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

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**Modules**

Here is a list of all modules:

- **MIDDLEWARES**
  - OSX_BLUEVOICE
    - OSX_BLUEVOICE_ExportedEnums
    - OSX_BLUEVOICE_Frequencies
    - OSX_BLUEVOICE_ReturnStates
    - OSX_BLUEVOICE_Mode
    - OSX_BLUEVOICE_ProfileStates
  - OSX_BLUEVOICE_ExportedTypes
    - OSX_BLUEVOICE_Configuration
    - OSX_BLUEVOICE_UUIDs
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  - OSX_BLUEVOICE_ExportedConstants
    - OSX_BLUEVOICE_Timeouts
    - OSX_BLUEVOICE_PCM_samples_packet
    - OSX_BLUEVOICE_ExportedFunctions
    - OSX_BLUEVOICE_ExportedCallbacks

Generated on Mon Aug 29 2016 15:19:56 for OSXBLUEVOICE by [doxygen](http://www.stackoverflow.com) 1.8.9.1
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OSX_BLUEVOICE_ExportedEnums
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OSX_BLUEVOICE_Frequencies

MIDDLEWARES » OSX_BLUEVOICE » OSX_BLUEVOICE_Exported_Enums
### Enumerations

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

Accepted audio in sampling frequencies. More...
Detailed Description

Enumeration Type Documentation

```c
enum Sampling_fr_t {
    FR_8000,  // Sampling frequency 8000 kHz.
    FR_16000  // Sampling frequency 16000 kHz.
};
```

Accepted audio in sampling frequencies.
OSXBLUEVOICE
Documentation for OSXBLUEVOICE Library for STM32, BlueNRG and MP34DT01-M

OSX_BLUEVOICE_Return_States
MIDDLEWARES » OSX_BLUEVOICE »
OSX_BLUEVOICE_Exported_Enums
Enumerations

```c
enum OSX_BV_Status {
    OSX_BV_SUCCESS = 0x00, OSX_BV_LOCKER_ERROR = 0x11, OSX_BV_ERROR = 0x01, OSX_BV_DISCONNETED = 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...
**Enumeration Type Documentation**

```markdown
enum OSX_BV_Status

Return states values.

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<thead>
<tr>
<th>Enumerator</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>OSX_BV_SUCCESS</td>
<td>Success.</td>
</tr>
<tr>
<td>OSX_BV_LOCKER_ERROR</td>
<td>The library locker authenticate failed.</td>
</tr>
<tr>
<td>OSX_BV_ERROR</td>
<td>Error.</td>
</tr>
<tr>
<td>OSX_BV_DISCONNECTED</td>
<td>BLE Disconnected Error.</td>
</tr>
<tr>
<td>OSX_BV_NOT_CONFIG</td>
<td>BLUEVOICE library not configured.</td>
</tr>
<tr>
<td>OSX_BV_RECEIVER_DISABLE</td>
<td>Receiver mode disabled.</td>
</tr>
<tr>
<td>OSX_BV_TRANSMITTER_DISABLE</td>
<td>Transmitter mode disabled.</td>
</tr>
<tr>
<td>OSX_BV_RX_HANDLE_NOTAVAILABLE</td>
<td>The handle isn't recognized.</td>
</tr>
<tr>
<td>OSX_BV_OUT_BUF_READY</td>
<td>The audio out buffer is ready to be sent.</td>
</tr>
<tr>
<td>OSX_BV_OUT_BUF_NOT_READY</td>
<td>The audio out buffer is not ready to be sent.</td>
</tr>
<tr>
<td>OSX_BV_PCM_SAMPLES_ERR</td>
<td>The number of PCM</td>
</tr>
</tbody>
</table>
```
<table>
<thead>
<tr>
<th>samples given as audio input is not correct.</th>
</tr>
</thead>
<tbody>
<tr>
<td>OSX_BV_NOTIF_DISABLE</td>
</tr>
<tr>
<td>OSX_BV_TIMEOUT</td>
</tr>
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</table>
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<td>OSX_BLUEVOICE</td>
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<tr>
<td></td>
<td>OSX_BLUEVOICE_Mode</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>OSX_BLUEVOICE_Exported_Enums</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**OSX_BLUEVOICE_Mode**

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Enumerations

<table>
<thead>
<tr>
<th>enum</th>
<th>OSX_BV_Mode</th>
<th>NOT_READY = 0x00, TRANSMITTER = 0x01, RECEIVER = 0x02, HALF_DUPLEX = 0x03</th>
</tr>
</thead>
</table>

BlueVoice working modalities. More...
BlueVoice working modalities.

<table>
<thead>
<tr>
<th>Enumerator</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>NOT_READY</td>
<td>Device not ready.</td>
</tr>
<tr>
<td>TRANSMITTER</td>
<td>Device in Transmitter mode.</td>
</tr>
<tr>
<td>RECEIVER</td>
<td>Device in Receiver mode.</td>
</tr>
<tr>
<td>HALF_DUPLEX</td>
<td>Device in HalfDuplex mode.</td>
</tr>
</tbody>
</table>
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Documentation for OSXBLUEVOICE Library for STM32, BlueNRG and MP34DT01-M

OSX_BLUEVOICE_Profile_States

MIDDLEWARES » OSX_BLUEVOICE »
OSX_BLUEVOICE_Exported_ENums
### Enumerations

