

# OSXBLUEVOICE

Documentation for OSXBLUEVOICE Library for STM32,  
BlueNRG and MP34DT01-M

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## MIDDLEWARES

# Modules

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**OSX\_BLUEVOICE**

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## Detailed Description

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## OSX\_BLUEVOICE

MIDDLEWARES

# Modules

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## Detailed Description

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## Modules

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**OSX\_BLUEVOICE\_Frequencies**

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**OSX\_BLUEVOICE\_Profile\_States**

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## Detailed Description

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## OSX\_BLUEVOICE\_Frequencies

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## Enumerations

---

```
enum Sampling_fr_t { FR_8000 = 8000, FR_16000 = 16000 }
```

Accepted audio in sampling frequencies. [More...](#)

---

## Detailed Description

---

### Enumeration Type Documentation

---

#### **enum Sampling\_fr\_t**

---

Accepted audio in sampling frequencies.

Enumerator	
FR_8000	Sampling frequency 8000 kHz.
FR_16000	Sampling frequency 16000 kHz.

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## **OSX\_BLUEVOICE\_Return\_States**

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[OSX\\_BLUEVOICE\\_Exported.Enums](#)

## Enumerations

```
enum OSX_BV_Status {
    OSX_BV_SUCCESS = 0x00, OSX_BV_LOCKER_ERROR
= 0x11, OSX_BV_ERROR = 0x01, OSX_BV_DISCONNECTED
= 0x10,
    OSX_BV_NOT_CONFIG = 0x20,
    OSX_BV_RECEIVER_DISABLE = 0x30,
    OSX_BV_TRANSMITTER_DISABLE = 0x31,
    OSX_BV_RX_HANDLE_NOT_AVAILABLE = 0x32,
    OSX_BV_OUT_BUF_READY = 0x40,
    OSX_BV_OUT_BUF_NOT_READY = 0x41,
    OSX_BV_PCM_SAMPLES_ERR = 0x50,
    OSX_BV_NOTIF_DISABLE = 0x60,
    OSX_BV_TIMEOUT = 0x70
}
```

Return states values. [More...](#)

## Detailed Description

---

### Enumeration Type Documentation

---

#### **enum OSX\_BV\_Status**

---

Return states values.

Enumerator	Description
OSX_BV_SUCCESS	Success.
OSX_BV_LOCKER_ERROR	The library locker authenticate failed.
OSX_BV_ERROR	Error.
OSX_BV_DISCONNECTED	BLE Disconnected Error.
OSX_BV_NOT_CONFIG	BLUEVOICE library not configured.
OSX_BV_RECEIVER_DISABLE	Receiver mode disabled.
OSX_BV_TRANSMITTER_DISABLE	Transmitter mode disabled.
OSX_BV_RX_HANDLE_NOT_AVAILABLE	The handle isn't recognized.
OSX_BV_OUT_BUF_READY	The audio out buffer is ready to be sent.
OSX_BV_OUT_BUF_NOT_READY	The audio out buffer is not ready to be sent.
OSX_BV_PCM_SAMPLES_ERR	The number of PCM

	samples given as audio input is not correct.
OSX_BV_NOTIF_DISABLE	The notifications are disabled.
OSX_BV_TIMEOUT	A BLE timeout occurred.

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## **OSX\_BLUEVOICE\_Mode**

[MIDDLEWARES](#) » [OSX\\_BLUEVOICE](#) »

[OSX\\_BLUEVOICE\\_Exported.Enums](#)

## Enumerations

---

```
enum OSX_BV_Mode { NOT_READY = 0x00, TRANSMITTER =  
    0x01, RECEIVER = 0x02, HALF_DUPLEX = 0x03 }  
BlueVoice working modalities. More...
```

---

## Detailed Description

---

### Enumeration Type Documentation

---

#### **enum OSX\_BV\_Mode**

---

BlueVoice working modalities.

Enumerator	
NOT_READY	Device not ready.
TRANSMITTER	Device in Transmitter mode.
RECEIVER	Device in Receiver mode.
HALF_DUPLEX	Device in HalfDuplex mode.

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## **OSX\_BLUEVOICE\_Profile\_States**

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[OSX\\_BLUEVOICE\\_Exported.Enums](#)

## Enumerations

---

```
enum OSX_BV_Profile_Status {
    OSX_BLUEVOICE_STATUS_UNINITIALIZED = 0x00,
    OSX_BLUEVOICE_STATUS_INITIALIZED = 0x10,
    OSX_BLUEVOICE_STATUS_READY = 0x20,
    OSX_BLUEVOICE_STATUS_STREAMING = 0x30,
    OSX_BLUEVOICE_STATUS RECEIVING = 0x40
}
BlueVoice profile status. More...
```

---

## Detailed Description

---

### Enumeration Type Documentation

---

#### **enum OSX\_BV\_Profile\_Status**

---

BlueVoice profile status.

Enumerator	Description
OSX_BLUEVOICE_STATUS_UNINITIALIZED	BlueVoice Profile is not initialized.
OSX_BLUEVOICE_STATUS_INITIALIZED	BlueVoice Profile is initialized.
OSX_BLUEVOICE_STATUS_READY	BlueVoice channel is ready and idle.
OSX_BLUEVOICE_STATUS_STREAMING	BlueVoice device is streaming data.
OSX_BLUEVOICE_STATUS RECEIVING	BlueVoice device is receiving data.

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## **OSX\_BLUEVOICE\_Exported\_Types**

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# Modules

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[\*\*OSX\\_BLUEVOICE\\_Configuration\*\*](#)

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[\*\*OSX\\_BLUEVOICE\\_UUIDs\*\*](#)

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[\*\*OSX\\_BLUEVOICE\\_Handlers\*\*](#)

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## Detailed Description

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## OSX\_BLUEVOICE\_Configuration

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[OSX\\_BLUEVOICE\\_Exported\\_Types](#)

## Classes

---

struct **OSX\_BLUEVOICE\_Config\_t**

BlueVoice profile configuration parameters. [More...](#)

---

## Detailed Description

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<p><a href="#">OSX_BLUEVOICE_Exported_Types</a> »</p>			
<p><a href="#">OSX_BLUEVOICE_Configuration</a></p>			

BlueVoice profile configuration parameters. [More...](#)

```
#include <osx_bluevoice.h>
```

## Public Attributes

---

**Sampling\_fr\_t sampling\_frequency**

**uint8\_t channel\_tot**

**uint8\_t channel\_in**

---

## Detailed Description

---

BlueVoice profile configuration parameters.

