Technical Report

Billionton Inc. Bluetooth™ Class 2/3 Module : USBBT02M

USBBT02M is a miniature Bluetooth Radio Frequency (RF) Module that is based on the CSR BC02 single-chip solution. It is small in size for use in embedded systems to communicate with Bluetooth Access Points and other Bluetooth devices. An embedded system can become Bluetooth enabled by inserting the Bluetooth RF module that interfaces to the embedded processor via either USB or UART interface. The Class 2/3 module is a low power module that has a communication range of 10-20 meters. Using the USBBT02M to enable Bluetooth technology into systems, the embedded system can wirelessly communicate with other Bluetooth devices or with Bluetooth Access Points to wirelessly share and exchange data and access network resources and the Internet. As well as, eliminating cables and entanglements associated with cables.

General

Based on CSR BC02 single-chip solution.
Full Bluetooth Rate UART: 16550-compatible with programmable baud rate up to 921.6K bps and a 128-byte TX and RX FIFO.
Four low power modes: Park, Sniff, Hold and Sleep.
An embedded system can become Bluetooth enabled by inserting the Bluetooth module that interfaces to the embedded processor via either USB or UART interface. Once Bluetooth-enabled, the embedded systems can wirelessly communicate with each other or with Bluetooth Access Points to wirelessly share and exchange data and access network resources and Internet, eliminating cables and entanglements associated with cables. The super-small and cost-effective Bluetooth module makes designing a Bluetooth-enabled product an easy way!

Standard: Fully compliant with Bluetooth Version 1.1
RF-Wireless Frequency: 2400 ~ 2483.5MHz
Transmitter Power: Output power programmable to meet Class 2(0 dBm) or Class 3 requirements
Receiver Sensitivity: -80 dBm typical across passband under high interference environments
Interface: USB interface signals (conforms to full-speed 12Mbps speed of USb spec. 1.1)
UART interface signals
PCM Codec interface signals
Power Consumption: 42mA average
Power Source: DC 5V from USB interface of PC
Speed: Full 723K bps data rate
Range: Up to 10 ~20 meters
Dimension: 15mm X 25mm (W X L)

Application
With embedded systems becoming Bluetooth-enabled by the Bluetooth Modules, many wireless applications will become possible, such as:
Communicate with each other wirelessly (between embedded systems, laptops, PCs, and others), including sharing or exchange of data (i.e. wireless file transfers between Bluetooth-enabled devices).
Access wired network and network resources via Bluetooth Access Point.
Access Internet via Bluetooth Access Point with Router function or indirectly via Router in wired network, including sending and receiving emails or faxes.