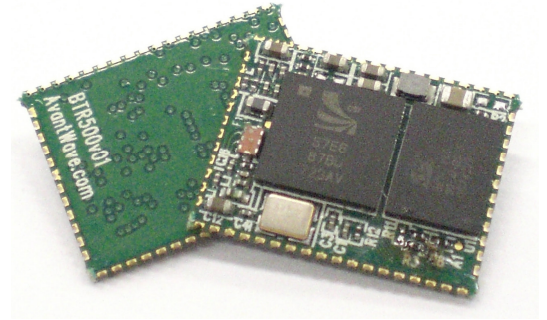


Bluetron™ Application Specific Bluetooth Module BTR501 / BTR502 / BTR503

Key Features

- A small and cost effective Bluetooth® system
- Bluetooth® specification v2.1 +EDR compliant
- Class 2, up to 10-meter range
- Complete 2.4GHz Bluetooth® System including:
 - Hardware: Radio, Baseband, Crystal and Flash Memory
 - Standard Firmware: HCI or RFCOMM stack
- 64MIPS Kalimba DSP co-processor
- Integrated 1.8V, 1.5V regulators (linear or switching mode)
- Compact size: 14.50 mm x 18.40 mm x 2.20 mm
- Built-in stereo CODEC
- Integrated battery charger
- 4.2V tolerant LED driver
- Support multiple connections
- Optional noise reduction and echo cancellation software library
- Optional text-to-speech software library
- Enhanced audio quality 92dB SNR
- Surface mount module for embedded applications
- Several firmware options
- Rewritable flash memory (BTR501 – 8Mbit, BTR502 - 16Mbit, BTR503 - 32Mbit) for easy upgrade route
- External antenna design



QDID: B013924

Description

Bluetron™ BTR501/BTR502/BTR503 module from AvantWave is a complete Bluetooth® solution for fast implementation, cutting your time-to-market. It is a short-range, compact and cost effective radio/baseband module that can be implemented in any kind of electronic devices, such as hands-free car kit, stereo headset/headphone, home audio system, etc.

In standard configuration the module includes a baseband processor with on board Flash memory, a radio front-end, supporting circuitry, together with some higher-level software protocols and applications such as HSP, HFP, A2DP, AVRCP are resided in the Flash.

The **Bluetron™ BTR500 series modules** are a power class 2 Bluetooth® device, and are in compliance with version 2.1 +EDR of the Bluetooth® specification. They are supplied with Bluetooth® protocol stack firmware which runs on the internal microprocessor. **Bluetron™ BTR500 series modules** are built on CSR BC05 Multimedia External core with Flash memory for firmware and application software storage.

Applications

- Stereo Bluetooth headset/headphone
- Automotive car kit applications
- PMP
- Home Audio System
- VoIP Headset
- Analog & USB Multimedia Dongle
- Automotive Wireless Gateway



www.avantwave.com

Tel: (852) 2648 9887 Fax: (852) 2646 3713

inquiry@avantwave.com

©AvantWave Limited, 2007

Technical Data

Hardware

- Bluetooth® Class 2 radio (up to 10 meters)
- Nominal output power up to 6 dBm
- Nominal sensitivity better than -86 dBm
- Uses 2.4 GHz ISM band
- Based on CSR BC05 Multimedia External chipset
- Host processor interface with UART, USB
- SPI interface for firmware and parameter upgrades
- Single supply voltage
- Operating temperature: -40°C to +85°C
- Reference designs and antennas available for several architectures

Firmware/Software

- Application specific firmware available
- Possible to use customized DSP firmware
- Audio codec, SBC & MP3 available

Certifications

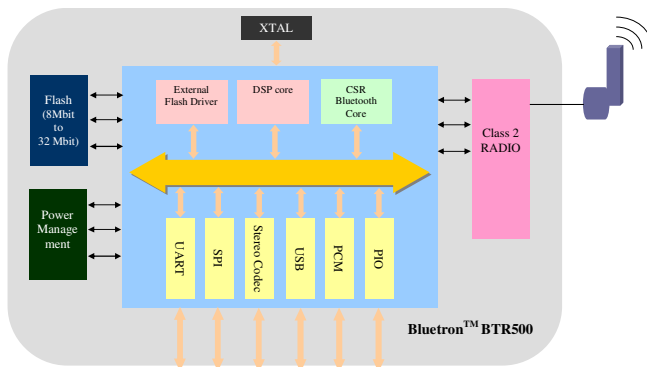
- Bluetooth® version 2.1 +EDR

Development and Evaluation

- **Bluetron™** On-board Installation Kit
- (Firmware and parameters installation)

Configuration

The **BTR500** series are based on the scalable **Bluetron™** architecture. This configuration allows embedded stand-alone Bluetooth® applications where your target application is embedded within the module, in addition to traditional host-based applications. This possibility is especially useful in portable type applications like car multimedia systems, home audio systems, etc. The variety of external interfaces also makes the **BTR500** series ideally suited for various applications in stereo headset/headphone, high-end audio systems.



Antenna interface

50Ω Bluetooth ISM Band antenna (2.4-2.5 GHz)

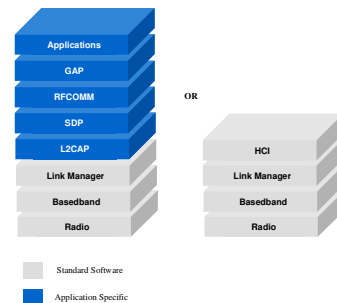
Communication Interface

Communication is carried out using a wide range of external interfaces like high-speed UART, SPI, USB (Universal Serial Bus), PCM and PIO.

Software

The standard firmware includes Bluetooth protocol layers up to the HCI-layer or RFCOMM-layer.

In addition, a variety of Bluetooth stacks for host- and embedded applications with different configuration could be offered. Please contact with our sales representatives at inquiry@avantwave.com or call us directly at 852-2648-9887.



Bluetooth is trademark of Bluetooth SIG, Inc., USA
All other product or service names are the property of their respective holders



www.avantwave.com

Tel: (852) 2648 9887 Fax: (852) 2646 3713

inquiry@avantwave.com
©AvantWave Limited, 2007