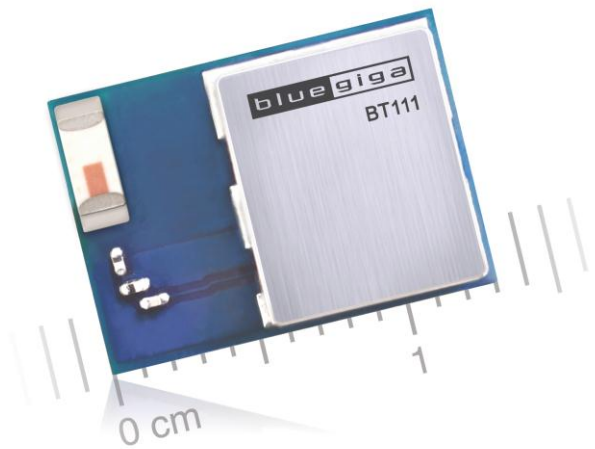




BT111 *Bluetooth*® Smart Ready HCI Module

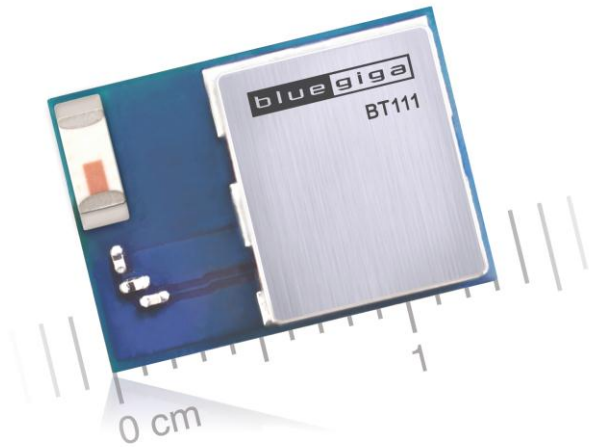
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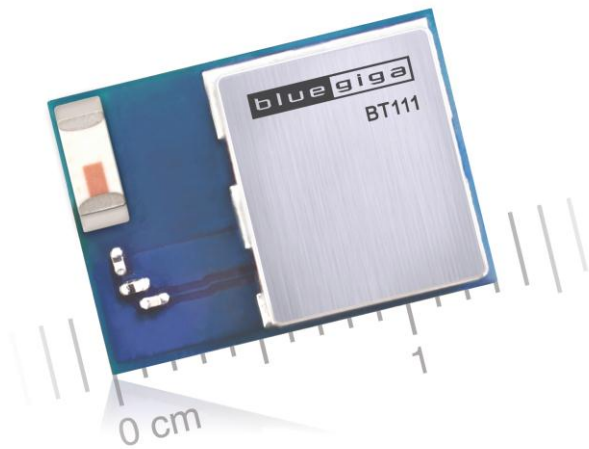
Key Features