```c
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**

```plaintext
enum OSX_BV_Profile_Status

BlueVoice profile status.

<table>
<thead>
<tr>
<th>Enumerator</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>OSX_BLUEVOICE_STATUS_UNINITIALIZED</td>
<td>BlueVoice Profile is not initialized.</td>
</tr>
<tr>
<td>OSX_BLUEVOICE_STATUS_INITIALIZED</td>
<td>BlueVoice Profile is initialized.</td>
</tr>
<tr>
<td>OSX_BLUEVOICE_STATUS_READY</td>
<td>BlueVoice channel is ready and idle.</td>
</tr>
<tr>
<td>OSX_BLUEVOICE_STATUS_STREAMING</td>
<td>BlueVoice device is streaming data.</td>
</tr>
<tr>
<td>OSX_BLUEVOICE_STATUS_RECEIVING</td>
<td>BlueVoice device is receiving data.</td>
</tr>
</tbody>
</table>
```
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OSX_BLUEVOICE_Exported_Types
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**OSX_BLUEVOICE_Configuration**

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<td>struct</td>
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OSX_BLUEVOICE_Config_t Struct Reference

MIDDLEWARES » OSX_BLUEVOICE » OSX_BLUEVOICE_Exported_Types » OSX_BLUEVOICE_Configuration

BlueVoice profile configuration parameters. More...

#include <osx_bluevoice.h>
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<td><strong>Sampling_fr_t  sampling_frequency</strong></td>
</tr>
<tr>
<td><strong>uint8_t  channel_tot</strong></td>
</tr>
<tr>
<td><strong>uint8_t  channel_in</strong></td>
</tr>
</tbody>
</table>
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

Generated on Mon Aug 29 2016 15:19:56 for OSXBLUEVOICE by doxygen 1.8.9.1
# OSXBLUEVOICE

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**OSX_BLUEVOICE_UUIDs**

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<td>BlueVoice profile configuration parameters.</td>
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**OSX_BLUEVOICE_uuid_t Struct Reference**

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

```c
#include <osx_bluevoice.h>
```
### Public Attributes

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<tr>
<th>Attribute Type</th>
<th>Attribute Name</th>
<th>Length</th>
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</thead>
<tbody>
<tr>
<td><code>uint8_t</code></td>
<td>ServiceUUID</td>
<td>[16]</td>
</tr>
<tr>
<td><code>uint8_t</code></td>
<td>CharAudioUUID</td>
<td>[16]</td>
</tr>
<tr>
<td><code>uint8_t</code></td>
<td>CharAudioSyncUUID</td>
<td>[16]</td>
</tr>
</tbody>
</table>
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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## OSX_BLUEVOICE_ProfileHandle_t Struct Reference

