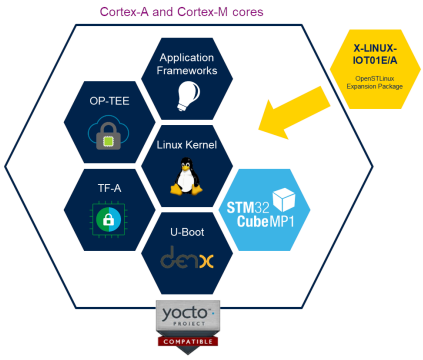
Data brief

STM32 MPU OpenSTLinux software expansion package for X-STM32MP-IOT01E and X-STM32MP-IOT01A



Features

- Linux user space driver for SPIRIT1
- Peer-to-peer connectivity between the STM32MP157F-DK2 discovery kit and the SPIRIT1-based sensor node
- Integration with the asset tracking dashboard
- Sample application available for the X-STM32MP-IOT01E and X-STM32MP-IOT01A expansion board for the STM32MP157F-DK2 discovery kit
- Complete source code is provided for development on the Yocto-based OpenSTLinux platform
- Meta-layer for integration with ST Yocto distribution package

Product summary	
STM32 MPU OpenSTLinux software expansion package for X-STM32MP-IOT01A	X-LINUX-IOT01E/A
STM32MP157FDK2 expansion board based on SPIRIT1 and LSM6DSOX	X-STM32MP-IOT01E/X-STM32MP-IOT01A
Low data rate, low power Sub 1GHz transceiver	SPIRIT1
iNEMO inertial module with Machine Learning Core, Finite State Machine and advanced Digital Functions	LSM6DSOX
Discovery kit with STM32MP157F MPU	STM32MP157F-DK2
Application	Edge Processing/ Motion Sensing

Description

X-LINUX-IOT01E/A is an STM32 MPU OpenSTLinux software expansion package, which runs on the Arm® Cortex® A7-based core of the STM32MP1 microprocessor.

In the STM32MP157F-DK2 discovery kit, it demonstrates the SPIRIT1 and LSM6DSOX-based applications, using the X-STM32MP-IOT01E and X-STM32MP-IOT01A hardware expansion boards.

The X-LINUX-IOT01E/A includes a user-mode Linux driver for the SPIRIT1 module and the Python-based application accessing the LSM6DSOX via an open GTK-based GUI.

SPIRIT1 is a low data rate, low-power Sub 1GHz transceiver, intended for RF wireless applications in the sub-1 GHz band.

LSM6DSOX is a system-in-package that features a 3-axis digital accelerometer and a 3-axis digital gyroscope.

An example application is included in the software package.

The source code can be imported to any Linux platform.

Revision history

Table 1. **Document revision history**

Date	Revision	Changes
17-Jun-2022	1	Initial release.
22-Jun-2022	2	Updated cover page image.
14-Dec-2022	3	Added X-STM32MP-IOT01E