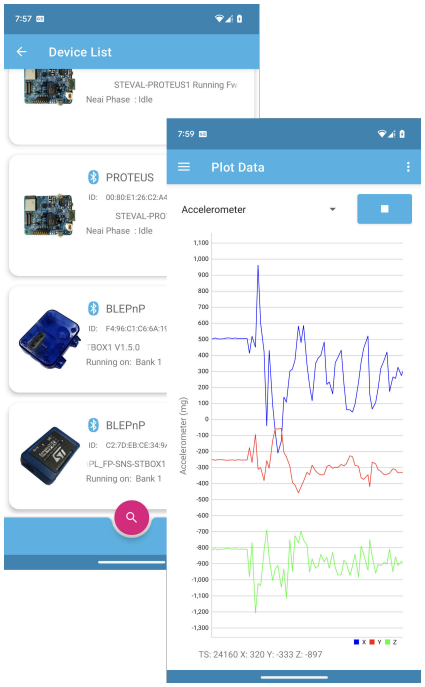
STBLESensClassic

Data brief

BLE Sensor Classic application for Android and iOS



Product summary	
BLESensor Classic application for Android and iOS	STBLESensClassic
Bluetooth low energy and sensor technology SDK	BlueST-SDK

Features

- Sensor data reception and command transmission over Bluetooth Low Energy (BLE)
- Support for multiple STM32Cube function packs and evaluation boards
- Available on Android and iOS app stores
- Cross-platform user interface and functionality
- Based on BlueST-SDK library
- Data logging support
- Data plotting support
- Included serial console (stdout/stdin/stderr) over Bluetooth
- Secure pairing (with pin) support
- Data publishing on the cloud support

Description

STBLESensClassic (ST BLE Sensor Classic) application is available for Android and iOS and shows the data exported by a BLE device using the BlueST protocol.

The app shows different panels based on the data types exported by the firmware, including: environmental data, MEMS sensor fusion, FFT, plot, BlueVoice, Compass, Machine Learning Core, Finite State Machine, Cloud logging.

All the data received by the app can be logged in CVS files and exported by e-mail.

If the firmware supports the functionality, the application can also show a serial console to exchange string messages with the board.

Both Android and iOS applications support the Bluetooth secure pairing with pin.

It's possible to use an NFC tag to read the pin and trigger the connection with the node.

The application is able to make the a Fast Firmware Over the Air update of the firmware running of the board.

1 Detailed description

The available panels shown by the application, if supported by the firmware, are:

- Environmental data: displays the data from the environmental sensors (temperature, pressure, humidity, light).
- MEMS sensor fusion: moves a cube using the quaternions computed by the sensor fusion library.
- Plot: plots the available features.
- Activity recognition: shows the result of the activity recognition algorithm library.
- Carry position: shows the result of the carry position recognition algorithm library.
- Acceleration event: displays events like single tap, double tap, orientation, pedometer detected by the accelerometer component.
- BlueVoice: receives the audio from a MEMS microphone.
- Beam forming: uses multiple ominidirectional microphones to create a directional one.
- Speech to text: streams audio data to different speech to text cloud providers.
- Source localization: localizes the sound source direction.
- Pedometer: shows the output of the pedometer algorithm.
- Switch: changes the LED status.
- Motion intensity: shows the output of the motion intensity detection library.
- Compass: displays the board orientation with respect to the magnetic north.
- Cloud: sends board data to a cloud provider using the MQTT protocol.
- Node status: shows the RSSI of a BLE signal and the battery level.
- FFT amplitude: shows the Fast Fourier transform computed by the board.
- Level: shows the board inclination.
- High Speed Data Log: configure the data acquisition and annotate the the acquired data
- NanoEdgeAIStudio Anomaly detection and Classification
- Audio Classification
- Global Satellite Navigation System
- Custom Commands
- Board Firmware update
- Fast Firmware Over the Air Update
- Multi Neural AI Network output
- Gesture Navigation
- Multi Object Time of Flight Detection

2 Order codes

Table 1. **STBLESensor and BlueST-SDK order codes**

Order code	Description
STBLESensor Classic-iOS	iOS demo application compatible with BlueST-SDK protocol-based STM32Cube function packs
STBLESensor Classic-Android	Android demo application compatible with BlueST- SDK protocol-based STM32Cube function packs
BlueST-SDK-Ipa	iOS version of BlueST-SDK library that permits easy access to the data exported by a Bluetooth low energy (BLE) device that implements the BlueST protocol.
BlueST-SDK-Aar	Android version of BlueST SDK library that permits easy access to the data exported by a Bluetooth low energy (BLE) device that implements the BlueST protocol.

Revision history

Table 2. **Document revision history**

Date	Revision	Changes
12-May-2023	1	Initial release.

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