# Member Data Documentation

---

## **uint8\_t OSX\_BLUEVOICE\_Config\_t::channel\_in**

---

The chosen channel among the available in the input buffer.

## **uint8\_t OSX\_BLUEVOICE\_Config\_t::channel\_tot**

---

Number of channels contained in the buffer given as Audio Input.

## **Sampling\_fr\_t OSX\_BLUEVOICE\_Config\_t::sampling\_frequency**

---

Specifies the sampling frequency in kHz - can be 16 kHz or 8 kHz.

---

The documentation for this struct was generated from the following file:

- Inc/[osx\\_bluevoice.h](#)
-

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Classes

## **OSX\_BLUEVOICE\_UUIDs**

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[OSX\\_BLUEVOICE\\_Exported\\_Types](#)

## Classes

---

struct **OSX\_BLUEVOICE\_uuid\_t**

BlueVoice profile configuration parameters. [More...](#)

---

## Detailed Description

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<h2>OSX_BLUEVOICE_uuid_t Struct Reference</h2>			

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[OSX\\_BLUEVOICE\\_Exported\\_Types](#) »  
[OSX\\_BLUEVOICE\\_UUIDs](#)

BlueVoice profile configuration parameters. [More...](#)

```
#include <osx_bluevoice.h>
```

## Public Attributes

---

uint8\_t **ServiceUUID** [16]

uint8\_t **CharAudioUUID** [16]

uint8\_t **CharAudioSyncUUID** [16]

---

## Detailed Description

---

BlueVoice profile configuration parameters.

## Member Data Documentation

---

**uint8\_t OSX\_BLUEVOICE\_uuid\_t::CharAudioSyncUUID[16]**

---

Audio sync characteristic UUID.

**uint8\_t OSX\_BLUEVOICE\_uuid\_t::CharAudioUUID[16]**

---

Audio characteristic UUID.

**uint8\_t OSX\_BLUEVOICE\_uuid\_t::ServiceUUID[16]**

---

Service UUID.

---

The documentation for this struct was generated from the following file:

- [Inc/osx\\_bluevoice.h](#)
-

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Classes

## OSX\_BLUEVOICE\_Handlers

[MIDDLEWARES](#) » [OSX\\_BLUEVOICE](#) »

[OSX\\_BLUEVOICE\\_Exported\\_Types](#)

## Classes

---

struct **OSX\_BLUEVOICE\_ProfileHandle\_t**

BlueVoice profile configuration parameters. [More...](#)

---

## Detailed Description

---

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**OSX\_BLUEVOICE\_ProfileHandle\_t Struct Reference**

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BlueVoice profile configuration parameters. [More...](#)

```
#include <osx_bluevoice.h>
```

## Public Attributes

---

`uint16_t ServiceHandle`

`uint16_t CharAudioHandle`

`uint16_t CharAudioSyncHandle`

---

## Detailed Description

---

BlueVoice profile configuration parameters.

## Member Data Documentation

---

**uint16\_t OSX\_BLUEVOICE\_ProfileHandle\_t::CharAudioHandle**

---

Audio characteristic handle.

**uint16\_t  
OSX\_BLUEVOICE\_ProfileHandle\_t::CharAudioSyncHandle**

---

Audio Sync characteristic handle.

**uint16\_t OSX\_BLUEVOICE\_ProfileHandle\_t::ServiceHandle**

---

Service handle.

---

The documentation for this struct was generated from the following file:

- Inc/[osx\\_bluevoice.h](#)
-

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## **OSX\_BLUEVOICE\_Exported\_Constants**

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## Modules

---

**OSX\_BLUEVOICE\_Timeouts**

**OSX\_BLUEVOICE\_PCM\_samples\_packet**

---

## Detailed Description

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## OSX\_BLUEVOICE\_Timeouts

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[OSX\\_BLUEVOICE\\_Exported\\_Constants](#)

## Macros

---

```
#define OSX_BLUEVOICE_TIMEOUT_STATUS ((uint16_t)500)
```

---

## Detailed Description

---

### Macro Definition Documentation

---

**#define OSX\_BLUEVOICE\_TIMEOUT\_STATUS ((uint16\_t)500)**

---

status timeout (in ms), the function "osx\_BlueVoice\_IncTick" must be called every 1 ms. If timeout expires, the device goes from receiving/streaming to ready mode.

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## **OSX\_BLUEVOICE\_PCM\_samples\_packet**

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[OSX\\_BLUEVOICE\\_Exported\\_Constants](#)

## Macros

---

```
#define OSX_BLUEVOICE_PCM_SAMPLES_PER_PACKET (40)
```

---

## Detailed Description

---

### Macro Definition Documentation

---

**#define OSX\_BLUEVOICE\_PCM\_SAMPLES\_PER\_PACKET (40)**

---

Number of PCM samples contained in a single BlueVoice audio packet .

---

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Functions

## **OSX\_BLUEVOICE\_Exported\_Functions**

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## Functions

**OSX\_BV\_Status** [\*\*osx\\_BlueVoice\\_Initialize\*\*](#) (void)

This function is called to initialize the bluevoice library. [More...](#)

**OSX\_BV\_Status** [\*\*osx\\_BlueVoice\\_SetConfig\*\*](#)

([\*\*OSX\\_BLUEVOICE\\_Config\\_t\*\*](#)  
\*[\*\*OSX\\_BLUEVOICE\\_Config\*\*](#))

This function is called to set the configuration parameters. [More...](#)

uint8\_t [\*\*osx\\_BlueVoice\\_IsProfileConfigured\*\*](#)  
(void)

This function returns if the BlueVoice Profile is configured. [More...](#)

**OSX\_BV\_Status** [\*\*osx\\_BlueVoice\\_AddService\*\*](#) (uint8\_t

\*service\_uuid, uint16\_t \*service\_handle)  
This function is called to add BlueVoice Service. [More...](#)

