

# Bluetooth® and USB Audio Docking for iPhone®, iPod® and Android™ Devices

## Summary

Designing a low cost Bluetooth audio or USB audio docking for iPhone, iPod and Android devices has never been easier! Microchip's audio development kits and libraries give you freedom to innovate audio solutions with reduced time-to-market.

## Key Highlights of Microchip's Audio Solutions

- All iPhones, iPads® and iPods including iPhone 5th generation
- Android 4.1 AOA audio and Samsung™ audio
- Royalty free Microchip Bluetooth audio profiles and stack
- 3D or free-space gesture user interface
- USB memory stick playback (MP3 format)
- Firmware update via USB or an application
- Multiple audio sampling rates
- Auto-detect/connect for Apple® iOS and Android/Samsung
- High performance 32-bit MCU with I<sup>2</sup>S™, USB FS 2.0, 64–512 Kbyte Flash, 28–100 pin packages



## USB Audio Development Tools

### PIC32 Digital Audio Mixer Accessory Board



- 16 or 24-bit audio playback, recording and mixing
- DAC SNR 100 dB, ADC SNR 92.5 dB
- 2× Microphone in
- 2× Headphone out
- 1× Line in, 1× Line out
- 28-/44-pin, 64K/128K Flash 32-bit PIC32MX2 family

### PIC32MX2 USB Audio Development Kit



- Audio playback for iPhone, iPod and Android Devices
- DAC SNR 92 dB
- 1× Headphone out
- Soft mute, digital attenuator, bass boost function
- Audio controls: Play, Pause, Next, Previous, Vol+, Vol-, Mute, etc.
- 28-/44-pin, 64K/128K Flash 32-bit PIC32MX2 family

## Bluetooth and USB Audio Development Tools

### PIC32 Bluetooth Audio Development Kit (DV320032)



- USB audio playback for iPhone, iPod and Android Devices (a separate iPod Authentication Coprocessor Evaluation Board is required)
- Bluetooth audio streaming with low cost HCI module
- USB memory stick playback (MP3 format)
- 2-inch LCD display with touch screen
- DAC SNR 106 dB 192 KHz 24-bit
- 1× Headphone out
- Audio control functions

## How Do I Start?

- Schedule a demonstration with your Microchip Sales Representative.
- Enroll in Apple's Made-for-iPod (MFi) licensing program.
- Download the free Microchip MFi Library from Apple's authorized MFi component distributor .
- Contact Microchip sales to obtain the development kit(s).
- Contact [applesupport@microchip.com](mailto:applesupport@microchip.com) for additional questions.



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## Bluetooth and USB Audio Development Kit Portfolio

Products	Where to Buy
PIC32MX2 USB Audio Development Kit	Contact Microchip Sales
PIC32 Bluetooth® Audio Development Kit (DV320032)	Microchip Channel Partner or microchipDIRECT
PIC32 Digital Audio Mixer Accessory Board	Apple's Authorized MFi Component Distributor
iPod® Authentication Coprocessor Evaluation Board (SP000918596)	

### 3D Gesture with GestIC® Technology

Microchip's patented GestIC technology allows users to interact with their devices using hand/finger position tracking and intuitive free-space gestures in real time. It is a patented 3D sensor technology which utilizes an electric field (E-fields) for advanced proximity sensing, and allows realization of new user interface applications by detection, tracking and classification of a user's hand or finger motion in free-space.

Additional information, visit: [www.microchip.com/gestic](http://www.microchip.com/gestic).

### Universal Serial Bus (USB)

USB has grown to be the standard wired interface on smartphones/tablets. With the addition of dual role – embedded host and device, the mobile devices mobilize the desktop and applications. Microchip's simple and easy-to-use USB solutions offer a wide variety of 8, 16 and 32-bit USB MCUs for basic, low cost to complex accessory applications.

Additional information, visit: [www.microchip.com/usb](http://www.microchip.com/usb).

### Bluetooth Wireless Technology

Bluetooth is becoming a popular choice of wireless connectivity between accessories and smartphones or tablets. Microchip offers various options to connect to the Bluetooth of your choice while meeting the Android OS specification.

Additional information, visit: [www.microchip.com/bluetooth](http://www.microchip.com/bluetooth).



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