



KAmoNFC



Rev. 20241101182554

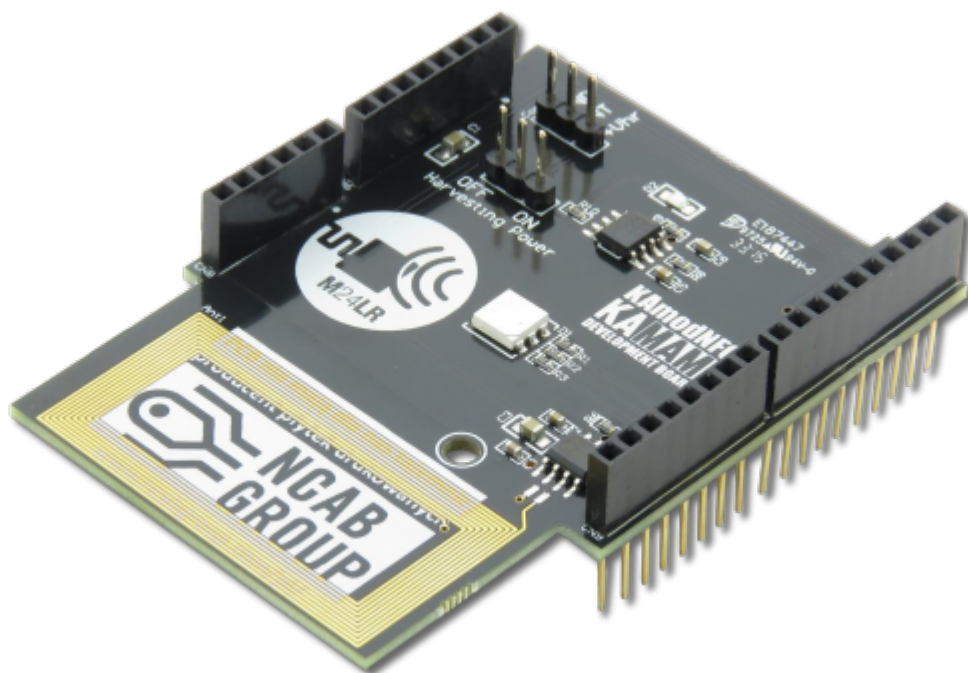
Źródło: <https://wiki.kamamilabs.com/index.php?title=KAmoNFC>

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Description

[KAmoNFC](#) is an expansion board with M24LR64E-R chip – dynamic tag with 64kb EEPROM memory and dual communication interface (I2C / RF). On board is placed also signalization of energy harvesting function, which is in M24LR64E-R chip embedded.