**OSX\_BV\_Status** [\*\*osx\\_BlueVoice\\_AddChar\*\*](#)

([\*\*OSX\\_BLUEVOICE\\_uuid\\_t\*\*](#) uuid, uint16\_t  
service\_handle,  
[\*\*OSX\\_BLUEVOICE\\_ProfileHandle\\_t\*\*](#)  
\*handle)

This function is called to add BlueVoice characteristics. [More...](#)

**OSX\_BV\_Status** [\*\*osx\\_BlueVoice\\_SetTxHandle\*\*](#)

([\*\*OSX\\_BLUEVOICE\\_ProfileHandle\\_t\*\*](#)  
\*tx\_handle)

This function is called to set the handles if the BlueVoice characteristics are added out of the library. [More...](#)

**OSX\_BV\_Status** **osx\_BlueVoice\_SetRxHandle**  
**(OSX\_BLUEVOICE\_ProfileHandle\_t**  
**\*rx\_handle)**  
This function is called to set the handles discovered, if an other BlueVoice module is available. [More...](#)

**OSX\_BV\_Profile\_Status** **osx\_BlueVoice\_GetStatus** (void)  
This function returns the BLUEVOICE Profile State Machine status. [More...](#)

**OSX\_BV\_Mode** **osx\_BlueVoice\_GetMode** (void)  
This function returns the current modality.  
[More...](#)

**OSX\_BV\_Status** **osx\_BlueVoice\_IncTick** (void)  
This function increases the the internal counter, used to switch from Receiving/Streaming to Ready status.  
[More...](#)

**OSX\_BV\_Status** **osx\_BlueVoice\_EnableNotification** (void)  
This function is called to enable notifications mechanism. [More...](#)

**OSX\_BV\_Status** **osx\_BlueVoice\_AudioIn** (uint16\_t \*buffer,  
uint8\_t Nsamples)  
This function is called to fill audio buffer.  
[More...](#)

**OSX\_BV\_Status** **osx\_BlueVoice\_SendData** (uint16\_t  
\*NbyteSent)  
This function must be called when the compressed audio data are ready, (when the function BLUEVOICE\_AudioIn returns OSX\_BV\_OUT\_BUF\_READY) [More...](#)

**OSX\_BV\_Status** **osx\_BlueVoice\_ParseData** (uint8\_t \*buffer\_in, uint32\_t Len, uint16\_t attr\_handle, uint8\_t \*buffer\_out, uint8\_t \*samples)

This function is called to parse received data. [More...](#)

## Detailed Description

---

### Function Documentation

---

#### **OSX\_BV\_Status**

```
osx_BlueVoice_AddChar ( OSX_BLUEVOICE_uuid_t          uu
                        uint16_t                sei
                        OSX_BLUEVOICE_ProfileHandle_t * handle
                      )
```

---

This function is called to add BlueVoice characteristics.

#### Parameters

- |                       |   |
|-----------------------|---|
| <b>uuid</b>           | It contains the uuid values of the Audio and audio characteristics.           |
| <b>service_handle</b> | Handle of the service to which the characteristic is added.                   |
| <b>handle</b>         | Pointer to a BLUEVOICE_ProfileHandle_t struct in which handles will be saved. |

#### Return values

**OSX\_BV\_Status** `OSX_BV_SUCCESS` in case of success, `OSX_E_*` otherwise.

#### **OSX\_BV\_Status**

```
osx_BlueVoice_AddService ( uint8_t * service_uuid,
                           uint16_t * service_handle
                         )
```

---

This function is called to add BlueVoice Service.

## Parameters

**service\_uuid** Service uuid value.

**service\_handle** Pointer to a variable in which the service handle will be saved.

## Return values

**OSX\_BV\_Status** Value indicating success or error code.

---

**OSX\_BV\_Status** **osx\_BlueVoice\_AudioIn** ( **uint16\_t** \* **buffer**,  
                                 **uint8\_t**   **Nsamples**  
                                 **)**

---

This function is called to fill audio buffer.

## Parameters

**buffer** Audio in PCM buffer.

**Nsamples** Number of PCM 16 bit audio samples.

## Return values

**OSX\_BV\_Status** Value indicating success or error code.

---

**OSX\_BV\_Status** **osx\_BlueVoice\_EnableNotification** ( **void** )

---

This function is called to enable notifications mechanism.

## Parameters

**None.**

## Return values

**OSX\_BV\_Status** Value indicating success or error code.

---

**OSX\_BV\_Mode** **osx\_BlueVoice\_GetMode** ( **void** )

---

This function returns the current modality.

## Parameters

**None.**

## Return values

**OSX\_BV\_Mode** Current working modality: NOT\_READY, RECEIVER, TRANSMITTER or HALF\_DUPLEX.

---

## **OSX\_BV\_Profile\_Status osx\_BlueVoice\_GetStatus ( void )**

This function returns the BLUEVOICE Profile State Machine status.

## Parameters

**None.**

## Return values

**OSX\_BV\_Profile\_Status** BLUEVOICE Profile Status.

---

## **OSX\_BV\_Status osx\_BlueVoice\_IncTick ( void )**

This function increases the the internal counter, used to switch from Receiving/Streaming to Ready status.

## Parameters

**None.**

## Return values

**OSX\_BV\_Status** Value indicating success or error code.

---

## **OSX\_BV\_Status osx\_BlueVoice\_Initialize ( void )**

This function is called to initialize the bluevoice library.

## Parameters

**None.**

#### Return values

**OSX\_BV\_Status** OSX\_BV\_SUCCESS if the configuration is ok, OSX\_BV\_ERROR otherwise.

---

### **uint8\_t osx\_BlueVoice\_IsProfileConfigured ( void )**

---

This function returns if the BlueVoice Profile is configured.

#### Parameters

**None.**

#### Return values

**uint8\_t** 1 if the profile is configured 0 otherwise.

---

### **OSX\_BV\_Status**

#### **osx\_BlueVoice\_ParseData**

( **uint8\_t** \* **buffer\_in**,  
**uint32\_t** **Len**,  
**uint16\_t** **attr\_handle**,  
**uint8\_t** \* **buffer\_out**,  
**uint8\_t** \* **samples**  
)

---

This function is called to parse received data.