**MIDDLEWARES ➔ OSX_BLUEVOICE ➔**

**OSX_BLUEVOICE_Exported_Types ➔**

**OSX_BLUEVOICE_Handlers**

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

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

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<tr>
<th>Data Type</th>
<th>Attribute Name</th>
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<tbody>
<tr>
<td>uint16_t</td>
<td>ServiceHandle</td>
</tr>
<tr>
<td>uint16_t</td>
<td>CharAudioHandle</td>
</tr>
<tr>
<td>uint16_t</td>
<td>CharAudioSyncHandle</td>
</tr>
</tbody>
</table>
Detailed Description

BlueVoice profile configuration parameters.
Member Data Documentation

\texttt{uint16\_t OSX\_BLUEVOICE\_ProfileHandle\_t::CharAudioHandle}

Audio characteristic handle.

\texttt{uint16\_t OSX\_BLUEVOICE\_ProfileHandle\_t::CharAudioSyncHandle}

Audio Sync characteristic handle.

\texttt{uint16\_t OSX\_BLUEVOICE\_ProfileHandle\_t::ServiceHandle}

Service handle.

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

- Inc/osx\_bluevoice.h
## Modules

**OSX_BLUEVOICE**

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

### Modules

**OSX_BLUEVOICE_Exported_Constants**

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OSX_BLUEVOICE_Timeouts
MIDDLEWARES » OSX_BLUEVOICE » OSX_BLUEVOICE_Exported_Constants
Macros

#define OSX_BLUEVOICE_TIMEOUT_STATUS ((uint16_t)500)
Detailed Description

Macro Definition Documentation

```c
#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.
# OSXBLUEVOICE

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**OSX_BLUEVOICE_PCM_samples_packet**

MIDDLEWARES » OSX_BLUEVOICE » 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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**OSX_BLUEVOICE_Exported_Functions**

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<th>Function</th>
<th>Description</th>
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<tr>
<td>OSX_BV_Status</td>
<td>osx_BlueVoice_Initialize (void) &lt;br&gt;This function is called to initialize the bluevoice library. More...</td>
</tr>
<tr>
<td>OSX_BV_Status</td>
<td>osx_BlueVoice_SetConfig (OSX_BLUEVOICE_Config_t *OSX_BLUEVOICE_Config) &lt;br&gt;This function is called to set the configuration parameters. More...</td>
</tr>
<tr>
<td>uint8_t</td>
<td>osx_BlueVoice_IsProfileConfigured (void) &lt;br&gt;This function returns if the BlueVoice Profile is configured. More...</td>
</tr>
<tr>
<td>OSX_BV_Status</td>
<td>osx_BlueVoice_AddService (uint8_t *service_uuid, uint16_t *service_handle) &lt;br&gt;This function is called to add BlueVoice Service. More...</td>
</tr>
<tr>
<td>OSX_BV_Status</td>
<td>osx_BlueVoice_AddChar (OSX_BLUEVOICE_uuid_t uuid, uint16_t service_handle, OSX_BLUEVOICE_ProfileHandle_t *handle) &lt;br&gt;This function is called to add BlueVoice characteristics. More...</td>
</tr>
<tr>
<td>OSX_BV_Status</td>
<td>osx_BlueVoice_SetTxHandle (OSX_BLUEVOICE_ProfileHandle_t *tx_handle) &lt;br&gt;This function is called to set the handles if the BlueVoice characteristics are added out of the library. More...</td>
</tr>
<tr>
<td>Function</td>
<td>Description</td>
</tr>
<tr>
<td>-----------------------------------------------</td>
<td>-------------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td><code>osx_BlueVoice_SetRxHandle</code></td>
<td>(OSX_BLUEVOICE_ProfileHandle_t *rx_handle) This function is called to set the handles discovered, if another BlueVoice module is available.</td>
</tr>
<tr>
<td><code>osx_BlueVoice_GetStatus</code></td>
<td>(void) This function returns the BLUEVOICE Profile State Machine status.</td>
</tr>
<tr>
<td><code>osx_BlueVoice_GetMode</code></td>
<td>(void) This function returns the current modality.</td>
</tr>
<tr>
<td><code>osx_BlueVoice_IncTick</code></td>
<td>(void) This function increases the the internal counter, used to switch from Receiving/Streaming to Ready status.</td>
</tr>
<tr>
<td><code>osx_BlueVoice_EnableNotification</code></td>
<td>(void) This function is called to enable notifications mechanism.</td>
</tr>
<tr>
<td><code>osx_BlueVoice_Audioln</code></td>
<td>(uint16_t *buffer, uint8_t Nsamples) This function is called to fill audio buffer.</td>
</tr>
<tr>
<td><code>osx_BlueVoice_SendData</code></td>
<td>(uint16_t *NbyteSent) This function must be called when the compressed audio data are ready, (when the function BLUEVOICE_Audioln returns OSX_BV_OUT_BUF_READY)</td>
</tr>
<tr>
<td><strong>OSX_BV_Status</strong> osx_BlueVoice_ParseData</td>
<td>(uint8_t *buffer_in, uint32_t Len, uint16_t attr_handle, uint8_t *buffer_out, uint8_t *samples)</td>
</tr>
<tr>
<td>-----------------------------------------</td>
<td>---------------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td><em>This function is called to parse received data.</em></td>
<td>More...</td>
</tr>
</tbody>
</table>

Function Documentation

**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.

**Parameters**

- **uuid**: It contains the uuid values of the Audio and audioSync characteristics.
- **service_handle**: Handle of the service to which the characteristic must be added.
- **handle**: Pointer to a BLUEVOICE_ProfileHandle_t struct in which the handles will be saved.

**Return values**

- **OSX_BV_Status**: OSX_BV_SUCCESS in case of success, OSX_BV_ERROR otherwise.

