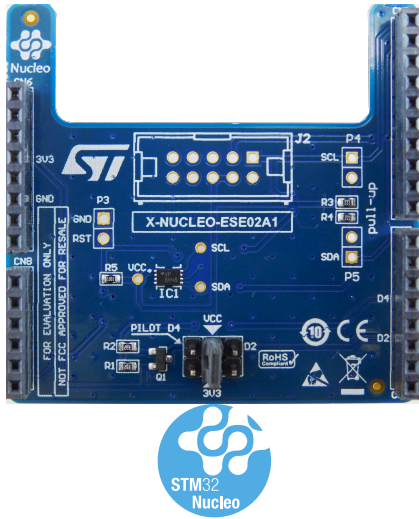


Secure element expansion board based on STSAFE-L010



Features

- On-board STSAFE-L010 customized with a standard evaluation profile
- Arduino UNO R3 connector
- Free drivers, middleware and software samples compatible with the [STM32 ODE](#)
- RoHS and WEEE compliant

Description

The X-NUCLEO-ESE02A1 expansion board is based on the STSAFE-L010 secure element. It can be used with any STM32 Nucleo development board.

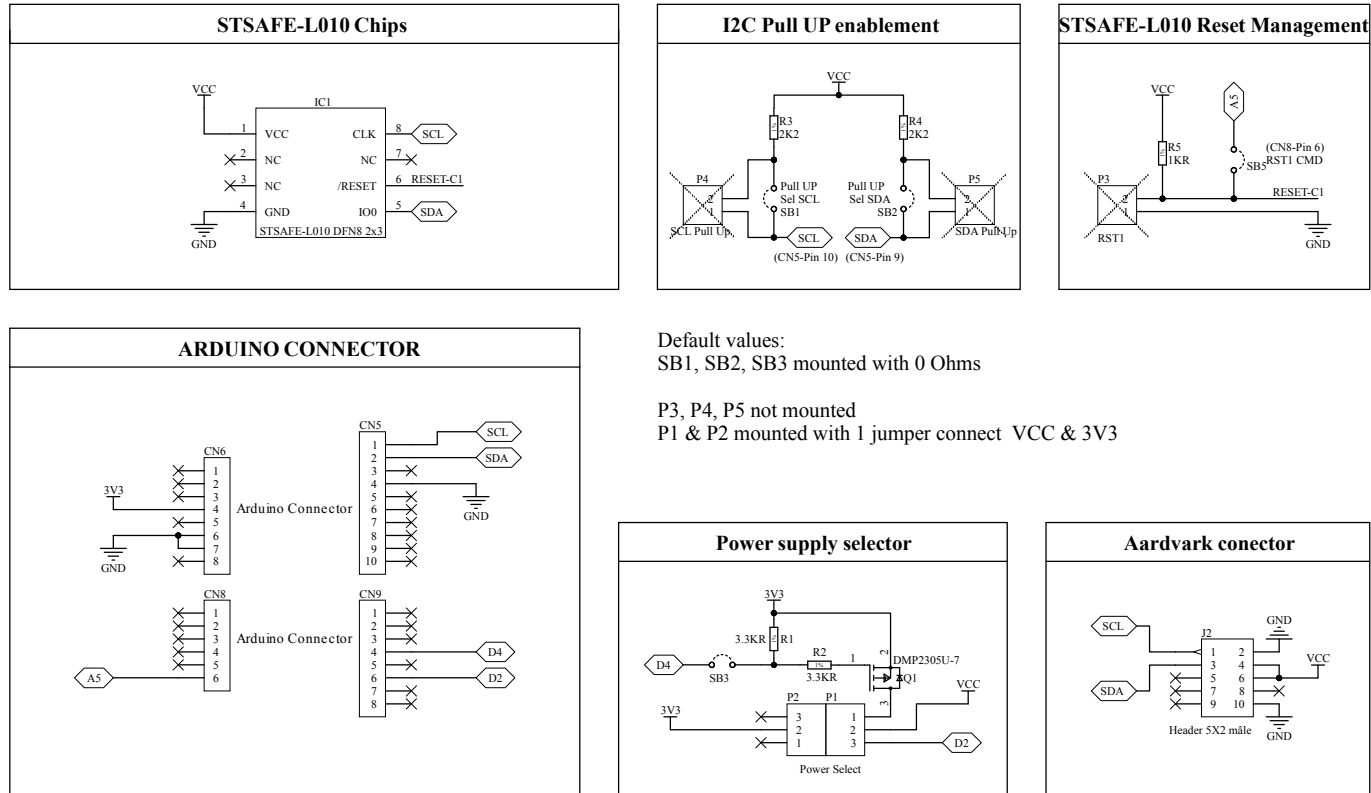
The on-board STSAFE-L010 is customized with a standard profile for evaluation and is compatible with the Arduino® UNO R3 connector.

The X-NUCLEO-ESE02A1 expansion board is used with free STSELib middleware providing sample code to demonstrate how to implement security applications.

Product summary	
Secure element expansion board based on STSAFE-L010	X-NUCLEO-ESE02A1
STMicroelectronics Secure Element Library (STSELib) middleware	STMicroelectronics Secure Element Library (STSELib)
Authentication and brand protection secure solution	STSAFL010DFSPLO1
Applications	Authentication/ Embedded Security for Communications Equipment, Computers and Peripherals

1 Schematic diagrams

Figure 1. X-NUCLEO-ESE02A1 circuit schematic



Default values:
SB1, SB2, SB3 mounted with 0 Ohms

P3, P4, P5 not mounted
P1 & P2 mounted with 1 jumper connect VCC & 3V3



2 Board versions

Table 1. X-NUCLEO-ESE02A1 versions

Finished good	Schematic diagrams	Bill of materials
XN\$ESE02A1A ⁽¹⁾	XN\$ESE02A1A schematic diagrams	XN\$ESE02A1A bill of materials

1. This code identifies the X-NUCLEO-ESE02A1 evaluation board first version.

Revision history

Table 2. Document revision history

Date	Revision	Changes
03-Sep-2025	1	Initial release.
10-Feb-2026	2	Removed STSAFEA logo.

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