#### Parameters

**buffer\_in** 8-bit packed ADPCM samples source buffer.

**Len** Dimension in Bytes.

**attr\_handle** Handle of the updated characteristic.

**buffer\_out** 16-bit PCM samples destination buffer.

**samples** Number of 16-bit PCM samples in the destination buffer.

---

#### Return values

**OSX\_BV\_Status** Value indicating success or error code.

### **OSX\_BV\_Status**

**osx\_BlueVoice\_SendData**

( **uint16\_t \* NbyteSent** )

---

This function must be called when the compressed audio data are ready, (when the function BLUEVOICE\_AudioIn returns OSX\_BV\_OUT\_BUF\_READY)

#### Parameters

**NbyteSent** Number of bytes sent.

#### Return values

**OSX\_BV\_Status** Value indicating success or error code.

### **OSX\_BV\_Status**

**osx\_BlueVoice\_SetConfig ( OSX\_BLUEVOICE\_Config\_t \* OSX\_BL**

---

This function is called to set the configuration parameters.

#### Parameters

**OSX\_BLUEVOICE\_Config** It contains the configuration paramete

#### Return values

**OSX\_BV\_Status** OSX\_BV\_SUCCESS if the configuration is ok, C otherwise.

### **OSX\_BV\_Status**

**osx\_BlueVoice\_SetRxHandle ( OSX\_BLUEVOICE\_ProfileHandle\_t \***

---

This function is called to set the handles discovered, if an other BlueVoice available.

#### Parameters

**rx\_handle** Pointer to a **OSX\_BLUEVOICE\_ProfileHandle\_t** struc

the handles are stored.

### Return values

**OSX\_BV\_Status** OSX\_BV\_SUCCESS in case of success, OSX\_E otherwise.

---

## **OSX\_BV\_Status**

### **osx\_BlueVoice\_SetTxHandle ( OSX\_BLUEVOICE\_ProfileHandle\_t \* )**

---

This function is called to set the handles if the BlueVoice characteristics out of the library.

### Parameters

**tx\_handle** Pointer to a **OSX\_BLUEVOICE\_ProfileHandle\_t** structure where the handles are stored.

### Return values

**OSX\_BV\_Status** OSX\_BV\_SUCCESS in case of success, OSX\_E otherwise.

# OSXBLUEVOICE

Documentation for OSXBLUEVOICE Library for STM32,  
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## **OSX\_BLUEVOICE\_Exported\_Callbacks**

[MIDDLEWARES](#) » [OSX\\_BLUEVOICE](#)

## Functions

---

**OSX\_BV\_Status** **osx\_BlueVoice\_ConnectionComplete\_CB**  
(uint16\_t handle)

This function must be called when there is a LE Connection Complete event. [More...](#)

**OSX\_BV\_Status** **osx\_BlueVoice\_DisconnectionComplete\_CB**  
(void)

This function must be called when there is a LE disconnection Complete event. [More...](#)

**OSX\_BV\_Status** **osx\_BlueVoice\_AttributeModified\_CB** (uint16\_t attr\_handle, uint8\_t attr\_len, uint8\_t \*attr\_value)

This function must be called when there is a LE attribut modified event. [More...](#)

int **osx\_BlueVoice\_GetLibVersion** (char \*version)

This function is called to get library version.

[More...](#)

---

## Detailed Description

---

## Function Documentation

---

### **OSX\_BV\_Status**

```
osx_BlueVoice_AttributeModified_CB ( uint16_t attr_handle,
                                         uint8_t attr_len,
                                         uint8_t * attr_value
                                       )
```

---

This function must be called when there is a LE attribut modified event.

#### Parameters

**attr\_handle** Attribute handle.  
**attr\_len** Attribute length.  
**attr\_value** Attribute value.

#### Return values

**OSX\_BV\_Status** Value indicating success or error code.

### **OSX\_BV\_Status**

```
osx_BlueVoice_ConnectionComplete_CB ( uint16_t handle )
```

---

This function must be called when there is a LE Connection Complete event.

#### Parameters

**handle** Connection handle.

#### Return values

**OSX\_BV\_Status** Value indicating success or error code.

### **OSX\_BV\_Status**

**osx\_BlueVoice\_DisconnectionComplete\_CB**

**( void )**

---

This function must be called when there is a LE disconnection Complete event.

#### **Parameters**

**None.**

#### **Return values**

**OSX\_BV\_Status** Value indicating success or error code.

### **int osx\_BlueVoice\_GetLibVersion ( char \* version )**

---

This function is called to get library version.

#### **Return values**

**string length**

# OSXBLUEVOICE

Documentation for OSXBLUEVOICE Library for STM32,  
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## Class List

Here are the classes, structs, unions and interfaces with brief descriptions:

 <a href="#">OSX_BLUEVOICE_Config_t</a>	BlueVoice profile configuration parameters
 <a href="#">OSX_BLUEVOICE_ProfileHandle_t</a>	BlueVoice profile configuration parameters
 <a href="#">OSX_BLUEVOICE_uuid_t</a>	BlueVoice profile configuration parameters

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## Class Index

O

**o**

[\*\*OSX\\_BLUEVOICE\\_ProfileHandle\\_t\*\*](#)

O

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All	Variables		

Here is a list of all documented class members with links to the class documentation for each member:

- channel\_in : [`OSX\_BLUEVOICE\_Config\_t`](#)
- channel\_tot : [`OSX\_BLUEVOICE\_Config\_t`](#)
- CharAudioHandle : [`OSX\_BLUEVOICE\_ProfileHandle\_t`](#)
- CharAudioSyncHandle : [`OSX\_BLUEVOICE\_ProfileHandle\_t`](#)
- CharAudioSyncUUID : [`OSX\_BLUEVOICE\_uuid\_t`](#)
- CharAudioUUID : [`OSX\_BLUEVOICE\_uuid\_t`](#)
- sampling\_frequency : [`OSX\_BLUEVOICE\_Config\_t`](#)
- ServiceHandle : [`OSX\_BLUEVOICE\_ProfileHandle\_t`](#)
- ServiceUUID : [`OSX\_BLUEVOICE\_uuid\_t`](#)