```
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.

```c
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.

```c
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.

```c
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 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_BLUEVOICE_Config )`

This function is called to set the configuration parameters.

**Parameters**

- **OSX_BLUEVOICE_Config** It contains the configuration parameters.

**Return values**

- **OSX_BV_Status** OSX_BV_SUCCESS if the configuration is ok, OSX_BV_ERROR otherwise.

**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.

**Parameters**

- **rx_handle** Pointer to a OSX_BLUEVOICE_ProfileHandle_t struct
the handles are stored.

Return values

**OSX_BV_Status** OSX_BV_SUCCESS in case of success, OSX_\* 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** struct

declaration.

Return values

**OSX_BV_Status** OSX_BV_SUCCESS in case of success, OSX_\* otherwise.
## OSXBLUEVOICE

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

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**OSX_BLUEVOICE_Exported_Callbacks**

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### Functions

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<th>Description</th>
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<td>OSX_BV_Status osx_BlueVoice_ConnectionComplete_CB (uint16_t handle)</td>
<td>This function must be called when there is a LE Connection Complete event.</td>
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<tr>
<td>OSX_BV_Status osx_BlueVoice_DisconnectionComplete_CB (void)</td>
<td>This function must be called when there is a LE disconnection Complete event.</td>
</tr>
<tr>
<td>OSX_BV_Status osx_BlueVoice_AttributeModified_CB (uint16_t attr_handle, uint8_t attr_len, uint8_t *attr_value)</td>
<td>This function must be called when there is a LE attribut modified event.</td>
</tr>
<tr>
<td>int osx_BlueVoice_GetLibVersion (char *version)</td>
<td>This function is called to get library version.</td>
</tr>
</tbody>
</table>
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 attribute 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.

