



life.augmented

Panasonic/Arrow IoT module

Dedidated code example

EMEA AMS - P&D Marketing & Application



Purpose

BlueNRGTile SDK can be used by final customer for initial evaluation but :

- This is a full SDK supporting all Sensors of the BlueNRG-Tile.
- This is not a “production fw” but a demo code example.

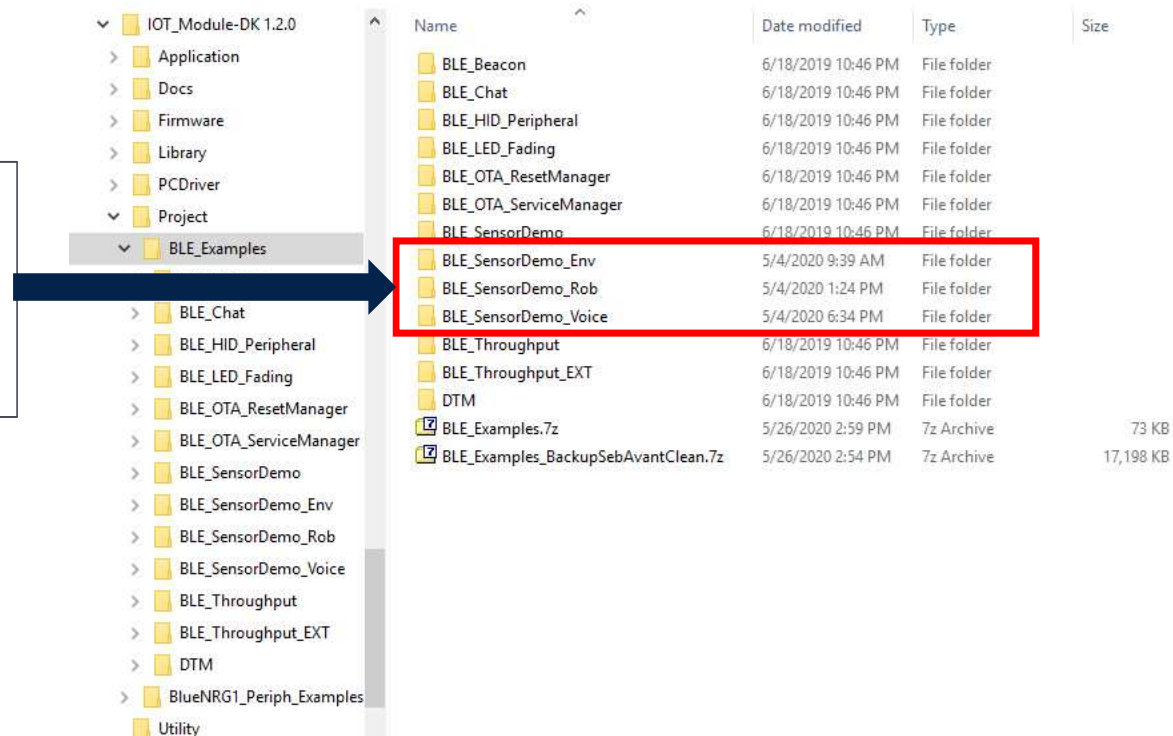
When moving to one of the three IoT module : customer may have to optimize/clean BlueNRG-Tile SDK accordingly.

- Not best approach for final customer.
- All customers will have to do the same job

ST to deliver 3 additional code examples (one per module)

- SensorDemo_Env
- SensorDemo_Rob
- SensorDemo_Voice

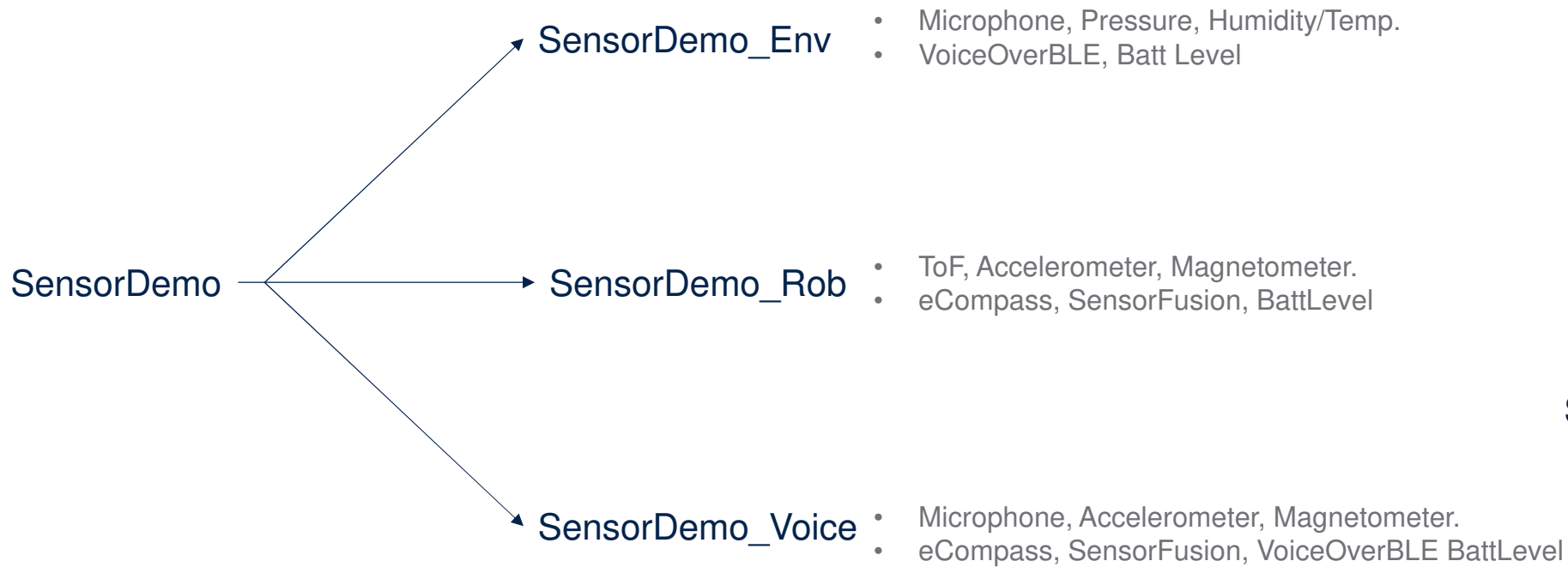
These 3 projects are delivered as “Add-on” to the BlueNRG-Tile DK





