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EEPROM 11 Click





PID: MIKROE-5889

EEPROM 11 Click is a compact add-on board with a highly reliable, nonvolatile memory solution. This board features the S-34C04AB, an EEPROM for DIMM serial presence detection from ABLIC. The EEPROM is internally organized as 2 pages of 256 words x 8-bit, and a capacity of 4Kbits and is an EE1004-1 JEDEC standard-compliant. The page write and sequential read are available over the I2C interface. This Click board™ makes the perfect solution for the development of consumer electronics, office equipment, communication devices, medical equipment, automobile equipment, and more.

EEPROM 11 Click is supported by a mikroSDK compliant library, which includes functions that simplify software development. This Click board™ comes as a fully tested product, ready to be used on a system equipped with the mikroBUS™ socket.

How does it work?

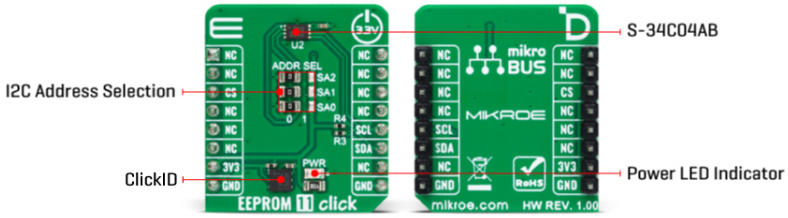
EEPROM 11 Click is based on the S-34C04AB, an EEPROM memory for DIMM serial presence detection from ABLIC. The EEPROM uses a Schmitt trigger and noise filter on the I2C bus for noise suppression. The S-34C04AB has a timeout function that can reset the I2C interface and return to standby mode. This timeout is typically 30ms. The EEPROM also allows you to write a byte or a page. The page write mode allows up to 16 bytes to be written in a single operation. The IC also has set protection for block n, clear write protection for all blocks, and read protection status for block n. As for reading, you can read a current address, a random read, or a sequential read.

Mikroe produces entire development toolchains for all major microcontroller architectures.
Committed to excellency, we are dedicated to helping engineers bring the project development up to speed and achieve outstanding results.

ISO 27001: 2013 certification of informational security management system.
ISO 14001: 2015 certification of environmental management system.
OHSAS 18001: 2008 certification of occupational health and safety management system.

ISO 9001: 2015 certification of quality management system (QMS).

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EEPROM 11 Click uses a standard 2-wire I2C interface to communicate with the host MCU, supporting clock frequencies of up to 1MHz. You can set the desired I2C address over three ADDR SEL jumpers, with 0s selected by default.

This Click board™ can be operated only with a 3.3V logic voltage level. The board must perform appropriate logic voltage level conversion before using MCUs with different logic levels. Also, this Click board™ comes equipped with a library containing easy-to-use functions and an example code that can be used as a reference for further development.

Specifications

Type	EEPROM
Applications	Can be used for the development of consumer electronics, office equipment, communication devices, medical equipment, automobile equipment, and more.
On-board modules	S-34C04AB - EEPROM memory for DIMM serial presence detection from ABLIC
Key Features	EEPROM for DIMM serial presence detect, can write 16 bytes per page, long endurance and data retention, JEDEC standard-compliant, low-current operation, write protection, noise suppression, and more
Interface	I2C
ClickID	Yes
Compatibility	mikroBUS™
Click board size	S (28.6 x 25.4 mm)
Input Voltage	3.3V

Pinout diagram

This table shows how the pinout on EEPROM 11 Click corresponds to the pinout on the mikroBUS™ socket (the latter shown in the two middle columns).

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Notes	Pin	mikro™ BUS				Pin	Notes
	NC	1	AN	PWM	16	NC	
	NC	2	RST	INT	15	NC	
ID COMM	**CS**	3	CS	RX	14	NC	
	NC	4	SCK	TX	13	NC	
	NC	5	MISO	SCL	12	**SCL**	I2C Clock
	NC	6	MOSI	SDA	11	**SDA**	I2C Data
Power Supply	**3.3V**	7	3.3V	5V	10	NC	
Ground	**GND**	8	GND	GND	9	**GND**	Ground

Onboard settings and indicators

Label	Name	Default	Description
LD1	PWR	-	Power LED Indicator
JP1-JP3	ADDR SEL	Left	I2C Address Selection 0/1: Left position 0, Right position 1

EEPROM 11 Click electrical specifications

Description	Min	Typ	Max	Unit
Supply Voltage	-	3.3	-	V
Memory Size	-	-	4	Kbit
Data Retention	100	-	-	Years
Endurance	10^6	-	-	Cycles

Software Support

We provide a library for the EEPROM 11 Click as well as a demo application (example), developed using MIKROE compilers. The demo can run on all the main MIKROE development boards.

Package can be downloaded/installed directly from NECTO Studio Package Manager (recommended), downloaded from our LibStock™ or found on Mikroe github account.

Library Description

This library contains API for EEPROM 11 Click driver.

Key functions

- eeprom11_page_write EEPROM 11 page write function.
- eeprom11_clear_page EEPROM 11 page clear function.
- eeprom11_set_page_addr EEPROM 11 set page address function.

Example Description

This is an example that demonstrates the use of the EEPROM 11 Click board™.

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The full application code, and ready to use projects can be installed directly from NECTO Studio Package Manager (recommended), downloaded from our LibStock™ or found on Mikroe github account.

Other Mikroe Libraries used in the example:

- MikroSDK.Board
- MikroSDK.Log
- Click.EEPROM11

Additional notes and informations

Depending on the development board you are using, you may need USB UART click, USB UART 2 Click or RS232 Click to connect to your PC, for development systems with no UART to USB interface available on the board. UART terminal is available in all MIKROE compilers.

mikroSDK

This Click board™ is supported with mikroSDK - MIKROE Software Development Kit. To ensure proper operation of mikroSDK compliant Click board™ demo applications, mikroSDK should be downloaded from the LibStock and installed for the compiler you are using.

For more information about mikroSDK, visit the official page.

Resources

mikroBUS™

mikroSDK

Click board™ Catalog

Click Boards™

ClickID

Downloads

EEPROM 11 click example on Libstock

S-34C04A datasheet

EEPROM 11 click 2D and 3D files

EEPROM 11 click schematic

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