```c
int osx_BlueVoice_GetLibVersion ( char * version )
```

This function is called to get library version.

**Return values**

- **string length**
Class List

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

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<th>Description</th>
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<td>BlueVoice profile configuration parameters</td>
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<td>OSX_BLUEVOICE_ProfileHandle_t</td>
<td>BlueVoice profile configuration parameters</td>
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<td>OSX_BLUEVOICE_uuid_t</td>
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<td>OSX_BLUEVOICE_ProfileHandle_t</td>
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<tr>
<td>OSX_BLUEVOICE_Config_t</td>
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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
• 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

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<tr>
<td></td>
<td>This file contains definitions for BlueVoice profile</td>
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<tr>
<td>Inc</td>
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<td></td>
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</tbody>
</table>

Inc Directory Reference
This file contains definitions for BlueVoice profile.
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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

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<tr>
<th>struct</th>
<th>OSX_BLUEVOICE_Config_t</th>
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</thead>
<tbody>
<tr>
<td></td>
<td>BlueVoice profile configuration parameters.</td>
</tr>
</tbody>
</table>
Macros

#define OSX_BLUEVOICE_TIMEOUT_STATUS ((uint16_t)500)

#define OSX_BLUEVOICE_PCM_SAMPLES_PER_PACKET (40)
## Enumerations

**Sampling_fr_t**

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

Accepted audio in sampling frequencies. More...

**OSX_BV_Status**

```c
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...

**OSX_BV_Mode**

```c
enum OSX_BV_Mode { NOT_READY = 0x00, TRANSMITTER = 0x01, RECEIVER = 0x02, HALF DUPLEX = 0x03 }
```

BlueVoice working modalities. More...

