℃ |
| Supply voltage | -0.4V | 5.6V |
| Other terminal voltages | VSS-0.4V | VDD+0.4V |

| Recommended Operating Conditions | | |
|---|---|---|
| **Operating Condition** | **Min** | **Max** |
| Operating temperature range | -40℃ | +85℃ |
| Guaranteed RF performance range(a) | -40℃ | +85℃ |
| Supply voltage | 2.2V | 4.2V |

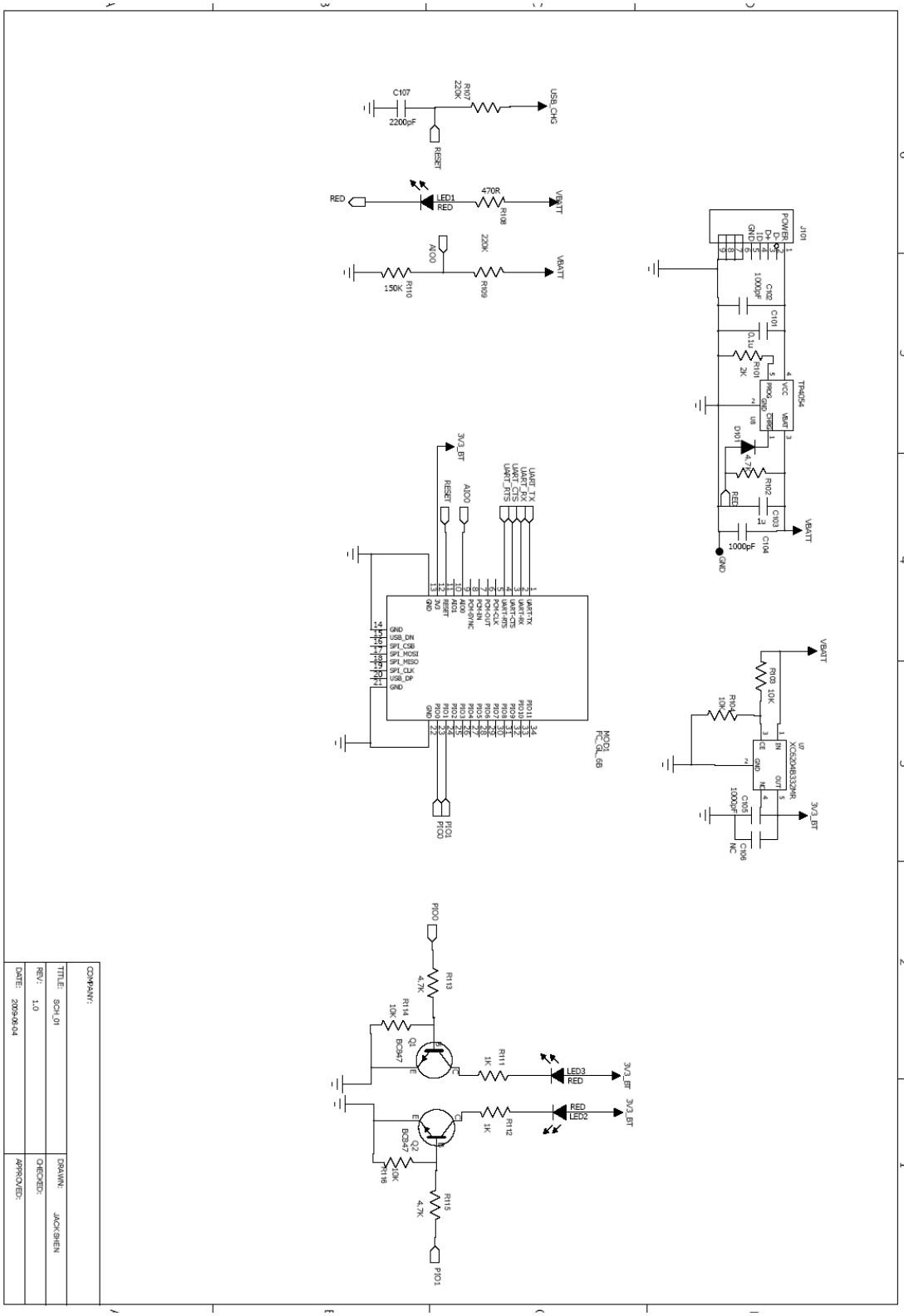
* Typical figures are given for RF performance between -40℃ and +105℃.

