

STM32 MPU OpenSTLinux software expansion package for MEMS Application

	Cortex M4	Cortex A7
Applications	Data Generator Applications	Data Logger Applications
Middleware	MotionFX OpenAMP	RPMSG
Hardware Abstraction	STM32Cube Hardware Abstraction Layer(HAL)	Linux Kernel OpenSTLinux BSP
Hardware	X-STM32MP-MSP01 STM32MP1 Development Board (STM32MP157-DK2)	

Features

- Complete software to build applications using the following sensors using Cortex® M4 and Cortex® A7 of STM32MPU
 - motion Sensors : ISM330DHCX, IIS2DLPC, IIS2MDC
 - pressure sensor: LPS22HH
 - temperature sensor : STTS22H
- Sample Application for MEMS Sensor fusion running on Cortex® M4
- Sample Application for MEMS data logging on Cortex® A7
- Free, user-friendly license terms

Description

X-LINUX-MEMS1 is a software package for running MEMS sensor fusion - motion FX on STM32MP157F-DK2.

The package provides an example of running MEMS sensor fusion on a Cortex® M4, and sending data over Linux® remote processor messaging (RPMsg) to Cortex® A7 to display console application.

The software package uses the X-STM32MP-MSP01 board mounted on STM32MP157F-DK2 via 40 pin GPIO header.

Product summary	
STM32 MPU OpenST Linux software expansion package for MEMS Application	X-LINUX-MEMS1
Discovery kit with STM32MP157F MPU	STM32MP157F-DK2
STM32MP expansion board for motion MEMS, environmental, ToF, and ALS sensor applications	X-STM32MP-MSP01
Applications	Personal Electronics/ Wearable/IoT, Smart Home

Revision history

Table 1. Document revision history

Date	Version	Changes
05-May-2023	1	Initial release.

IMPORTANT NOTICE – 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 acknowledgment.

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. For additional information about ST trademarks, refer to www.st.com/trademarks. 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.

© 2023 STMicroelectronics – All rights reserved