**OSX_BV_Profile_Status**

```c
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...
<table>
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<tr>
<th>Function</th>
<th>Description</th>
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<tbody>
<tr>
<td>OSX_BV_Status osx_BlueVoice_Initialize (void)</td>
<td>This function is called to initialize the bluevoice library. More...</td>
</tr>
<tr>
<td>OSX_BV_Status osx_BlueVoice_SetConfig (OSX_BLUEVOICE_Config_t *OSX_BLUEVOICE_Config)</td>
<td>This function is called to set the configuration parameters. More...</td>
</tr>
<tr>
<td>uint8_t osx_BlueVoice_IsProfileConfigured (void)</td>
<td>This function returns if the BlueVoice Profile is configured. More...</td>
</tr>
<tr>
<td>OSX_BV_Status osx_BlueVoice_AddService (uint8_t *service_uuid, uint16_t *service_handle)</td>
<td>This function is called to add BlueVoice Service. More...</td>
</tr>
<tr>
<td>OSX_BV_Status osx_BlueVoice_AddChar (OSX_BLUEVOICE_uuid_t uuid, uint16_t service_handle, OSX_BLUEVOICE_ProfileHandle_t *handle)</td>
<td>This function is called to add BlueVoice characteristics. More...</td>
</tr>
<tr>
<td>OSX_BV_Status osx_BlueVoice_SetTxHandle (OSX_BLUEVOICE_ProfileHandle_t *tx_handle)</td>
<td>This function is called to set the handles if the BlueVoice characteristics are added out of the library. More...</td>
</tr>
<tr>
<td>OSX_BV_Status osx_BlueVoice_SetRxHandle (OSX_BLUEVOICE_ProfileHandle_t...</td>
<td></td>
</tr>
</tbody>
</table>
*rx_handle)
This function is called to set the handles discovered, if an other BlueVoice module is available. More...

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<th>OSX_BV_Profile_Status</th>
<th>osx_BlueVoice_GetStatus (void)</th>
</tr>
</thead>
<tbody>
<tr>
<td>OSX_BV_Profile_Status</td>
<td>This function returns the BLUEVOICE Profile State Machine status. More...</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>OSX_BV_Mode</th>
<th>osx_BlueVoice_GetMode (void)</th>
</tr>
</thead>
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<tr>
<td>OSX_BV_Mode</td>
<td>This function returns the current modality. More...</td>
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<th>OSX_BV_Status</th>
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</thead>
<tbody>
<tr>
<td>OSX_BV_Status</td>
<td>This function increases the the internal counter, used to switch from Receiving/Streaming to Ready status. More.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>OSX_BV_Status</th>
<th>osx_BlueVoice_EnableNotification (void)</th>
</tr>
</thead>
<tbody>
<tr>
<td>OSX_BV_Status</td>
<td>This function is called to enable notifications mechanism. More...</td>
</tr>
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</table>

<table>
<thead>
<tr>
<th>OSX_BV_Status</th>
<th>osx_BlueVoice_AudioIn (uint16_t *buffer, uint8_t Nsamples)</th>
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<tbody>
<tr>
<td>OSX_BV_Status</td>
<td>This function is called to fill audio buffer. More...</td>
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</table>

<table>
<thead>
<tr>
<th>OSX_BV_Status</th>
<th>osx_BlueVoice_SendData (uint16_t *NbyteSent)</th>
</tr>
</thead>
<tbody>
<tr>
<td>OSX_BV_Status</td>
<td>This function must be called when the compressed audio data are ready, (when the function BLUEVOICE_AudioIn returns OSX_BV_OUT_BUF_READY) More...</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>OSX_BV_Status</th>
<th>osx_BlueVoice_ParseData (uint8_t *buffer_in, uint32_t Len, uint16_t attr_handle, uint8_t *buffer_out, uint8_t *samples)</th>
</tr>
</thead>
<tbody>
<tr>
<td>OSX_BV_Status</td>
<td>This function is called to parse received data</td>
</tr>
<tr>
<td>Function</td>
<td>Description</td>
</tr>
<tr>
<td>-----------------------------------------------</td>
<td>----------------------------------------------------------------------------</td>
</tr>
<tr>
<td><code>OSX_BV_Status osx_BlueVoice_ConnectionComplete_CB (uint16_t handle)</code></td>
<td>This function must be called when there is a LE Connection Complete event.</td>
</tr>
<tr>
<td><code>OSX_BV_Status osx_BlueVoice_DisconnectionComplete_CB (void)</code></td>
<td>This function must be called when there is a LE disconnection Complete event.</td>
</tr>
<tr>
<td><code>OSX_BV_Status osx_BlueVoice_AttributeModified_CB (uint16_t attr_handle, uint8_t attr_len, uint8_t *attr_value)</code></td>
<td>This function must be called when there is a LE attribute modified event.</td>
</tr>
<tr>
<td><code>int osx_BlueVoice_GetLibVersion (char *version)</code></td>
<td>This function is called to get library version.</td>
</tr>
</tbody>
</table>
Detailed Description

This file contains definitions for BlueVoice profile.

Author
Central Labs

Version
V2.0.0

Date
4-July-2016

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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
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• 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_DISCONNETED : 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
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• 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 -
- t -

- Sampling_fr_t: osx_bluevoice.h

- TRANSMITTER: osx_bluevoice.h
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- osx_BlueVoice_AddService() : osx_bluevoice.h
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- osx_BlueVoice_AudioIn() : osx_bluevoice.h
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- osx_BlueVoice_EnableNotification() : osx_bluevoice.h
- osx_BlueVoice_GetLibVersion() : osx_bluevoice.h
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- osx_BlueVoice_SendDate() : osx_bluevoice.h
- osx_BlueVoice_SetConfig() : osx_bluevoice.h
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- 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
- OSX_BV RECEIVER_DISABLE : osx_bluevoice.h
- OSX_BV_RX_HANDLE_NOT_AVAILABLE : osx_bluevoice.h
- OSX_BV_SUCCESS : osx_bluevoice.h
- OSX_BV_TIMEOUT : osx_bluevoice.h
- OSX_BV_TRANSMITTER_DISABLE : osx_bluevoice.h
- RECEIVER : osx_bluevoice.h
- TRANSMITTER : osx_bluevoice.h
### OSXBLUEVOICE

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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.

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<tr>
<td>sampling_frequency</td>
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Go to the documentation of this file.