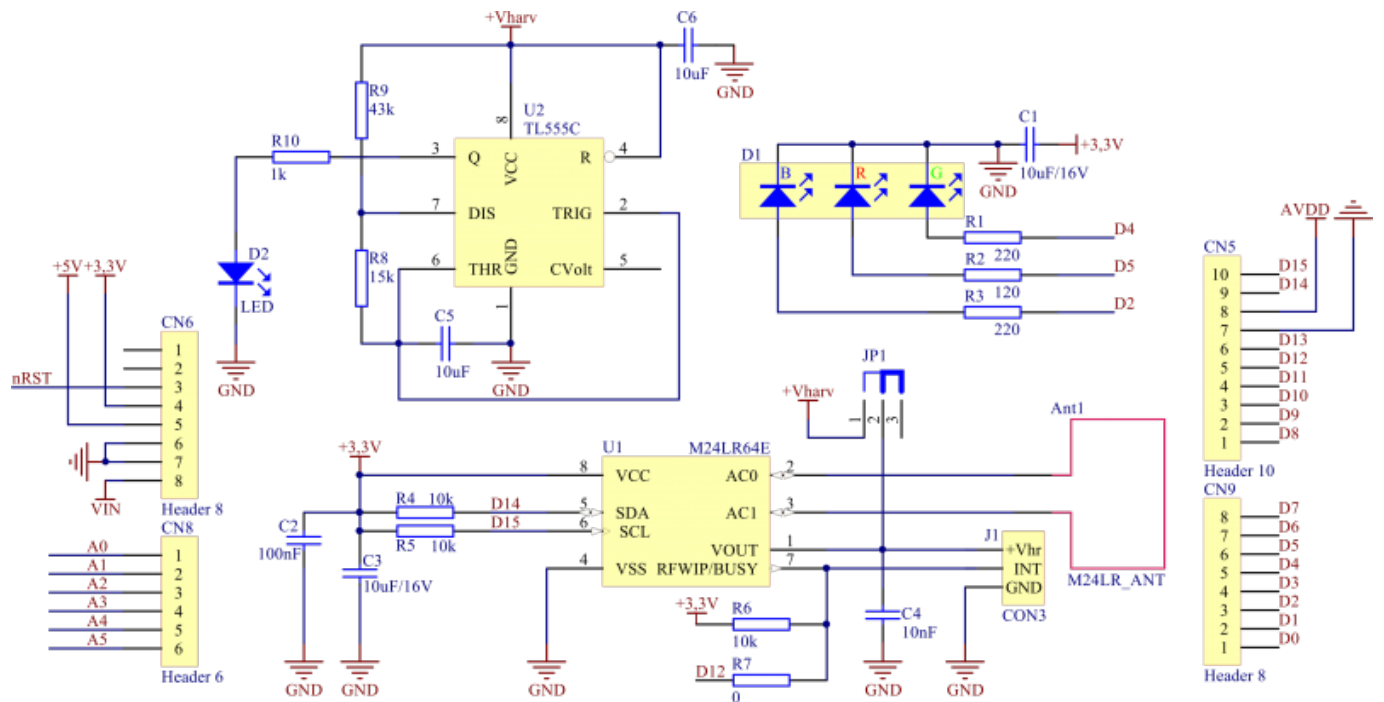
Basic features and parameters

- Chip M24LR64E-R - dynamic NFC tag / RFID from STMicroelectronics
- Energy harvesting powers supply line on connector (+Vhr) with efficiency max. 7mA
- Embedded microstrip antenna, designed for work with frequency 13.56MHz
- Connectors compatible with z Arduino UNO R3
- Possibility of using another shield compatible with z Arduino UNO R3
- Embedded tri color user RGB LED
- Embedded module of work stabilization with energy harvesting
- Mounting hole 3mm
- Module size: 74mm x 52mm x 20mm

