Bluetooth® Solutions for Apple iOS Devices
Topics

• Introduction

• Bluegiga’s Solution for iOS Devices

• Compatible Products

• Summary
• **Bluetooth BR/EDR compatible iOS devices are:**
  – iPhone 3G, iPhone 3GS, iPhone 4, iPhone 4S and iPhone 5
  – iPod Touch 2nd generation and newer devices
  – iPad, iPad 2, iPad with Retina display and iPad Mini

• **Bluetooth 4.0 compatible iOS devices are:**
  – iPhone 4S and iPhone 5
  – iPod 5th generation
  – iPad with Retina display and iPad Mini
• Supported *Bluetooth* profiles on Apple iOS devices are:
  
  – The latest list of supported Bluetooth profiles can be found from [here](#)
iOS devices do not implement the Bluetooth RFCOMM (SPP) profile

Instead Bluetooth accessories can use iAP profile to exchange data with iOS devices
  - iAP is RFCOMM based connection (similar to SPP)
  - It uses Apple proprietary iAP application protocol
  - Allows data exchange between Apps and the accessory

Audio, Human Interface (HID), PAN accessories and Bluetooth Smart devices are outside MFi program

Learn more about iAP here
Bluegiga’s iWRAP Bluetooth Stack implements the iAP profile
- Provides fast Time-to-Market
- Less development effort

Can communicate with any iOS device that supports Bluetooth

iWRAP has a simple ASCII command API
- Simple
- Fast to learn

iWRAP also implements 13 other Bluetooth profiles
- Serial Port Profile
- A2DP
- Hands-Free Profile
- Human Interface Device Profile
- Health Device Profile
- etc.
Example use case of an audio device
- Uses A2DP for generic audio streaming
- Uses AVRCP for generic remote control
- Uses SPP to communicate with an Android App
- Uses iAP to communicate with an iOS App
Bluegiga’s Solution for iOS Devices

- **Example use case of a medical sensor**
  - Uses iAP to connect to and iOS device
  - Uses SPP to connect to an Android device
  - Uses HDP to connect to a Health Gateway
Bluegiga’s Solution for iOS Devices: Compatible products

- WT12 Bluetooth class 2 module
- Bluetooth® 2.1 + EDR compliant, class 2
- Radio performance
  - Transmit power: +3 dBm
  - Receiver sensitivity: -86 dBm
- Integrated chip antenna
- Industrial temperature range from -40°C to +85°C
- Integrated iWRAP Bluetooth stack
- 802.11 co-existence
- Bluetooth, CE, FCC, IC Japan and South-Korea qualified
Bluegiga’s Solution for iOS Devices: Compatible products

- WT1i1 Bluetooth class 1 module
- Bluetooth® 2.1 + EDR compliant, class 1
- Excellent radio performance
  - Transmit power: +17 dBm
  - Receiver sensitivity: -86 dBm
- Integrated chip antenna or RF pin
- Industrial temperature range from -40C to +85C
- Integrated iWRAP Bluetooth stack
- 802.11 co-existence
- Bluetooth, CE, FCC, IC and Japan qualified
Bluegiga’s Solution for iOS Devices: Compatible products

- WT41 *Bluetooth* class 1 long range module
- Extreme radio performance
  - Transmit power: +20 dBm
  - Receiver sensitivity: -90 dBm
  - Range: 1000 meters line-of-sight
- Integrated chip antenna, U.FL connector or RF pin
- Industrial temperature range from -40°C to +85°C
- Integrated iWRAP *Bluetooth* stack
- 802.11 co-existence
- *Bluetooth*, CE, FCC, IC, South-Korea and Japan qualified
Bluegiga’s Solution for iOS Devices: Compatible products

- Plug n’ play Bluetooth®2.1 + EDR solution for stereo and mono audio solutions

- Radio performance
  - Transmit power: +7 dBm
  - Receiver sensitivity: -88 dBm

- Integrated chip antenna or W.FL connector

- Integrated iWRAP Bluetooth stack

- Integrated audio features
  - Stereo codec
  - Digital Signal Processor (DSP)
  - Battery charger

- Optional audio extensions
  - CVC® - Echo cancellation and noise reduction
  - aptX® - Enhanced audio quality for A2DP

- Bluetooth, CE, FCC, IC, South Korea and Japan qualified
Summary

- Join MFi program
  - Gives you access to iAP documents and tools

- Buy products
  - [https://mfi.avnet.com/MFI/](https://mfi.avnet.com/MFI/)

- Develop the product
  - [http://techforum.bluegiga.com](http://techforum.bluegiga.com)
  - [support@bluegiga.com](mailto:support@bluegiga.com)