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IL MANUALE DI GEVINO opto v1.3

Compatible Arduino Zero
Manual v23

GEVINO products have been designed for civil, domestic, corporate or industrial environments. They have high voltage and high current inputs and outputs, protected against disturbances, electrostatic discharges, magnetic fields, inductive loads, extra voltages and currents.

They comply with EC directives.

It is possible to customize them for more than 50 pieces.

To program Gevino simply connect it to your computer with a USB cable, write some instructions, and press the «Upload» button. It is very rich in libraries for an infinity of modules and sensors. The instructions are quite simple and understandable.

The programming software, also called IDE (Integrated Development Environment), contains many examples from which to take inspiration to write their own listings.

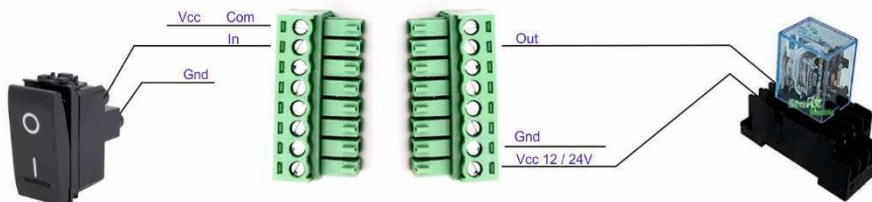
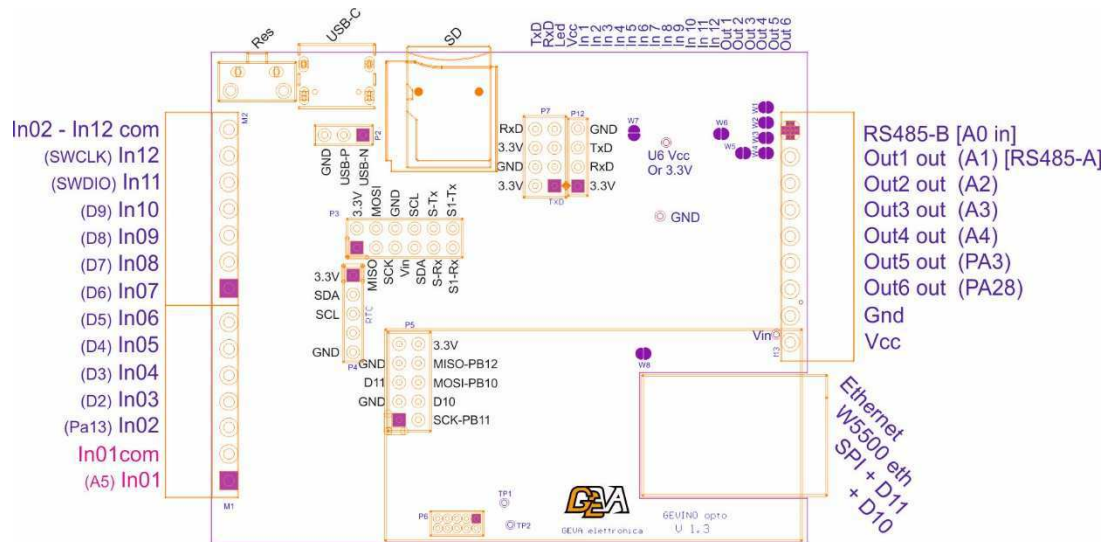
I prodotti GEVINO sono stati progettati per ambienti civili, domestici, aziendali o industriali. Hanno ingressi e uscite ad alta tensione, alta corrente, protetti contro disturbi, scariche elettrostatiche, campi magnetici, carichi induttivi, extra tensioni e correnti.

Sono conformi alle direttive CE.

E' possibile personalizzarle per una quantità superiore a 50 pezzi.

Per programmare Gevino è sufficiente collegarlo al proprio computer con un cavo USB, scrivere qualche istruzione, e premere il tasto «Upload». E' ricchissimo di librerie per un' infinità di moduli e sensori. Le istruzioni sono abbastanza semplici e comprensibili.

Il software di programmazione, chiamato anche IDE (Ambiente Integrato di Sviluppo), contiene numerosi esempi da cui prendere spunto per scrivere i propri listati.



JUMPER

Out1 Terminal

W4 = Mosfet (Open W3) *

W3 = RS485-A (Open W4 & W5 & W6)

Ana/RS485 Terminal

W1 = RS485-B Can be used only one wire for less then 10 Mt of cable *

W2 = Input Analog 1V or 3.3V, used A0

W2 + W8 = 0/4/20mA, used A0

*Default

NOTE

At power on, the In12 input must not be activated.

You can update the program in the GEVINO from the Internet or SD card with a dedicated bootloader.