- **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



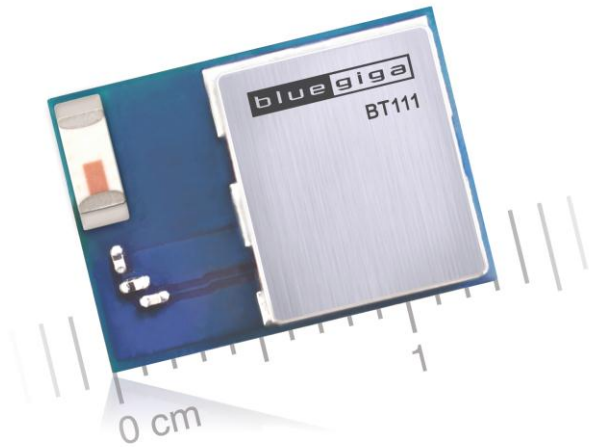
Key Features

- **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**



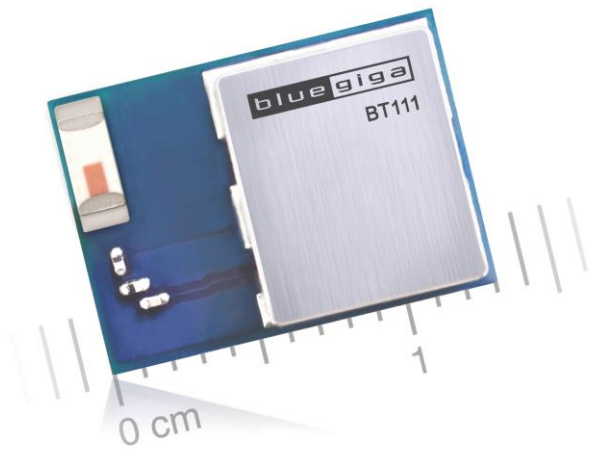
Benefits

- **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

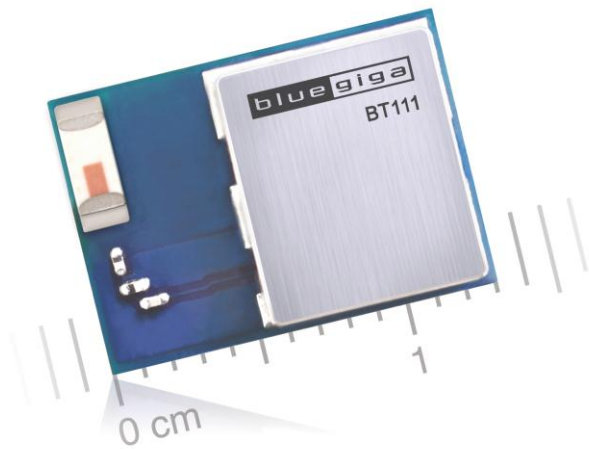
- 8 programmable GPIO pins

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

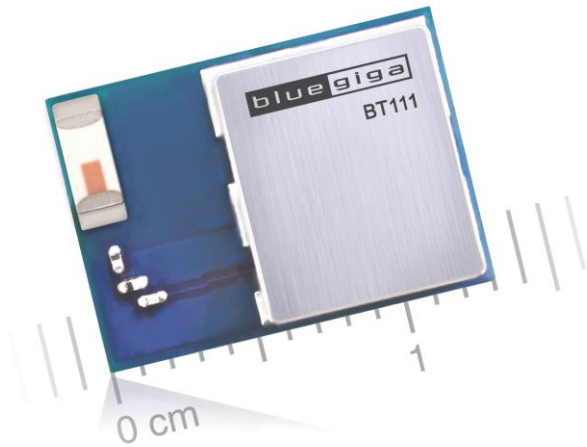
- 802.11 debug SPI



BT111 Overview

Power supply and current consumption

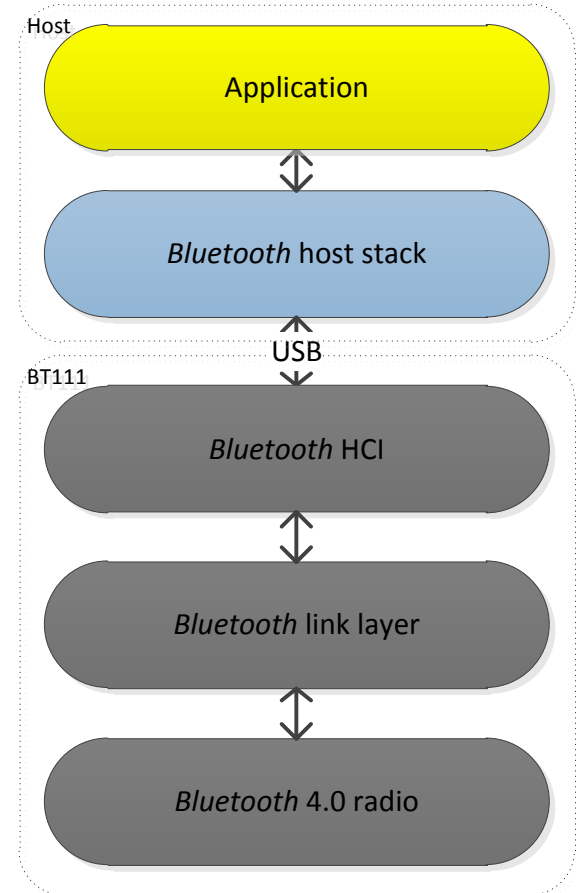
- **Single supply voltage**
 - 2.3V to 5.7V
- **Current consumption**
 - TX peak 70mA
 - RX peak 52mA
 - Deep sleep 370uA





