BT111 *Bluetooth*® Smart Ready HCI Module

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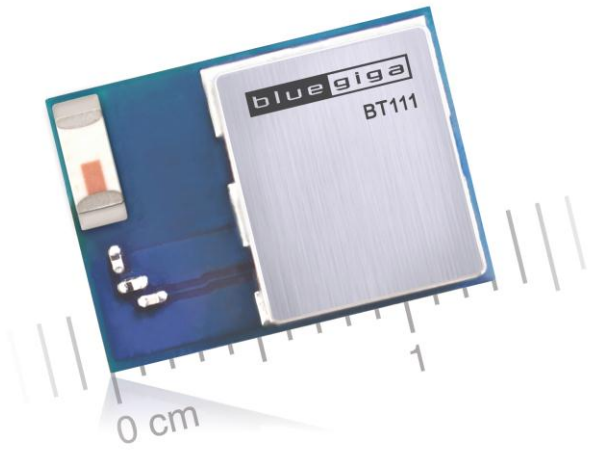
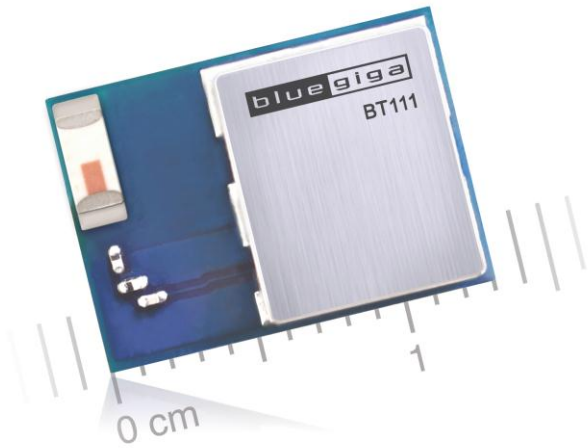
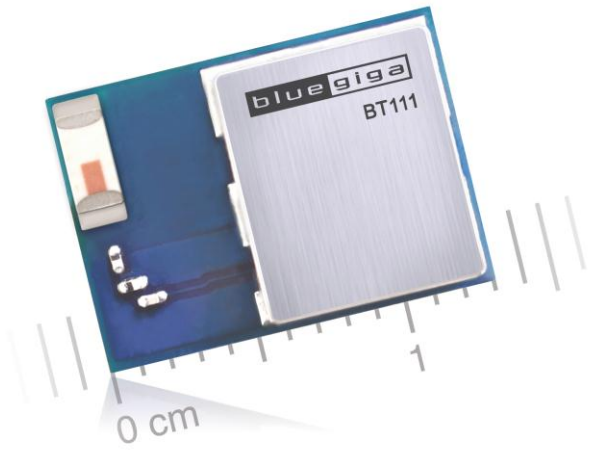


Key Features



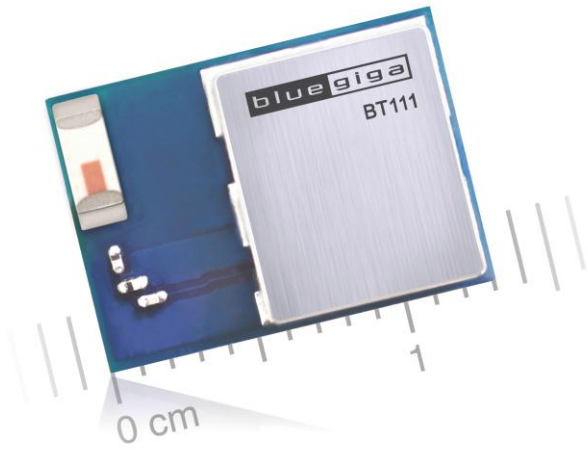
- ***Bluetooth* v.4.0 dual mode compliant**
  - Support *Bluetooth* classic
  - Supports *Bluetooth* 4.0 master mode
- **Radio capabilities**
  - Transmit power: + 8dBm
  - Receiver sensitivity: - 89dBm
  - Line-of-sight range: 100+ meters
  - Integrated antenna
- **Interfaces**
  - HCI over USB host interface
  - 802.11 co-existence interface
  - Software programmable GPIO
  - PCM or I2S audio interfaces

Key Features



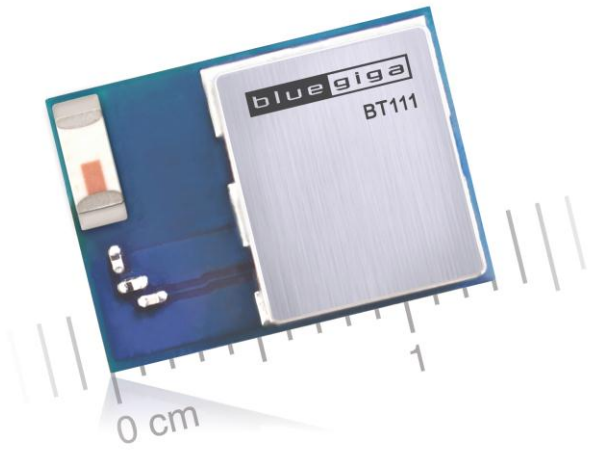
- **Supply voltage:** 2.3V to 5.7V
- **Temperature range:** -30C to +85C
- **Ultra compact size (L x W x H):** 13.05mm x 9.30mm x 2.1 mm
- ***Bluetooth*, CE, FCC, IC and Japan qualified**