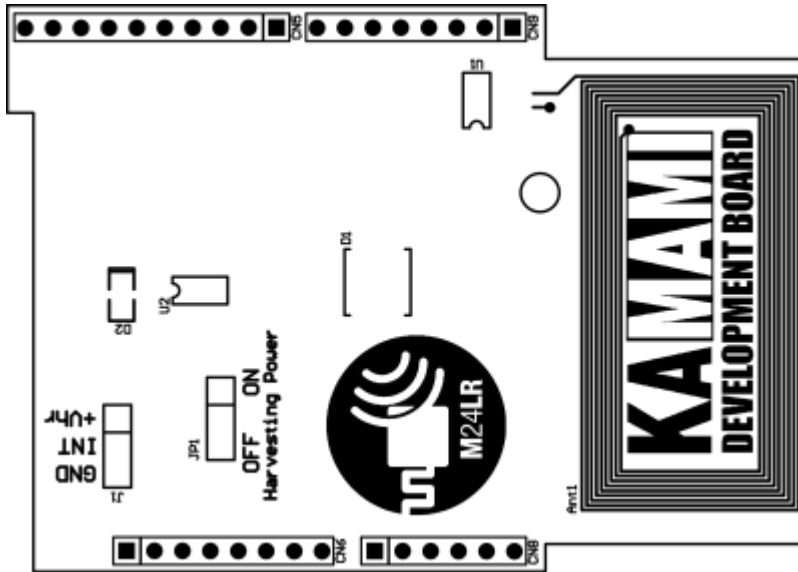
Standard equipment

Code	Description
KAmoNFC	• Assembled and launched module

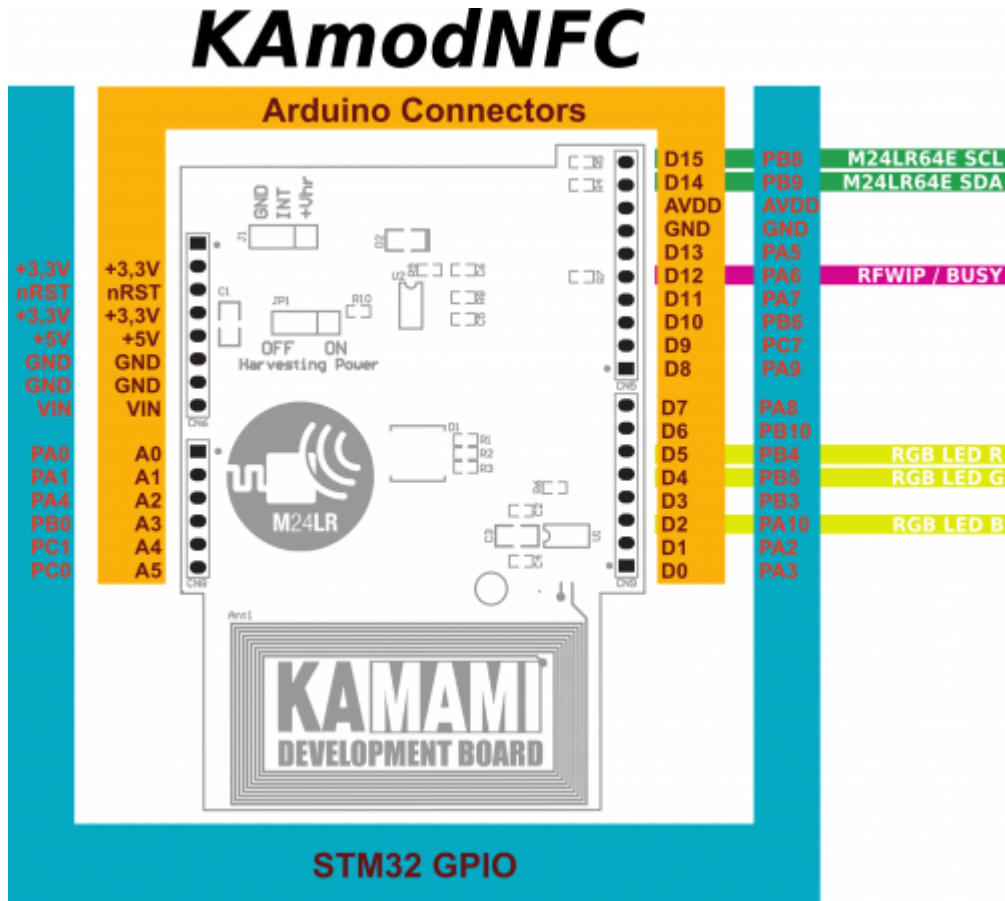
Electrical schematics



View of PCB

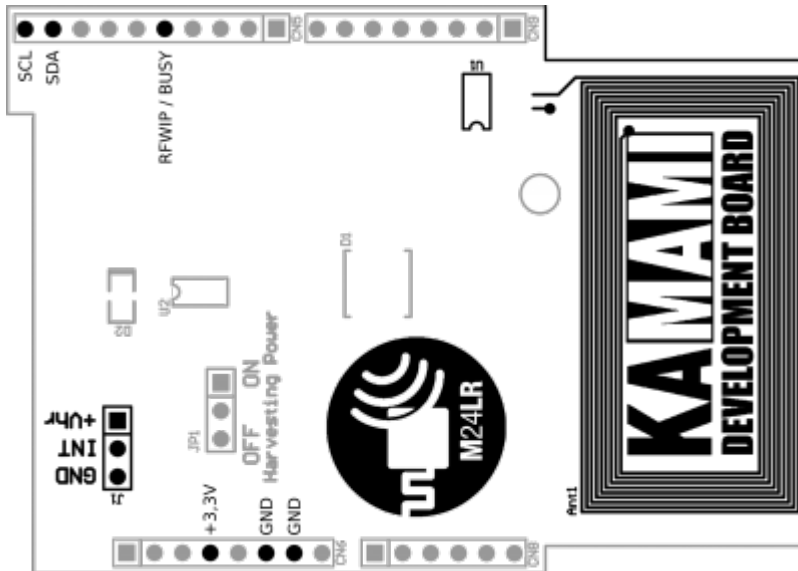


Output description

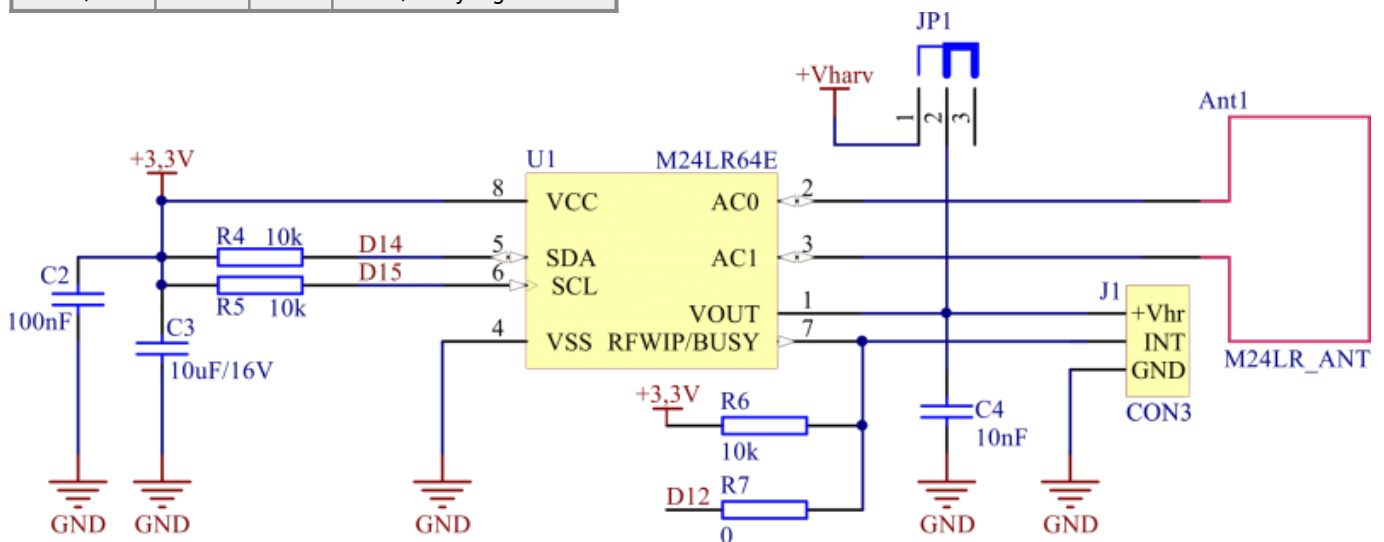


M24LR64E-R - tag RFID / NFC chip

M24LR64E-R is a dynamic NFC / RFID tag with 64kb EEPROM memory and dual communication interface – is possible to use I2C communication bus as well as a radio track. Chip has a energy