Si può aggiornare il programma nel GEVINO da internet o SD card con un bootloader dedicato.

Specs / Specifiche

- Vcc from 7 to 28V
- Out 28V 6A
- Optoisolated Input, High level 5 to 40V, -5 to -40V, Low level -2.5 to +2.5V, DC or AC.
- All input can be interrupt. Except In5, In11, In12.
- 10Khz max input frequency
- CPU ATSAM21G18 - Arduino ZERO M0 compatible.
- 48 Mhz, 32-bit ARM® Cortex®-M0+ processor.
- Flash 256KB, RAM 32K
- -40°C +85°C Working temperature

Utilization / Utilizzo

ARDUINO IDE <https://www.arduino.cc/en/main/software>
Install zero Compiler <https://www.arduino.cc/en/Guide/ArduinoZero>
Choose Board «Arduino/Genuino Zero (Native USB Port)»
Use the Arduino Zero reference guide.

3 ENCLOSURES, of different THICKNESSES:

3 CONTENITORI, CON DIFFERENTE SPESSORE:

Thin 17.5mm black, for the only card without accessories.
Medium 22.5mm green, for accessories such as Ethernet, RTC, Wi-Fi, Bluetooth, GSM modem.
Thick 35mm black, for accessories such as RS232 on DB9 female, Li-Po battery with battery charger.

*Sottile 17.5mm nera, per la sola scheda senza accessori.
Media 22.5mm verde, per accessori quali l'Ethernet, l'RTC, il Wi-Fi, il Bluetooth, il modem GSM.
Spessa 35.0mm nera, per accessori quali RS232 su DB9 femmina, Batteria Li-Po con caricabatteria.*

SERCOM

Six Serial Communication Interfaces, each configurable to operate as either:

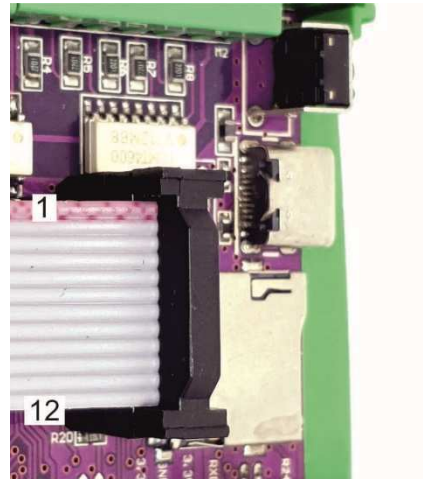
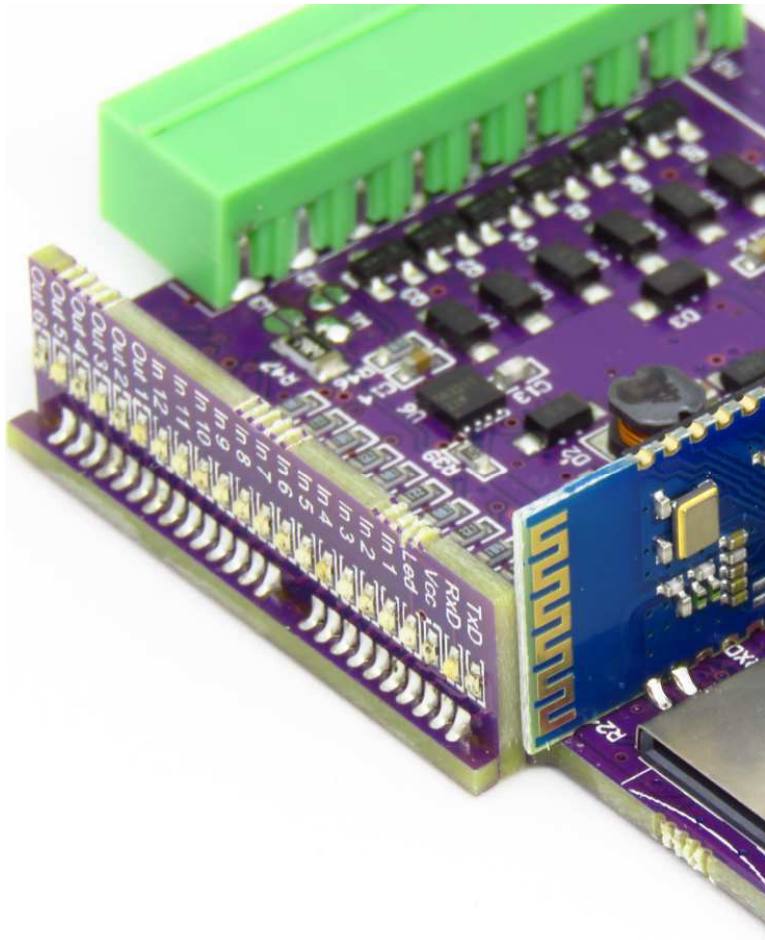
- USART with full-duplex and single-wire half-duplex configuration
- I2C up to 3.4MHz
- SPI
- LIN slave

