



The BTM420 and BTM421 Bluetooth® modules are designed to meet the needs of developers adding robust, short range Bluetooth data connectivity to their products and using embedded Bluetooth stacks within these products. They are based on the market-leading Cambridge Silicon Radio BC04 chipset, providing exceptionally low power consumption with outstanding range. Supporting the latest Bluetooth Version 2.1 Specification with EDR (Enhanced Data Rate), HCI Data Modules increase data throughput up to 2.1 Mbps. BT version 2.1 provides the advantage of Secure Simple Pairing that improves security and enhances ease of use for end customers.

With a footprint as small as 12.5mm x 18.0mm and best-of-class low-power operation, these modules are ideal for applications where designers need both performance and minimum size. For maximum flexibility in systems integration, the modules are designed to support separate power supplies for I/O and the USB interface.

These modules present an HCI interface and are fully qualified as Bluetooth Controller Subsystem products. This also allows designers to integrate their existing pre-approved Bluetooth Host and Profile subsystem stacks to gain a Bluetooth END product approval for their products.

A low-cost developer's kit is available for prototyping, ensuring a fast route to market.

FEATURES AND BENEFITS

- Bluetooth v2.1+EDR
- Adaptive frequency hopping to cope with interference from other wireless devices
- Secure Simple Pairing support
- External or internal antenna options
- HCI interface
- Bluetooth controller subsystem product qualified
- Compact size
- Class 2 output – 4dBm
- Low power operation
- USB interface
- PCM for external codec
- Wi-Fi co-existence hardware support

APPLICATION AREAS

- Embedded devices
- Phone accessories
- Security devices
- Medical devices
- Aftermarket automotive applications
- Bluetooth advertising
- ePOS

global solutions: local support™

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wirelessinfo@lairdtech.com

www.lairdtech.com/wireless

| CATEGORIES | FEATURE | IMPLEMENTATION |
|------------------------------------|-----------------------|---|
| Wireless Specification | Bluetooth® | Version 2.1+EDR |
| | Frequency | 2.402 – 2.480 GHz |
| | Max Transmit Power | Class 2 + 4dBm (at antenna pad – BTM420) +4dBm (from integrated antenna – BTM421) |
| | Receive Sensitivity | Better than -84dBm |
| | Range | Up to 30 meters |
| | Data Rates | Up to 2.1Mbps (over the air) |
| Host Interface | USB | Qualified to USB v 1.1. Compliant with USB 2.0 Data signalling requirements. |
| Power Consumption | Current Consumption | Less than 40 mA during SCO transmission |
| Supply Voltage | Supply | 3.0V to +3.3V |
| | USB | 3.1V to 3.6V |
| | I/O | 1.7V to +3.3V (independent of Vcc) |
| Coexistence / Compatibility | 802.11 (Wi-Fi) | 2 wire and 3 wire schemes supported |
| Connections | External Antenna | Connection via SMT pad – BTM420 |
| | Internal Antenna | Multilayer ceramic – BTM421 |
| Physical | Dimensions | 12.5mm x 18.0mm x 3.4mm (external antenna – BTM420) |
| | | 12.5mm x 22.0mm x 3.4mm (integrated antenna – BTM421) |
| Environmental | Operating Temperature | -30°C to +70°C |
| | Storage Temperature | -40°C to +85°C |
| Miscellaneous | Lead free | Lead-free and RoHS compliant |
| | Warranty | 1 Year |
| Development Tools | Development Kit | Development board |
| Approvals | Bluetooth® | Controller Subsystem Product |
| | FCC/IC & CE | BTM420 - Limited Modular Approval BTM421 - Full Modular Approval |

ORDERING INFORMATION

| | |
|-------------|---|
| BTM420 | Bluetooth HCI Data Module (external antenna) |
| BTM421 | Bluetooth HCI Data Module (with integrated antenna) |
| DVK- BTM420 | Development Kit (external antenna) |
| DVK- BTM421 | Development Kit (with integrated antenna) |

The details contained within the document are subject to change. Download the product specification from www.lairdtech.com/wireless for the most current specification.

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- Подбор аналогов;
- Консультации по применению компонента;
- Поставка образцов и прототипов;
- Техническая поддержка проекта;
- Защита от снятия компонента с производства.



Как с нами связаться

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