BT111 *Bluetooth* Software Stacks

- **BT111 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

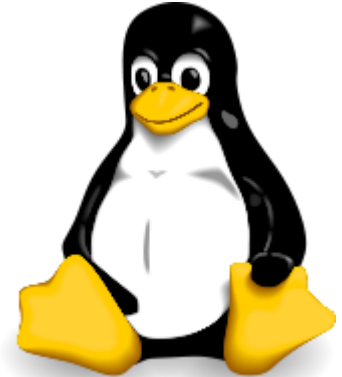


- **Windows 7**
 - Microsoft Windows *Bluetooth* stack
 - Supports *Bluetooth* 2.1 + EDR
 - Free of charge with Windows
 - [Supported profiles](#)

- **Windows 8**
 - Microsoft Windows *Bluetooth* stack
 - Supports *Bluetooth* 4.0
 - Free of charge with Windows
 - [Supported profiles](#)



- **BlueZ Bluetooth stack**
 - Supports *Bluetooth* 2.1 + EDR
 - Preliminary support for *Bluetooth* 4.0
 - Free of charge
 - [BlueZ web pages](#)

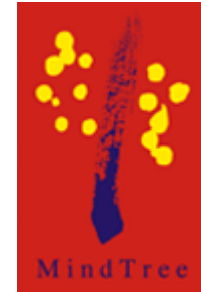


- **Windows CE 6.0**
 - Microsoft Windows CE *Bluetooth* stack
 - Supports *Bluetooth* 2.1 + EDR
 - Free of charge with Windows CE
 - [Supported profiles](#)

- **Windows Embedded Compact**
 - Microsoft Windows EC *Bluetooth* stack
 - Supports *Bluetooth* 2.1 + EDR
 - Free of charge with Windows EC
 - [Supported profiles](#)



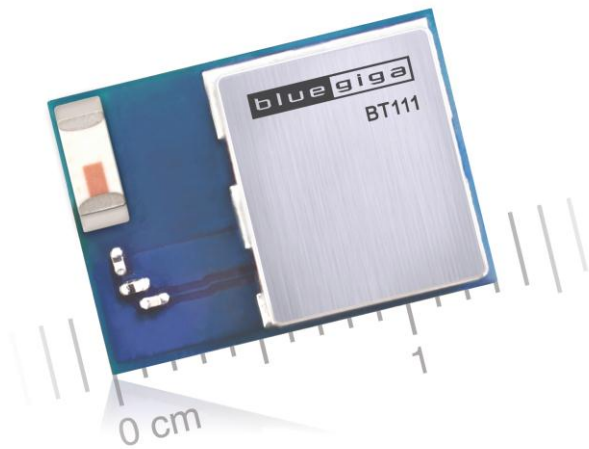
- **EtherMind Bluetooth stack**
 - 3rd party Bluetooth stack from Mindtree
 - [More information](#)
- **Bluetopia®**
 - 3rd party Bluetooth stack from Stonesteet One
 - [More information](#)
- **BTWare**
 - 3rd party Bluetooth stack from Jungo
 - [More information](#)



Certifications

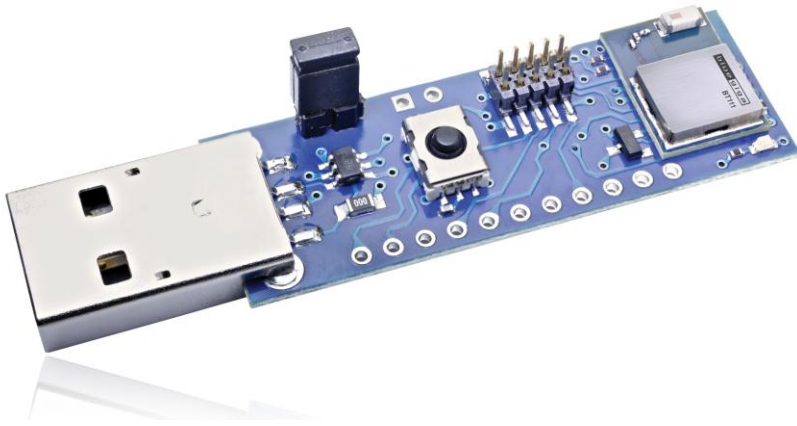


- **Bluetooth controller subsystem**
 - QDID: B017701
- **Europe: CE**
 - EN300328
 - EN301489
- **FCC : USA**
 - Part 15B
- **Canada**
 - Industry Canada
- **Japan (H2/2013)**
 - ARIB STD-66



Development Tools

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





Thank You