```c
/* Define to prevent recursive inclusion ------------------*/
#ifndef __OSX_BLUEVOICE_H
#define __OSX_BLUEVOICE_H

#ifdef __cplusplus
extern "C" {

/* Includes ----------------------------------------------*/
#include "bluenrg_aci_const.h"
#include "bluenrg_gatt_aci.h"

typedef enum {
FR_8000 = 8000,
FR_16000 = 16000
} Sampling_fr_t;

typedef enum {
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
}
} OSX_BV_Status;

typedef enum
{
    NOT_READY = 0x00,
    TRANSMITTER = 0x01,
    RECEIVER = 0x02,
    HALF_DUPLEX = 0x03
} OSX_BV_Mode;

typedef enum
{
    OSX_BLUEVOICE_STATUS_UNITIALIZED = 0x00,
    OSX_BLUEVOICE_STATUS_INITIALIZED = 0x10,
    OSX_BLUEVOICE_STATUS_READY = 0x20,
    OSX_BLUEVOICE_STATUS_STREAMING = 0x30,
    OSX_BLUEVOICE_STATUS_RECEIVING = 0x40
} OSX_BV_Profile_Status;

typedef struct
{
    Sampling_fr_t sampling_frequency;
    uint8_t channel_tot;
    uint8_t channel_in;
} OSX_BLUEVOICE_Config_t;

typedef struct
uint8_t ServiceUUID[16];
uint8_t CharAudioUUID[16];
uint8_t CharAudioSyncUUID[16];
}
OSX_BLUEVOICE_uuid_t;
typedef struct {
    uint16_t ServiceHandle;
    uint16_t CharAudioHandle;
    uint16_t CharAudioSyncHandle;
} OSX_BLUEVOICE_ProfileHandle_t;
#define OSX_BLUEVOICE_TIMEOUT_STATUS ((uint16_t)500)
#define OSX_BLUEVOICE_PCM_SAMPLES_PER_PACKET (40)
OSX_BV_Status osx_BlueVoice_Initialize(void);
OSX_BV_Status osx_BlueVoice_SetConfig(OSX_BLUEVOICE_Config_t *OSX_BLUEVOICE_Config);
uint8_t osx_BlueVoice_IsProfileConfigured(void);
OSX_BV_Status osx_BlueVoice_AddService(uint8_t *service_uuid, uint16_t *service_handle);
OSX_BV_Status osx_BlueVoice_AddChar(OSX_BLUEVOICE_uuid_t uuid, uint16_t service_handle, OSX_BLUEVOICE_ProfileHandle_t *handle);
OSX_BV_Status osx_BlueVoice_SetTxHandle(OSX_BLUEVOICE_ProfileHandle_t *tx_handle);
OSX_BV_Status
osx_BlueVoice_SetRxHandle(OSX_BLUEVOICE_ProfileHandle_t *rx_handle);

OSX_BV_Profile_Status
osx_BlueVoice_GetStatus(void);

OSX_BV_Mode
osx_BlueVoice_GetMode(void);

OSX_BV_Status
osx_BlueVoice_IncTick(void);

OSX_BV_Status
osx_BlueVoice_EnableNotification(void);

OSX_BV_Status
osx_BLUEVOICE_ProfileHandle_t

OSX_BV_Status
osx_BlueVoice_AudioIn(uint16_t* buffer, uint8_t Nsamples);

OSX_BV_Status
osx_BlueVoice_SendData(uint16_t *NbyteSent);

OSX_BV_Status
osx_BLUEVOICE_ParseData(uint8_t* buffer_in, uint32_t Len, uint16_t attr_handle, uint8_t* buffer_out, uint8_t *samples);

OSX_BV_Status
osx_BlueVoice_ConnectionComplete_CB(uint16_t handle);

OSX_BV_Status
osx_BlueVoice_DisconnectionComplete_CB(void);

OSX_BV_Status
osx_BlueVoice_AttributeModified_CB(uint16_t attr_handle, uint8_t attr_len, uint8_t
int osx_BlueVoice_GetLibVersion(char *version);

#ifdef __cplusplus
#endif
#endif

/************************ (C) COPYRIGHT STMicroelectronics *****END OF FILE*****/
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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.

<table>
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<tr>
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<tr>
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