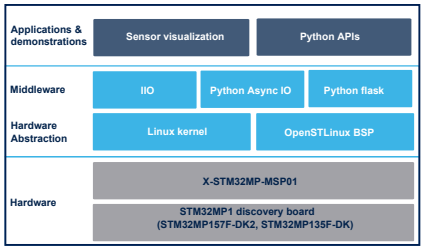
X-LINUX-MSP1

Data brief

STM32 MPU OpenSTLinux software package for X-STM32MP1-MSP01 expansion board



Product summary	
STM32 MPU OpenSTLinux software package for X-STM32MP1-MSP01 expansion board	X-LINUX-MSP1
STM32MP expansion board for motion MEMS, environmental, ToF, and ALS sensor applications	X-STM32MP-MSP01
Discovery kit with STM32MP157F MPU	STM32MP157F-DK2
Discovery kit with STM32MP135F MPU	STM32MP135F-DK
Application	Edge Processing/ Motion Sensing

Features

- Expansion software for building applications for the STM32MP1 series microprocessors, using the X-STM32MP-MSP01 expansion board
- Python APIs that provide easy access to the following sensors:
  - Motion sensors: ISM330DHCX, IIS2DLPC, IIS2MDC
  - Pressure sensor: LPS22HH
  - Time-of-Flight sensor (VL53L5CX) and ambient light sensor (VD6283TX)
- Sensor visualization app to stream real-time sensor data and sensor fusion output to a web client over a network connection
- Sample GTK-based application to display the sensor data on the MPU board LCD
- Sample data logging application to log the sensor data for later processing
- Compiled binaries are included to enable quick evaluation of the solution using the OpenSTLinux starter package
- Sources of various applications and driver patches are provided to enable customization using the OpenSTLinux developer package
- Free, user-friendly license terms

Description

X-LINUX-MSP1 is an STM32 MPU OpenSTLinux expansion package targeting an X-STM32MP-MSP01 evaluation board mounted on STM32MP157F-DK2 or STM32MP135F-DK discovery board.

The software package provides a sensor fusion application using IMUs, Time-of-Flight (ToF), and ambient light sensor (ALS) with a web-client based 3D demo.

Python APIs are provided to access the onboard sensors for application development.

The X-LINUX-MSP1 OpenSTLinux expansion package v1.0.x is compatible with the Yocto project build system Kirkstone.

It is validated over the OpenSTLinux distribution v5.0 on STM32MP157F-DK2 and STM32MP135F-DK boards.

Revision history

Table 1. **Document revision history**

Date	Revision	Changes
11-Dec-2023	1	Initial release.

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