**Power Consumption**

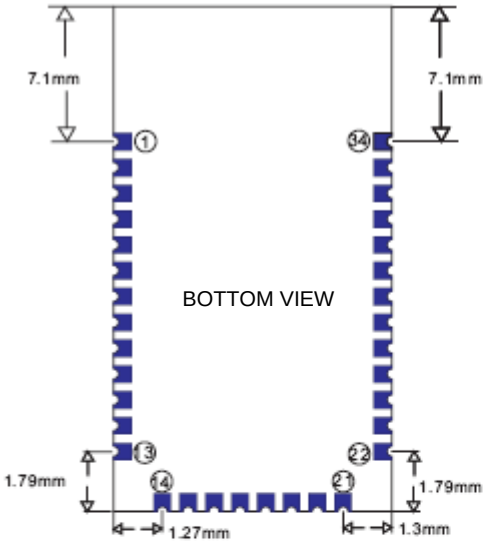
| Operation Mode | Connection Type | UART Rate (kbps) | Average | Unit |
|---|---|---|---|---|
| Page scan | - | 115.2 | 0.42 | mA |
| ACL No traffic | Master | 115.2 | 4.60 | mA |
| ACL With file transfer | Master | 115.2 | 10.3 | mA |
| ACL 1.28s sniff | Master | 38.4 | 0.37 | mA |
| ACL 1.28s sniff | Slave | 38.4 | 0.42 | mA |
| SCO HV3 30ms sniff | Master | 38.4 | 19.8 | mA |
| SCO HV3 30ms sniff | Slave | 38.4 | 19.0 | mA |
| Standby Host connection(a) | - | 38.4 | 40 | μA |

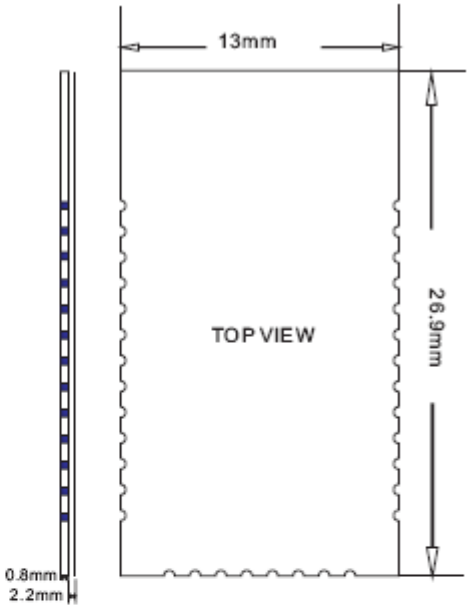
* Low power mode on the linear regulator is entered and exited antomatically when the chip enters/leaves Deep Sleep mode.