harvesting function and cooperates with microstrip antenna, which was designed for work with frequency 13.56MHz.

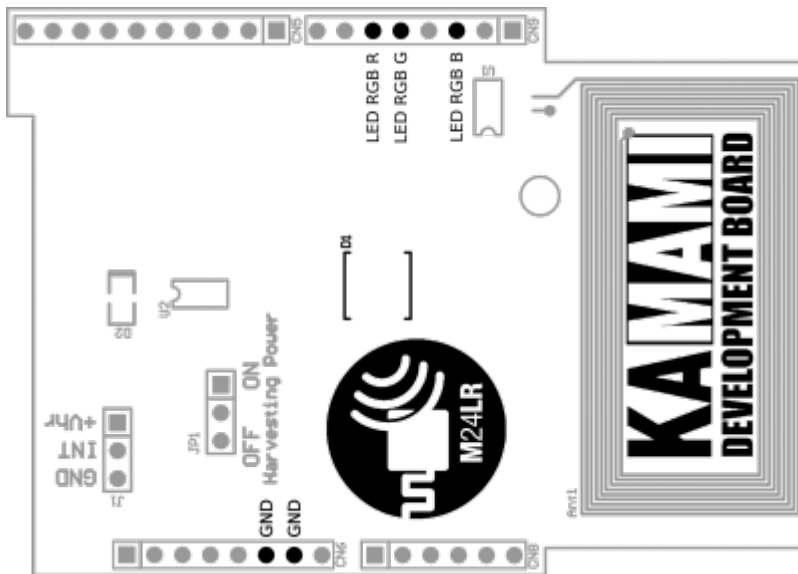


Line	Output	Function
	Arduino STM32	
SCL	D15 PB8	Clock line of I2C bus
SDA	D14 PB9	Data line of I2C bus
RFWIP/BUSY	D12 PA6	Write / busy signalization

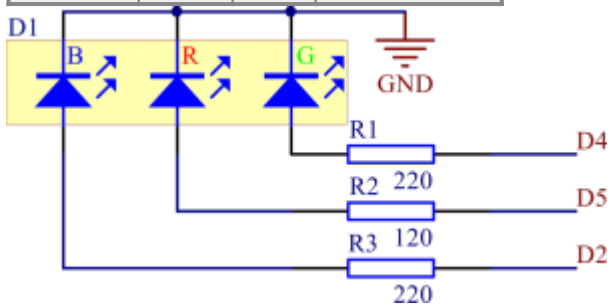


Multicolor user LED

Embedded RGB user LED in SMD 5060 package make possible to signaling a variety of events by using three, controlled independent colors (red, green, blue).