Benefits



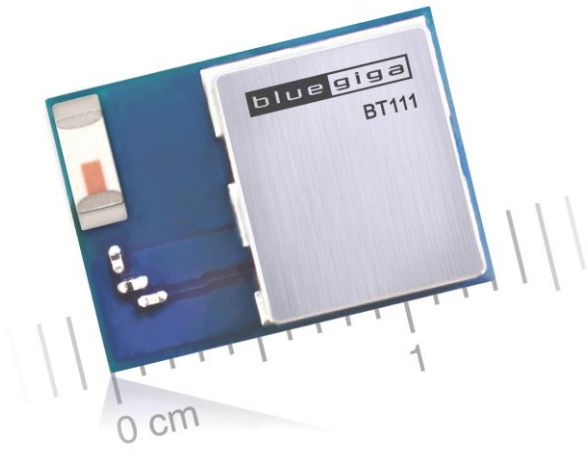
- **Integrated *Bluetooth* Smart Ready solution**
  - Fast time to market
  - Low development risks
- **Good radio performance**
  - Long range and robust connections
- **Regulatory and *Bluetooth* qualifications**
  - Proven interoperability
  - Minimal qualification costs
- **Co-existence with Bluegiga Wi-Fi products**

BT111 Overview



- ***Bluetooth 4.0 dual mode radio***
  - Frequency: 2.402 – 2480 MHz
  - TX power: +8 dBm
  - RX sensitivity: -89 dBm
  - Symbol rate: 1-3 Mbps
- **Antenna**
  - Integrated ceramic chip
- **Range**
  - 100+ meter lines of sight

BT111 Overview



Host interfaces
- Full speed USB 2.0 device
- Provides HCI over USB

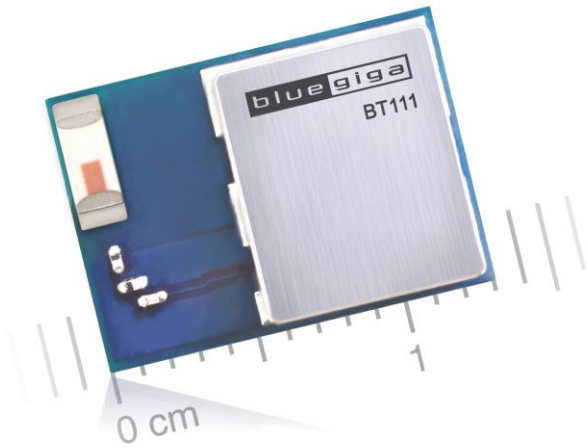
Audio interfaces
- Digital PCM interface
- Digital I2S interface

GPIO
- 8 programmable GPIO pins

Radio co-existence interfaces
- 3-wire Unity 3
- 3-wire Unity 3e+ (recommended)
- 4-wire Unity 4
- Compatible with Bluegiga Wi-Fi products

Programming & Debug
- 802.11 debug SPI

BT111 Overview



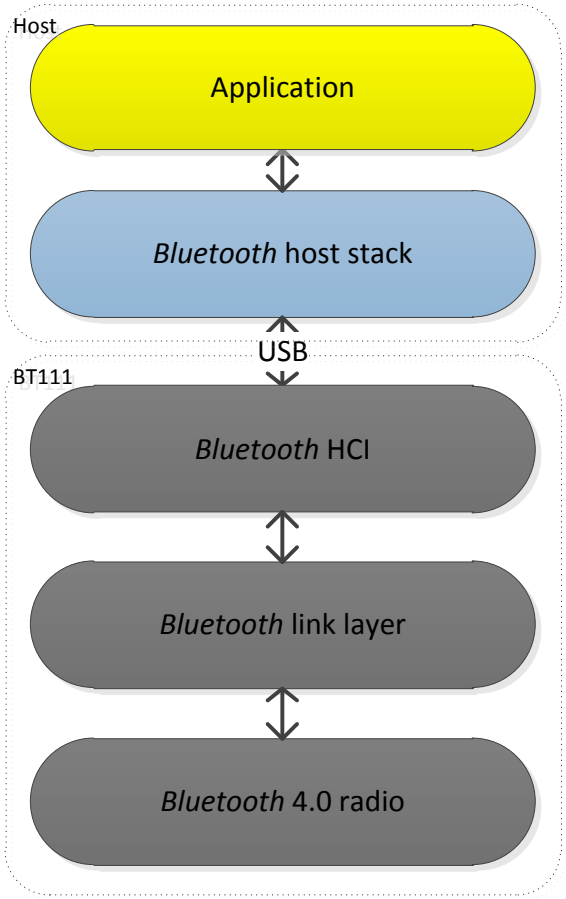
Power supply and current consumption

- **Single supply voltage**
  - 2.3V to 5.7V
- **Current consumption**
  - TX peak 70mA
  - RX peak 52mA
  - Deep sleep 370uA