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- channel\_in : [OSX\\_BLUEVOICE\\_Config\\_t](#)
- channel\_tot : [OSX\\_BLUEVOICE\\_Config\\_t](#)
- CharAudioHandle : [OSX\\_BLUEVOICE\\_ProfileHandle\\_t](#)
- CharAudioSyncHandle : [OSX\\_BLUEVOICE\\_ProfileHandle\\_t](#)
- CharAudioSyncUUID : [OSX\\_BLUEVOICE\\_uuid\\_t](#)
- CharAudioUUID : [OSX\\_BLUEVOICE\\_uuid\\_t](#)
- sampling\_frequency : [OSX\\_BLUEVOICE\\_Config\\_t](#)
- ServiceHandle : [OSX\\_BLUEVOICE\\_ProfileHandle\\_t](#)
- ServiceUUID : [OSX\\_BLUEVOICE\\_uuid\\_t](#)

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## File List

Here is a list of all documented files with brief descriptions:

[detail level [1](#) [2](#)]

▼  Inc

 [osx\\_bluevoice.h](#) This file contains definitions for BlueVoice profile

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# OSXBLUEVOICE

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Inc >

## Inc Directory Reference

## Files

---

file [\*\*osx\\_bluevoice.h\*\*](#) [code]

This file contains definitions for BlueVoice profile.

---

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# OSXBLUEVOICE

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[Classes](#) | [Macros](#) | [Enumerations](#) | [Functions](#)

## osx\_bluevoice.h File Reference

This file contains definitions for BlueVoice profile. [More...](#)

```
#include "bluenrg_aci_const.h" #include "bluenrg_gatt_aci.h"
```

[Go to the source code of this file.](#)

## Classes

---

struct **OSX\_BLUEVOICE\_Config\_t**

BlueVoice profile configuration parameters. [More...](#)

struct **OSX\_BLUEVOICE\_uuid\_t**

BlueVoice profile configuration parameters. [More...](#)

struct **OSX\_BLUEVOICE\_ProfileHandle\_t**

BlueVoice profile configuration parameters. [More...](#)

---

## Macros

---

```
#define OSX_BLUEVOICE_TIMEOUT_STATUS ((uint16_t)500)
```

```
#define OSX_BLUEVOICE_PCM_SAMPLES_PER_PACKET (40)
```

---

## Enumerations

enum **Sampling\_fr\_t** { **FR\_8000** = 8000, **FR\_16000** = 16000 }  
Accepted audio in sampling frequencies. More...

enum **OSX\_BV\_Status** {  
    **OSX\_BV\_SUCCESS** = 0x00, **OSX\_BV\_LOCKER\_ERROR** = 0x11, **OSX\_BV\_ERROR** = 0x01, **OSX\_BV\_DISCONNECTED** = 0x10,  
    **OSX\_BV\_NOT\_CONFIG** = 0x20,  
    **OSX\_BV\_RECEIVER\_DISABLE** = 0x30,  
    **OSX\_BV\_TRANSMITTER\_DISABLE** = 0x31,  
    **OSX\_BV\_RX\_HANDLE\_NOT\_AVAILABLE** = 0x32,  
    **OSX\_BV\_OUT\_BUF\_READY** = 0x40,  
    **OSX\_BV\_OUT\_BUF\_NOT\_READY** = 0x41,  
    **OSX\_BV\_PCM\_SAMPLES\_ERR** = 0x50,  
    **OSX\_BV\_NOTIF\_DISABLE** = 0x60,  
    **OSX\_BV\_TIMEOUT** = 0x70  
}  
Return states values. More...

enum **OSX\_BV\_Mode** { **NOT\_READY** = 0x00, **TRANSMITTER** = 0x01, **RECEIVER** = 0x02, **HALF\_DUPLEX** = 0x03 }  
BlueVoice working modalities. More...

enum **OSX\_BV\_Profile\_Status** {  
    **OSX\_BLUEVOICE\_STATUS\_UNINITIALIZED** = 0x00,  
    **OSX\_BLUEVOICE\_STATUS\_INITIALIZED** = 0x10,  
    **OSX\_BLUEVOICE\_STATUS\_READY** = 0x20,  
    **OSX\_BLUEVOICE\_STATUS\_STREAMING** = 0x30,  
    **OSX\_BLUEVOICE\_STATUS RECEIVING** = 0x40  
}  
BlueVoice profile status. More...

## Functions

**OSX\_BV\_Status** **osx\_BlueVoice\_Initialize** (void)

This function is called to initialize the bluevoice library. [More...](#)

**OSX\_BV\_Status** **osx\_BlueVoice\_SetConfig**

(**OSX\_BLUEVOICE\_Config\_t**  
\*OSX\_BLUEVOICE\_Config)

This function is called to set the configuration parameters. [More...](#)

uint8\_t **osx\_BlueVoice\_IsProfileConfigured** (void)

This function returns if the BlueVoice Profile configured. [More...](#)

**OSX\_BV\_Status** **osx\_BlueVoice\_AddService** (uint8\_t

\*service\_uuid, uint16\_t \*service\_handle)

This function is called to add BlueVoice Service. [More...](#)

**OSX\_BV\_Status** **osx\_BlueVoice\_AddChar**

(**OSX\_BLUEVOICE\_uuid\_t** uuid, uint16\_t  
service\_handle,

**OSX\_BLUEVOICE\_ProfileHandle\_t** \*handle)

This function is called to add BlueVoice characteristics. [More...](#)

**OSX\_BV\_Status** **osx\_BlueVoice\_SetTxHandle**

(**OSX\_BLUEVOICE\_ProfileHandle\_t**  
\*tx\_handle)

This function is called to set the handles if the BlueVoice characteristics are added out of the library. [More...](#)

**OSX\_BV\_Status** **osx\_BlueVoice\_SetRxHandle**

(**OSX\_BLUEVOICE\_ProfileHandle\_t**

`*rx_handle)`

This function is called to set the handles discovered, if an other BlueVoice module is available. [More...](#)