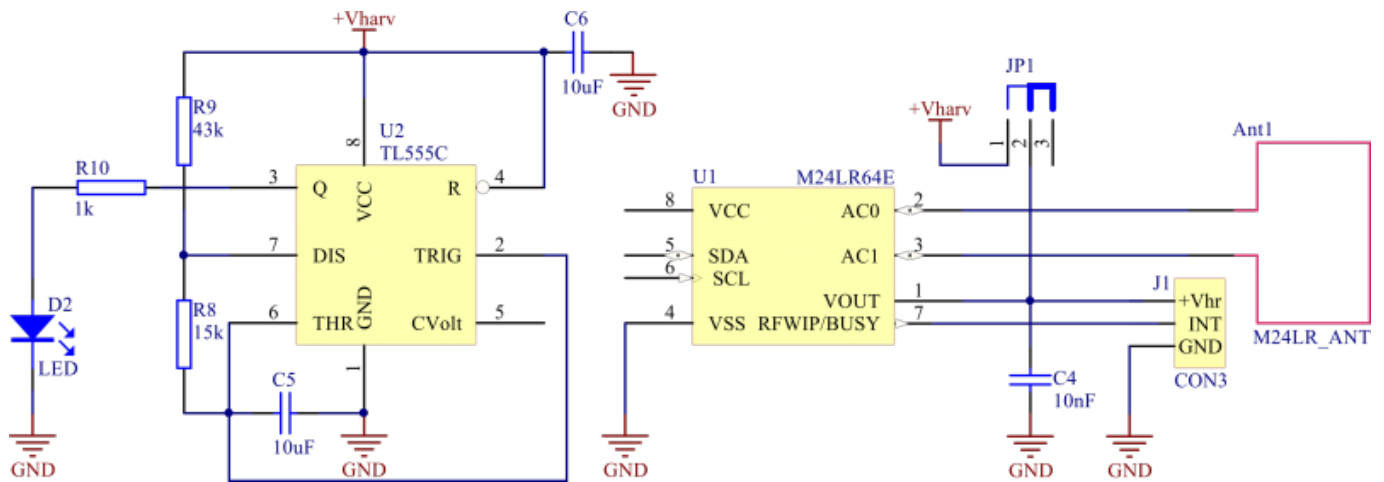
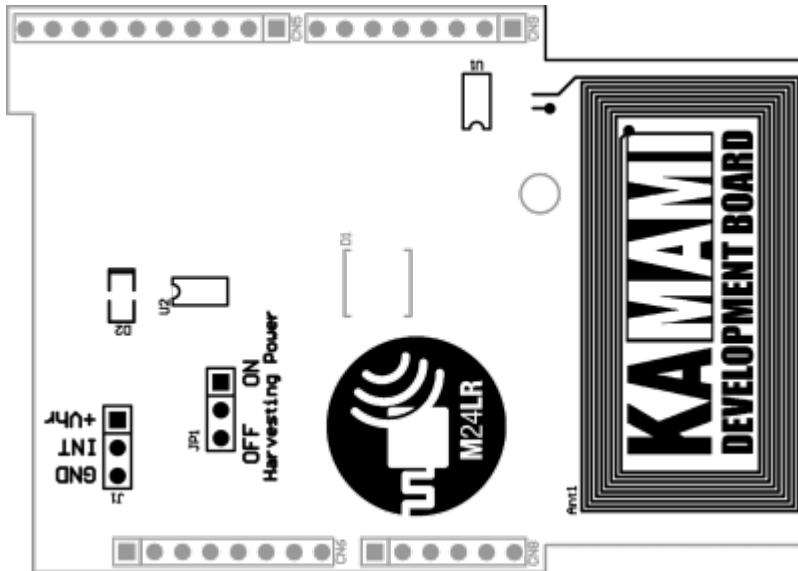


Line	Output	Function	
	Arduino	STM32	
RGB LED R	D5	PB4	Red LED color
RGB LED G	D4	PB5	Green LED color
RGB LED B	D2	PA10	Blue LED color



Energy harvesting

In chip M24LR64E-R embedded function of energy harvesting allows to wireless power supply of devices with low power consumption (max. 7mA), when antenna of module is placed enough near from transmitter antenna (which use CR95HF chip). Power supply with harvesting energy is activated with using jumper "Harvesting Power". Indicator starts periodically blinking with D2 LED, when on line +Vhr appears harvesting voltage from RF track.

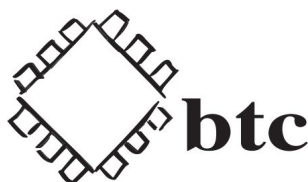


Media

Video with presentation of KamodNFC module working

External links

- [M24LR64E-R chip datasheet](#)
- [Thread dedicated to the KamodNFC module on site microgeek.eu](#)



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