

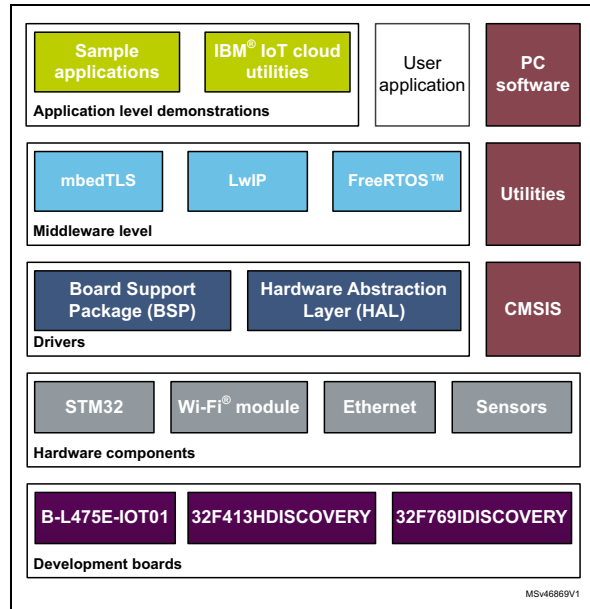
### Features

- Ready-to-run firmware example using Wi-Fi<sup>®</sup> and Ethernet connectivity to support quick evaluation and development of applications on the IBM Watson IoT<sup>™</sup> platform
- Board configuration interface
- Bidirectional communication examples between the board, acting as a device, and the IBM Watson IoT<sup>™</sup> platform
- Specific features on the B-L475E-IOT01 board such as measurement of humidity, temperature, 3-axis magnetic data, 3D acceleration, 3D gyroscope data, atmospheric pressure and time-of-flight

### Description

The X-CUBE-WATSON software expansion package consists of a set of libraries and application examples for STM32L4 Series, STM32F4 Series, and STM32F7 Series microcontrollers acting as end devices.

X-CUBE-WATSON runs on three platforms. The B-L475E-IOT01 and 32F413HDISCOVERY boards support Wi-Fi<sup>®</sup> connectivity with an on-board Inventek module. The 32F769IDISCOVERY board natively provides an Ethernet interface.



For the three boards, a sample application configures the Wi-Fi<sup>®</sup> parameters if Wi-Fi<sup>®</sup> is used, and illustrates the various ways for a device to interact with the IBM Watson IoT<sup>™</sup> platform.



## Ordering information

X-CUBE-WATSON is available for free download from the [www.st.com](http://www.st.com) website.

## License

The X-CUBE-WATSON embedded software package runs on STM32 microcontrollers, based on Arm<sup>®</sup> cores.



X-CUBE-WATSON is delivered under the *Mix Liberty + OSS + 3rd party V1* license.

The software components provided in this package come with different license schemes as shown in [Table 1](#).

For more details, refer to the license agreement of each component.

**Table 1. Software component license agreements**

Software component	Owner	License
Bluemix <sup>®</sup> Embedded C Client Library	IBM <sup>®</sup>	Eclipse <sup>™</sup> Public License - v 1.0
cJSON	Dave Gamble and cJSON contributors	MIT
cmocka	Andreas Schneider, Jakub Hrozek and cmocka contributors	Apache <sup>®</sup> License - Version 2.0
Paho	IBM <sup>®</sup>	Eclipse <sup>™</sup> Public License - v 1.0
Board Support Package (BSP)	ST	Open source BSD
Cortex <sup>®</sup> -M CMSIS	Arm <sup>®</sup>	Open source BSD
FreeRTOS <sup>™</sup>	2016 Real Time Engineers Ltd	Modified GNU GPL <sup>(1)</sup>
HAL STM32 L4/F4/F7	ST	Open source BSD
Inventek driver	ST	Ultimate Liberty (source release)
LwIP	2001-2004 Swedish Institute of Computer Science	Open source BSD
mbedTLS	Arm <sup>®</sup>	Apache <sup>®</sup> License - Version 2.0
Project examples	ST	Ultimate Liberty (source release)

1. The FreeRTOS<sup>™</sup> source code is licensed by a modified GNU General Public License, the modification taking the form of an exception. The exception permits the source code of applications that use FreeRTOS<sup>™</sup> and are distributed as executables to remain closed source, thus permitting the use of FreeRTOS<sup>™</sup> in commercial applications without necessitating that the whole application to be open sourced.

## Revision history

**Table 2. Document revision history**

Date	Revision	Changes
14-Sep-2017	1	Initial release.
18-Oct-2017	2	Updated <i>License</i> .

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