Details

Project are derived from “SensorDemo” project available on BlueNRG-Tile DK and optimized according to HW



ST Ble Sensor App



“ST BLE Sensor” smartphone application will automatically adapt display panels according to HW

HowTo use package ?

1

Download and Install BlueNRG-Tile DK from ST web site : “STSW-BLUETILE-DK”

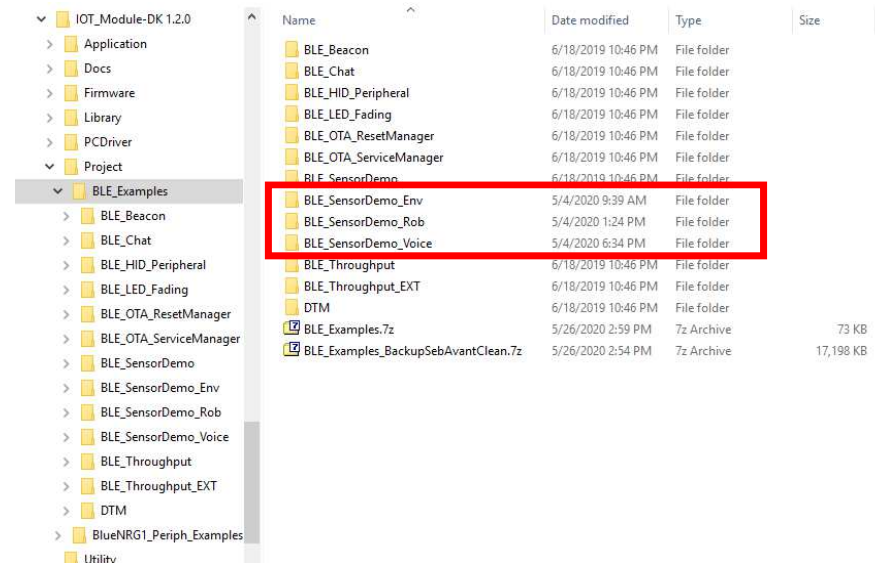
➤ https://www.st.com/content/st_com/en/products/embedded-software/evaluation-tool-software/stsw-bluetile-dk.html

2

Unzip the provided package into BlueNRG-Tile DK installation into “BLE examples” folder

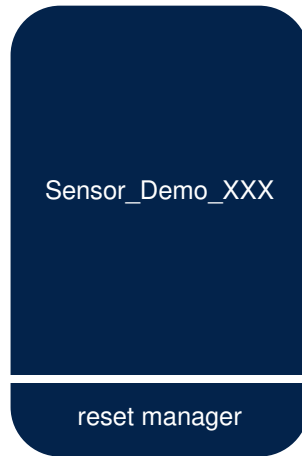
➤ ..\STSW-BLUETILE-DK 1.2.0\Project\BLE_Examples

At this stage, you should have 3 additional SW code examples.
IDE supported : Keil, IAR, Atollic



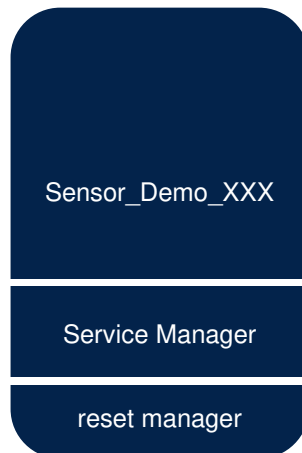
BlueNRG Tile architecture

No OTA



- 1 Load on board default reset manager from STSW-BLUETILE-DK
- 2 Load on board Sensor image : *SensorDemo_Env* , *SensorDemo_Rob*, *SensorDemo_Voice*

With OTA



- 1 Load on board default reset manager from STSW-BLUETILE-DK
- 2 Load on board default Service Manager image from STSW-BLUETILE-DK
- 3 Load on board Sensor image build with OTA capabilities: *BLE_SensorDemo_XXX_Use_OTA_ServiceManager*,

BlueNRG Tile architecture

OTA

With OTA



SW1 button over BlueNRG Tile allow to switch from main default Sensor partition to Service Manager to enable OTA.



Buttons description

| Configuration | **Server_Use_OTA_ServiceManager** |

| **BUTTON name** | SW1 |

| Function | Press 5 sec to jump to OTA service Manager *when battery operated* |

Extract from code example documentation

In order to enable OTA over Panasonic/Arrow IOT module, code modification required in main Sensor application to trigger switch to OTA (ie: adding a specific characteristic)

DTM code example

“DTM” code example from BlueNRG-Tile DK can be reused without modification on Arrow/Panasonic modules

- Same UART pinout/ same HW config.

This specific code example allow communication with ST PC GUI : “STSW-BNRGGUI”

- https://www.st.com/content/st_com/en/products/embedded-software/wireless-connectivity-software/stsw-bnrgui.html



This specific code can also be used for BLE and Regional certification

- https://www.st.com/content/st_com/en/products/embedded-software/wireless-connectivity-software/stsw-bnrgui.html

