X-NUCLEO-EEICA1



Data brief

Standard I²C EEPROM memory expansion board based on M24256E-F and M24M01E-F series for STM32 Nucleo



Features

- M24256E-F: 256 Kbit serial I²C bus EEPROM with configurable device address
- M24M01E-F: 1 Mbit serial I²C bus EEPROM with configurable device address and software write protection registers
- Additional identification page
- Compatible with the following I²C bus modes:
 - 1 MHz (fast mode plus)
 - 400 kHz (fast mode)
 - 100 kHz (standard mode)
- Preprogrammed device address (on demand)
- A free comprehensive development firmware library and sample implementation are available when the X-NUCLEO-EEICA1 expansion board is plugged on top of a NUCLEO-F401RE, NUCLEO-L053R8, NUCLEO-G474RE or NUCLEO-H743ZI development board
- Developer can choose and solder an EEPROM to be tested using the evaluation software provided

Description

The X-NUCLEO-EEICA1 expansion board is designed for M24256E-F and M24M01E-F series I^2C EEPROM for data reading and writing.

The expansion board acts as an external storage device that can be used to store data such as manufacturing traceability, calibration, user settings, error flags, data logs, and monitoring data to make applications more flexible and accurate.

Product summary		
Standard I ² C EEPROM memory expansion board based on M24256E-F and M24M01E-F series for STM32 Nucleo	X-NUCLEO- EEICA1	
256-Kbit serial I2C bus EEPROM with configurable device address	M24256E-F	
1 Mbit Serial I2C bus EEPROM with configurable device address and software write protection registers	M24M01E-F	
STM32 Nucleo-64 development board with STM32F401RE MCU, supports Arduino and ST morpho connectivity	NUCLEO- F401RE	
STM32 Nucleo-64 development board with STM32L053R8 MCU, supports Arduino and ST morpho connectivity	NUCLEO- L053R8	
STM32 Nucleo-64 development board with STM32G474RE MCU, supports Arduino and ST morpho connectivity	NUCLEO- G474RE	



Product summary		
STM32 Nucleo-144 development board with STM32H743ZI MCU, supports Arduino, ST Zio and morpho connectivity	NUCLEO- H743ZI	
Applications	Industrial Sensors	

Schematic diagrams







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Figure 2. X-NUCLEO-EEICA1 circuit schematic (2 of 4)







M24_I2C_SCL	R9 0 3.3K	M24_VCC
M24_I2C_SDA	<u></u>	M24_VCC



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Figure 3. X-NUCLEO-EEICA1 circuit schematic (3 of 4)

Nucleo Connectors (ARDUINO UNO R3)







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X-NUCLEO-EEICA1 Schematic diagrams

Figure 4. X-NUCLEO-EEICA1 circuit schematic (4 of 4)



Power Section





FOR CURRENT MEASUREMENT



PROBE_CONN

	J4	J5
1. 3V3 (Default)	Unshort 1 and 2	Short 1 and 2
2. IOREF	Unshort 1 and 2	Short 2 and 3
3. External Supply	Short 1 and 2	Connectors to be left open

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2 Board versions

Table 1. X-NUCLEO-EEICA1 versions

Finished good	Schematic diagrams	Bill of materials
X\$NUCLEO-EEICA1A (1)	X\$NUCLEO-EEICA1 schematic diagrams	X\$NUCLEO-EEICA1 bill of materials

1. This code identifies the X-NUCLEO-EEICA1 evaluation board first version.

Revision history

Table 2. Document revision history

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

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