**OSX\_BV\_Profile\_Status**

**osx\_BlueVoice\_GetStatus** (void)

This function returns the BLUEVOICE Profile State Machine status. [More...](#)

**OSX\_BV\_Mode**

**osx\_BlueVoice\_GetMode** (void)

This function returns the current modality. [More...](#)

**OSX\_BV\_Status**

**osx\_BlueVoice\_IncTick** (void)

This function increases the the internal counter, used to switch from Receiving/Streaming to Ready status. [More...](#)

**OSX\_BV\_Status**

**osx\_BlueVoice\_EnableNotification** (void)

This function is called to enable notifications mechanism. [More...](#)

**OSX\_BV\_Status**

**osx\_BlueVoice\_AudioIn** (uint16\_t \*buffer,

  uint8\_t Nsamples)

This function is called to fill audio buffer. [More...](#)

**OSX\_BV\_Status**

**osx\_BlueVoice\_SendData** (uint16\_t

  \*NbyteSent)

This function must be called when the compressed audio data are ready, (when the function BLUEVOICE\_AudioIn returns OSX\_BV\_OUT\_BUF\_READY) [More...](#)

**OSX\_BV\_Status**

**osx\_BlueVoice\_ParseData** (uint8\_t \*buffer\_

  uint32\_t Len, uint16\_t attr\_handle, uint8\_t

  \*buffer\_out, uint8\_t \*samples)

This function is called to parse received data

[More...](#)

**OSX\_BV\_Status** [\*\*osx\\_BlueVoice\\_ConnectionComplete\\_CB\*\*](#)  
(uint16\_t handle)  
This function must be called when there is a  
LE Connection Complete event. [More...](#)

**OSX\_BV\_Status** [\*\*osx\\_BlueVoice\\_DisconnectionComplete\\_CB\*\*](#)  
(void)  
This function must be called when there is a  
LE disconnection Complete event. [More...](#)

**OSX\_BV\_Status** [\*\*osx\\_BlueVoice\\_AttributeModified\\_CB\*\*](#)  
(uint16\_t attr\_handle, uint8\_t attr\_len, uint8\_t  
\*attr\_value)  
This function must be called when there is a  
LE attribut modified event. [More...](#)

int [\*\*osx\\_BlueVoice\\_GetLibVersion\*\*](#) (char  
\*version)  
This function is called to get library version.  
[More...](#)

## Detailed Description

---

This file contains definitions for BlueVoice profile.

**Author**

Central Labs

**Version**

V2.0.0

**Date**

4-July-2016

**Attention**

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# OSXBLUEVOICE

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The screenshot shows a navigation bar with tabs: Main Page, Modules, Classes, and Files. The 'Files' tab is highlighted. Below it, there are sub-tabs: File List and File Members, with 'File Members' being the active one. Underneath are further sub-tabs: All, Functions, Enumerations, Enumerator, and Macros. A search bar with the letter 't' is also visible.

Here is a list of all documented file members with links to the documentation:

- f -

- FR\_16000 : [osx\\_bluevoice.h](#)
- FR\_8000 : [osx\\_bluevoice.h](#)

- h -

- HALF\_DUPLEX : [osx\\_bluevoice.h](#)

- n -

- NOT\_READY : [osx\\_bluevoice.h](#)

- o -

- osx\_BlueVoice\_AddChar() : [osx\\_bluevoice.h](#)
- osx\_BlueVoice\_AddService() : [osx\\_bluevoice.h](#)
- osx\_BlueVoice\_AttributeModified\_CB() : [osx\\_bluevoice.h](#)
- osx\_BlueVoice\_AudioIn() : [osx\\_bluevoice.h](#)
- osx\_BlueVoice\_ConnectionComplete\_CB() : [osx\\_bluevoice.h](#)
- osx\_BlueVoice\_DisconnectionComplete\_CB() : [osx\\_bluevoice.h](#)
- osx\_BlueVoice\_EnableNotification() : [osx\\_bluevoice.h](#)
- osx\_BlueVoice\_GetLibVersion() : [osx\\_bluevoice.h](#)
- osx\_BlueVoice\_GetMode() : [osx\\_bluevoice.h](#)

- osx\_BlueVoice\_GetStatus() : **osx\_bluevoice.h**
- osx\_BlueVoice\_IncTick() : **osx\_bluevoice.h**
- osx\_BlueVoice\_Initialize() : **osx\_bluevoice.h**
- osx\_BlueVoice\_IsProfileConfigured() : **osx\_bluevoice.h**
- osx\_BlueVoice\_ParseData() : **osx\_bluevoice.h**
- OSX\_BLUEVOICE\_PCM\_SAMPLES\_PER\_PACKET : **osx\_bluevoice.h**
- osx\_BlueVoice\_SendData() : **osx\_bluevoice.h**
- osx\_BlueVoice\_SetConfig() : **osx\_bluevoice.h**
- osx\_BlueVoice\_SetRxHandle() : **osx\_bluevoice.h**
- osx\_BlueVoice\_SetTxHandle() : **osx\_bluevoice.h**
- OSX\_BLUEVOICE\_STATUS\_INITIALIZED : **osx\_bluevoice.h**
- OSX\_BLUEVOICE\_STATUS\_READY : **osx\_bluevoice.h**
- OSX\_BLUEVOICE\_STATUS RECEIVING : **osx\_bluevoice.h**
- OSX\_BLUEVOICE\_STATUS\_STREAMING : **osx\_bluevoice.h**
- OSX\_BLUEVOICE\_STATUS\_UNINITIALIZED : **osx\_bluevoice.h**
- OSX\_BLUEVOICE\_TIMEOUT\_STATUS : **osx\_bluevoice.h**
- OSX\_BV\_DISCONNECTED : **osx\_bluevoice.h**
- OSX\_BV\_ERROR : **osx\_bluevoice.h**
- OSX\_BV\_LOCKER\_ERROR : **osx\_bluevoice.h**
- OSX\_BV\_Mode : **osx\_bluevoice.h**
- OSX\_BV\_NOT\_CONFIG : **osx\_bluevoice.h**
- OSX\_BV\_NOTIF\_DISABLE : **osx\_bluevoice.h**
- OSX\_BV\_OUT\_BUF\_NOT\_READY : **osx\_bluevoice.h**
- OSX\_BV\_OUT\_BUF\_READY : **osx\_bluevoice.h**
- OSX\_BV\_PCM\_SAMPLES\_ERR : **osx\_bluevoice.h**
- OSX\_BV\_Profile\_Status : **osx\_bluevoice.h**
- OSX\_BV\_RECEIVER\_DISABLE : **osx\_bluevoice.h**
- OSX\_BV\_RX\_HANDLE\_NOT\_AVAILABLE : **osx\_bluevoice.h**
- OSX\_BV\_Status : **osx\_bluevoice.h**
- OSX\_BV\_SUCCESS : **osx\_bluevoice.h**
- OSX\_BV\_TIMEOUT : **osx\_bluevoice.h**
- OSX\_BV\_TRANSMITTER\_DISABLE : **osx\_bluevoice.h**