BT111 *Bluetooth* Software Stacks

BT111 *Bluetooth* software stacks

- **BT111 contains the *Bluetooth* radio, link layer and HCI**
  - The *Bluetooth* stack to be on a separate host
  - The application needs to be on a separate host
- **Several *Bluetooth* host stacks exists**
  - Windows 7
  - Windows 8
  - Windows CE and Embedded Compact
  - Linux
  - 3rd party embedded stacks



BT111 *Bluetooth* software stacks

- **Windows 7**
  - Microsoft Windows *Bluetooth* stack
  - Supports *Bluetooth* 2.1 + EDR
  - Free of charge with Windows
  - Supported profiles

- **Windows 8**
  - Microsoft Windows *Bluetooth* stack
  - Supports *Bluetooth* 4.0
  - Free of charge with Windows
  - Supported profiles

BT111 *Bluetooth* software stacks

- **BlueZ Bluetooth stack**
  - Supports *Bluetooth* 2.1 + EDR
  - Preliminary support for *Bluetooth* 4.0
  - Free of charge
  - BlueZ web pages

BT111 *Bluetooth* software stacks

- **Windows CE 6.0**
  - Microsoft Windows CE *Bluetooth* stack
  - Supports *Bluetooth* 2.1 + EDR
  - Free of charge with Windows CE
  - Supported profiles

- **Windows Embedded Compact**
  - Microsoft Windows EC *Bluetooth* stack
  - Supports *Bluetooth* 2.1 + EDR
  - Free of charge with Windows EC
  - Supported profiles

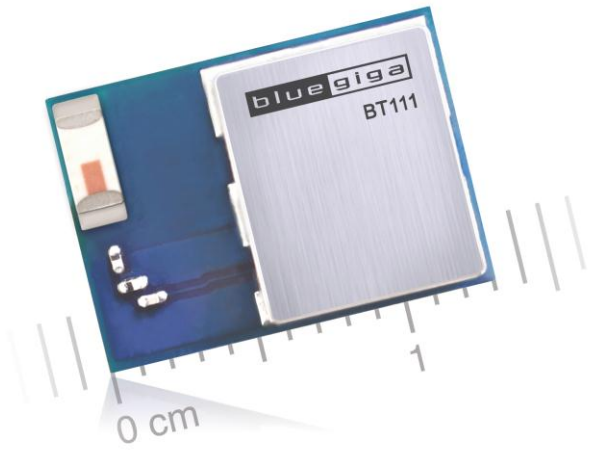
BT111 *Bluetooth* software stacks

- **EtherMind Bluetooth stack**
  - 3rd party Bluetooth stack from Mindtree
  - More information

- **Bluetopia®**
  - 3rd party Bluetooth stack from Stonesteet One
  - More information

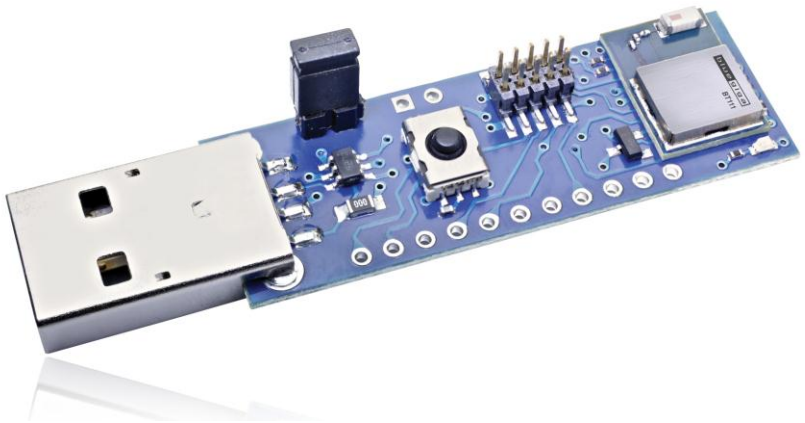
- **BTWare**
  - 3rd party Bluetooth stack from Jungo
  - More information

Certifications



- ***Bluetooth* controller subsystem**
  - QDID: B017701
- **Europe: CE**
  - EN300328
  - EN301489
- **FCC : USA**
  - Part 15B
- **Canada**
  - Industry Canada
- **Japan (H2/2013)**
  - ARIB STD-66

Development Tools



- **BT111 Development Kit**
  - BT111-A
  - USB connector board
  - SPI debug interface
  - Activity led
  - Reset button

  + Documentation

Thank You