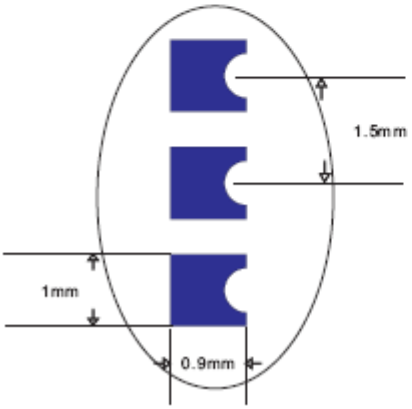
# Application Schematic



# Mechanical Dimension




| NO | PIN NAME | NO | PIN NAME |
|---|---|---|---|
| 1 | UART-TX | 18 | SPI-MISO |
| 2 | UART-RX | 19 | SPI-CLK |
| 3 | UART-CTS | 20 | USB D+ |
| 4 | UART-RTS | 21 | GND |
| 5 | PCM-CLK | 22 | GND |
| 6 | PCM-OUT | 23 | PIO(0) |
| 7 | PCM-IN | 24 | PIO(1) |
| 8 | PCM-SYNC | 25 | PIO (2) |
| 9 | AIO(0) | 26 | PIO(3) |
| 10 | AIO(1) | 27 | PIO(4) |
| 11 | RESET | 28 | PIO(5) |
| 12 | 3.3V | 29 | PIO(6) |
| 13 | GND | 30 | PIO(7) |
| 14 | GND | 31 | PIO(8) |
| 15 | USB D- | 32 | PIO(9) |
| 16 | SPI-CSB | 33 | PIO(10) |
| 17 | SPI-MOSI | 34 | PIO(11) |

# Pin Descriptions

| PIN NO. | NAME | TYPE | FUNCTION | RE-MARK |
|---|---|---|---|---|
| 1 | UART-TX | CMOS Output | UART Data Output | |
| 2 | UART-RX | CMOS Input | UART Data Input | |
| 3 | UART-CTS | CMOS Input | UART Clear To Send Active Low | |
| 4 | UART-RTS | CMOS Output | UART Request To Send Active Low | |
| 5 | PCM-CLK | Bi-directional | Synchronous Data Clock | |
| 6 | PCM-OUT | CMOS Output | Synchronous Data Output | |
| 7 | PCM-IN | CMOS Input | Synchronous Data Input | |
| 8 | PCM-SYNC | Bi-directional | Synchronous Data Sync | |
| 9 | AIO(0) | Bi-directional | Programmable Input/Output Line | |
| 10 | AIO(1) | Bi-directional | Programmable Input/Output Line | |
| 11 | RESETB | CMOS Input | Reset if low.Input debounced so must be low for>5ms to cause a reset | |
| 12 | 3.3V | POWER | +3.3V Supply | |
| 13 | GND | GND | Ground | |
| 14 | GND | GND | Ground | |
| 15 | USB D- | Bi-directional | USB Data Minus | |
| 16 | SPI-CSB | CMOS Input | Chip Select For Synchronous Serial Interface | |
| 17 | SPI-MOSI | CMOS Input | Serial Peripheral Interface Data Input | |
| 18 | SPI-MISO | CMOS Output | Serial Peripheral Interface Data Output | |
| 19 | SPI-CLK | CMOS Input | Serial Peripheral Interface Clock | |
| 20 | USB D+ | Bi-directional | USB Data Plus with selectable internal 1.5K Ω | |
| 21 | GND | GND | Ground | |
| 22 | GND | GND | Ground | |
| 23 | PIO(0) | Bi-directional with programmable strength | Control output for external LNA (if fitted) | |
| 24 | PIO(1) | Bi-directional with programmable strength | Control output for external PA (if fitted) | |
| 25 | PIO(2) | Bi-directional | Programmable Input/Output Line | |
| 26 | PIO(3) | Bi-directional | Programmable Input/Output Line | |
| 27 | PIO(4) | Bi-directional with programmable strength | Programmable Input/Output Line or optional BT_Priority/CH_Clk output for co- | |
| 28 | PIO(5) | Bi-directional with programmable strength | Programmable Input/Output Line or optional BT_Active output for co-existence | |
| 29 | PIO(6) | Bi-directional with programmable strength | Programmable Input/Output Line or optional WLAN_Active/Ch_Data input for co- | |
| 30 | PIO(7) | Bi-directional | Programmable Input/Output Line | |
| 31 | PIO(8) | Bi-directional | Programmable Input/Output Line | |
| 32 | PIO(9) | Bi-directional | Programmable Input/Output Line | |
| 33 | PIO(10) | Bi-directional | Programmable Input/Output Line | |
| 34 | PIO(11) | Bi-directional | Programmable Input/Output Line | |