- r -

- RECEIVER : **osx\_bluevoice.h**

- s -

- Sampling\_fr\_t : **osx\_bluevoice.h**

- t -

- TRANSMITTER : **osx\_bluevoice.h**

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- `osx_BlueVoice_AddChar()` : `osx_bluevoice.h`
- `osx_BlueVoice_AddService()` : `osx_bluevoice.h`
- `osx_BlueVoice_AttributeModified_CB()` : `osx_bluevoice.h`
- `osx_BlueVoice_AudioIn()` : `osx_bluevoice.h`
- `osx_BlueVoice_ConnectionComplete_CB()` : `osx_bluevoice.h`
- `osx_BlueVoice_DisconnectionComplete_CB()` : `osx_bluevoice.h`
- `osx_BlueVoice_EnableNotification()` : `osx_bluevoice.h`
- `osx_BlueVoice_GetLibVersion()` : `osx_bluevoice.h`
- `osx_BlueVoice_GetMode()` : `osx_bluevoice.h`
- `osx_BlueVoice_GetStatus()` : `osx_bluevoice.h`
- `osx_BlueVoice_IncTick()` : `osx_bluevoice.h`
- `osx_BlueVoice_Initialize()` : `osx_bluevoice.h`
- `osx_BlueVoice_IsProfileConfigured()` : `osx_bluevoice.h`
- `osx_BlueVoice_ParseData()` : `osx_bluevoice.h`
- `osx_BlueVoice_SendData()` : `osx_bluevoice.h`
- `osx_BlueVoice_SetConfig()` : `osx_bluevoice.h`
- `osx_BlueVoice_SetRxHandle()` : `osx_bluevoice.h`
- `osx_BlueVoice_SetTxHandle()` : `osx_bluevoice.h`

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- OSX\_BV\_Mode : [osx\\_bluevoice.h](#)
- OSX\_BV\_Profile\_Status : [osx\\_bluevoice.h](#)
- OSX\_BV\_Status : [osx\\_bluevoice.h](#)
- Sampling\_fr\_t : [osx\\_bluevoice.h](#)

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- FR\_16000 : [osx\\_bluevoice.h](#)
- FR\_8000 : [osx\\_bluevoice.h](#)
- HALF\_DUPLEX : [osx\\_bluevoice.h](#)
- NOT\_READY : [osx\\_bluevoice.h](#)
- OSX\_BLUEVOICE\_STATUS\_INITIALIZED : [osx\\_bluevoice.h](#)
- OSX\_BLUEVOICE\_STATUS\_READY : [osx\\_bluevoice.h](#)
- OSX\_BLUEVOICE\_STATUS RECEIVING : [osx\\_bluevoice.h](#)
- OSX\_BLUEVOICE\_STATUS\_STREAMING : [osx\\_bluevoice.h](#)
- OSX\_BLUEVOICE\_STATUS\_UNINITIALIZED : [osx\\_bluevoice.h](#)
- OSX\_BV\_DISCONNECTED : [osx\\_bluevoice.h](#)
- OSX\_BV\_ERROR : [osx\\_bluevoice.h](#)
- OSX\_BV\_LOCKER\_ERROR : [osx\\_bluevoice.h](#)
- OSX\_BV\_NOT\_CONFIG : [osx\\_bluevoice.h](#)
- OSX\_BV\_NOTIF\_DISABLE : [osx\\_bluevoice.h](#)
- OSX\_BV\_OUT\_BUF\_NOT\_READY : [osx\\_bluevoice.h](#)
- OSX\_BV\_OUT\_BUF\_READY : [osx\\_bluevoice.h](#)
- OSX\_BV\_PCM\_SAMPLES\_ERR : [osx\\_bluevoice.h](#)
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- OSX\_BLUEVOICE\_PCM\_SAMPLES\_PER\_PACKET : [osx\\_bluevoice.h](#)
- OSX\_BLUEVOICE\_TIMEOUT\_STATUS : [osx\\_bluevoice.h](#)

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## OSX\_BLUEVOICE\_Config\_t Member List

This is the complete list of members for `OSX_BLUEVOICE_Config_t`, including all inherited members.

<code>channel_in</code>	<code>OSX_BLUEVOICE_Config_t</code>
<code>channel_tot</code>	<code>OSX_BLUEVOICE_Config_t</code>
<code>sampling_frequency</code>	<code>OSX_BLUEVOICE_Config_t</code>

