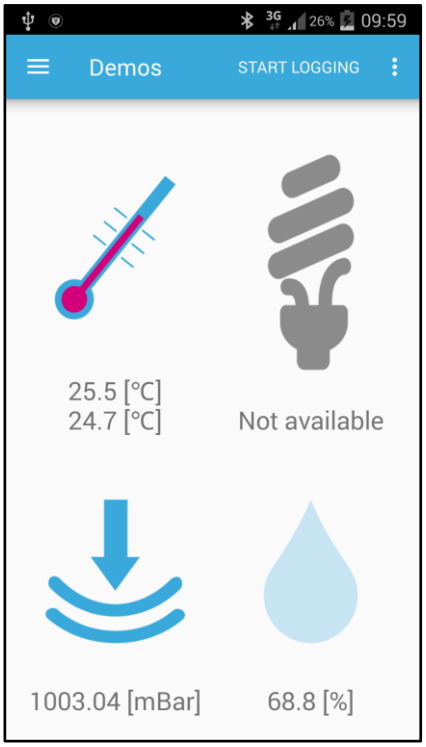
# BlueMS

## BlueMS application for Android and iOS

Data brief




## Features

- Sensor data reception and command transmission over Bluetooth Low Energy (BLE).
- Support for multiple STM32ODE function packs and 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

The ST BlueMS is the application available for Android and iOS that shows the data exported by a BLE device using the BlueST protocol (e.g.

FP-SNS-ALLMEMS1 STM32ODE function pack).

The app shows different panels based on the data types exported by the firmware, including: environmental data, MEMS sensor fusion, plot, activity recognition, carry position, acceleration event, BlueVoice, pedometer, switch, motion intensity, compass, cloud logging, node status.

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. This functionality is also used to upgrade the board firmware.

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

For Android it is also possible to use an NFC tag to read the pin and trigger the connection with the node.



For further information contact your local STMicroelectronics sales office

www.st.com

# Detailed description

The available panels shown by the application 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 (if supported by the firmware).

- Plot: plots the available features.

- Activity recognition: shows the result of the activity recognition algorithm library (if supported by the firmware).

- Carry position: shows the result of the carry position recognition algorithm library (if supported by the firmware).

- Acceleration event: displays events like single tap, double tap, orientation, pedometer detected by the accelerometer component.

- BlueVoice: receives the audio from a MEMS microphone (if available).

- Pedometer: shows the output of the pedometer algorithm (if supported by the firmware).

- Switch: changes the LED status

- Motion intensity: shows the output of the motion intensity detection library (if supported by the firmware).

- Compass: displays the board orientation with respect to the magnetic north (if supported by the firmware).

- 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.

# Order codes

**Table 1: BlueMS Order codes**

| Order code | Description |
|---|---|
| BlueMS-iOS | iOS demo application compatible with BlueST SDK protocol based STM32Cube Function Packs |
| BlueMS-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 | Version | Changes |
|---|---|---|
| 19-Nov-2015 | 1 | Initial release. |
| 06-Oct-2016 | 2 | Updated document to reflect software update version 3.0. |
| 30-May-2017 | 3 | Updated document to reflect software update version 3.4. |

**IMPORTANT NOTICE – PLEASE READ CAREFULLY**

STMicroelectronics NV and its subsidiaries (“ST”) reserve the right to make changes, corrections, enhancements, modifications, and improvements to ST products and/or to this document at any time without notice. Purchasers should obtain the latest relevant information on ST products before placing orders. ST products are sold pursuant to ST’s terms and conditions of sale in place at the time of order acknowledgement.

Purchasers are solely responsible for the choice, selection, and use of ST products and ST assumes no liability for application assistance or the design of Purchasers’ products.

No license, express or implied, to any intellectual property right is granted by ST herein.

Resale of ST products with provisions different from the information set forth herein shall void any warranty granted by ST for such product.

ST and the ST logo are trademarks of ST. All other product or service names are the property of their respective owners.

Information in this document supersedes and replaces information previously supplied in any prior versions of this document.

© 2017 STMicroelectronics – All rights reserved