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## osx\_bluevoice.h

Go to the documentation of this file.

```
1
39 /* Define to prevent recursive inclusion ---
40 -----*/
40 #ifndef __OSX_BLUEVOICE_H
41 #define __OSX_BLUEVOICE_H
42
43 #ifdef __cplusplus
44 extern "C" {
45 #endif
46
47 /* Includes -----
48 -----*/
48
49 #include "bluenrg_aci_const.h"
50 #include "bluenrg_gatt_aci.h"
51
51
71 typedef enum
72 {
73     FR_8000 = 8000,
74     FR_16000 = 16000
75 } Sampling_fr_t;
87 typedef enum
88 {
89     OSX_BV_SUCCESS = 0x00,
```

```
90 OSX_BV_LOCKER_ERROR = 0x11,
91 OSX_BV_ERROR = 0x01,
92 OSX_BV_DISCONNECTED = 0x10,
93 OSX_BV_NOT_CONFIG = 0x20,
94 OSX_BV_RECEIVER_DISABLE = 0x30,
95 OSX_BV_TRANSMITTER_DISABLE = 0x31,
96 OSX_BV_RX_HANDLE_NOT_AVAILABLE = 0x32,
97 OSX_BV_OUT_BUF_READY = 0x40,
98 OSX_BV_OUT_BUF_NOT_READY = 0x41,
99 OSX_BV_PCM_SAMPLES_ERR = 0x50,
100 OSX_BV_NOTIF_DISABLE = 0x60,
101 OSX_BV_TIMEOUT = 0x70
102 } OSX_BV_Status;
114 typedef enum
115 {
116     NOT_READY = 0x00,
117     TRANSMITTER = 0x01,
118     RECEIVER = 0x02,
119     HALF_DUPLEX = 0x03
120 } OSX_BV_Mode;
132 typedef enum
133 {
134     OSX_BLUEVOICE_STATUS_UNINITIALIZED = 0x00,
135     OSX_BLUEVOICE_STATUS_INITIALIZED = 0x10,
136     OSX_BLUEVOICE_STATUS_READY = 0x20,
137     OSX_BLUEVOICE_STATUS_STREAMING = 0x30,
138     OSX_BLUEVOICE_STATUS RECEIVING = 0x40
139 } OSX_BV_Profile_Status;
140
160 typedef struct
161 {
162     Sampling_fr_t sampling_frequency;
164     uint8_t channel_tot;
166     uint8_t channel_in;
168 } OSX_BLUEVOICE_Config_t;
180 typedef struct
181 {
```

```
182     uint8_t ServiceUUID[16];
184     uint8_t CharAudioUUID[16];
186     uint8_t CharAudioSyncUUID[16];
188 } OSX_BLUEVOICE_uuid_t;
200 typedef struct
201 {
202     uint16_t ServiceHandle;
204     uint16_t CharAudioHandle;
206     uint16_t CharAudioSyncHandle;
208 } OSX_BLUEVOICE_ProfileHandle_t;
209
225 #define OSX_BLUEVOICE_TIMEOUT_STATUS
226     ((uint16_t)500)
236 #define OSX_BLUEVOICE_PCM_SAMPLES_PER_PACKET
237     (40)
255 OSX_BV_Status
256     osx_BlueVoice_Initialize(void);
257
262 OSX_BV_Status
263     osx_BlueVoice_SetConfig(OSX_BLUEVOICE_Config_t
264     *OSX_BLUEVOICE_Config);
265
269     uint8_t
270     osx_BlueVoice_IsProfileConfigured(void);
271
277 OSX_BV_Status
278     osx_BlueVoice_AddService(uint8_t
279     *service_uuid, uint16_t *service_handle);
280
286 OSX_BV_Status
287     osx_BlueVoice_AddChar(OSX_BLUEVOICE_uuid_t
288     uuid, uint16_t service_handle,
289     OSX_BLUEVOICE_ProfileHandle_t *handle);
290
293 OSX_BV_Status
294     osx_BlueVoice_SetTxHandle(OSX_BLUEVOICE_Profil
295     eHandle_t *tx_handle);
```

```
294
300    OSX_BV_Status
        osx_BlueVoice_SetRxHandle(OSX_BLUEVOICE_Profil
            eHandle_t *rx_handle);
301
307    OSX_BV_Profile_Status
        osx_BlueVoice_GetStatus(void);
308
314    OSX_BV_Mode osx_BlueVoice_GetMode(void);
315
321    OSX_BV_Status osx_BlueVoice_IncTick(void);
322
328    OSX_BV_Status
        osx_BlueVoice_EnableNotification(void);
329
336    OSX_BV_Status
        osx_BlueVoice_AudioIn(uint16_t* buffer,
            uint8_t Nsamples);
337
344    OSX_BV_Status
        osx_BlueVoice_SendData(uint16_t *NbyteSent);
345
355    OSX_BV_Status
        osx_BlueVoice_ParseData(uint8_t* buffer_in,
            uint32_t Len, uint16_t attr_handle, uint8_t*
            buffer_out, uint8_t *samples);
356
370    OSX_BV_Status
        osx_BlueVoice_ConnectionComplete_CB(uint16_t
            handle);
371
377    OSX_BV_Status
        osx_BlueVoice_DisconnectionComplete_CB(void);
378
386    OSX_BV_Status
        osx_BlueVoice_AttributeModified_CB(uint16_t
            attr_handle, uint8_t attr_len, uint8_t
```

```
*attr_value);  
387 |     int OSX_BlueVoice_GetLibVersion(char  
392 |         *version);  
393 | #ifdef __cplusplus  
408 | }  
409 | #endif  
410 |  
411 | #endif /* __OSX_BLUEVOICE_H */  
412 |  
413 | /***** (C) COPYRIGHT  
        STMicroelectronics *****END OF FILE****/
```

# OSXBLUEVOICE

Documentation for OSXBLUEVOICE Library for STM32,  
BlueNRG and MP34DT01-M

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## OSX\_BLUEVOICE\_uuid\_t Member List

This is the complete list of members for `OSX_BLUEVOICE_uuid_t`, including all inherited members.

`CharAudioSyncUUID` `OSX_BLUEVOICE_uuid_t`

`CharAudioUUID` `OSX_BLUEVOICE_uuid_t`

`ServiceUUID` `OSX_BLUEVOICE_uuid_t`

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## OSX\_BLUEVOICE\_ProfileHandle\_t Member List

This is the complete list of members for [OSX\\_BLUEVOICE\\_ProfileHandle\\_t](#), including all inherited members.

[CharAudioHandle](#)      [OSX\\_BLUEVOICE\\_ProfileHandle\\_t](#)

[CharAudioSyncHandle](#) [OSX\\_BLUEVOICE\\_ProfileHandle\\_t](#)

[ServiceHandle](#)      [OSX\\_BLUEVOICE\\_ProfileHandle\\_t](#)