<https://www.arduino.cc/en/Tutorial/SamdSercom>

<https://learn.adafruit.com/using-atsamd21-sercom-to-add-more-spi-i2c-serial-ports/overview>

SerialUSB	USB	CS Addr	Reset	Int	Tx En
Serial	ESP-WiFi Bluetooth				
Serial1	RS485				A0
I2C	RTC DS3231				
"	OLED				
SPI	SD card reader	12			
"	W5500 ETH	10	11	---	

HC-06 -07 -08 BLUETOOTH ON SERIAL:



Optional Flat Cable on P7:

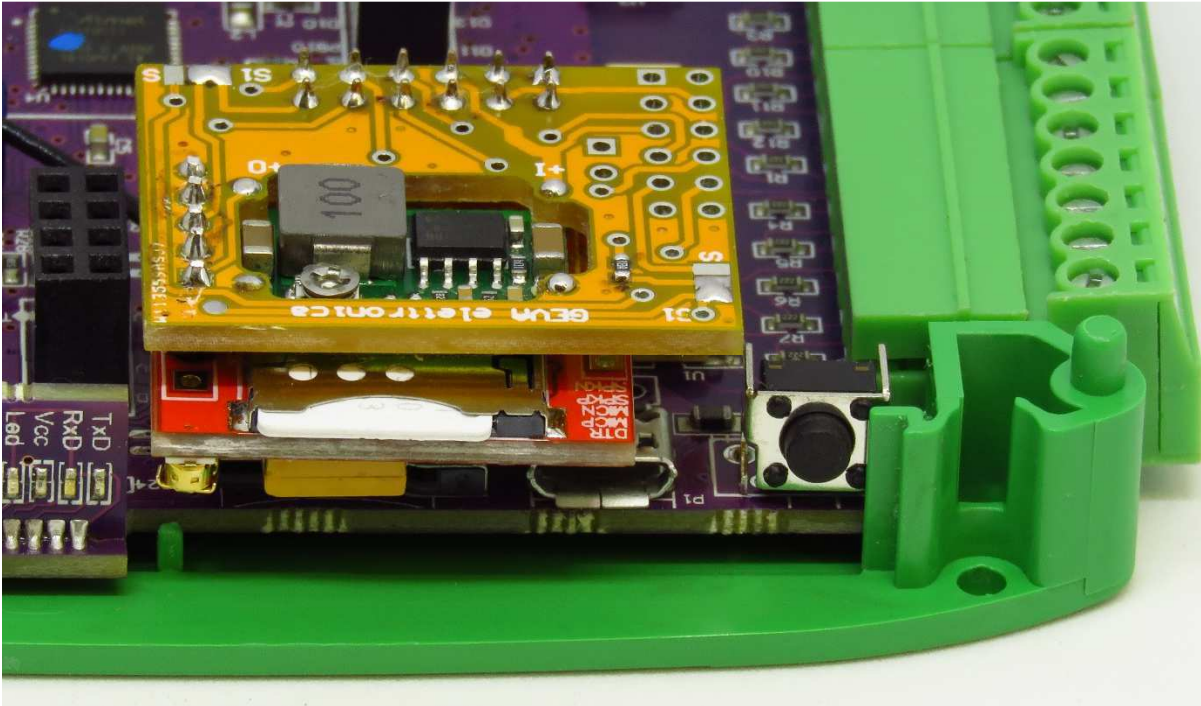
- 1- MISO – D22
- 2- 3.3V
- 3- SCK – D24
- 4- MOSI – D23
- 5- Vin (12v/24v) After Diode
- 6- GND
- 7- SDA – D20
- 8- SCL – D21
- 9- RXD Serial – D25 - ESP WiFi - Bluetooth
- 10- TXD Serial – D26 - ESP WiFi - Bluetooth
- 11- D0-RxD Serial1 - PA11 - Rs485
- 12- D1-TxD Serial1 - PA10 – Rs485

For use D0-RxD open W7 Jumper (Driver Rs485)

9 & 11 Rx D → Rx D of RS485 & RS232 module → Tx D of SIM800L modem, ESP

10 & 12 Tx D → Tx D of RS485 & RS232 module → Rx D of SIM800L modem, ESP

SIM800L MODEM ON SERIAL OR SERIAL1:



CHANGE TO NEXTION LIBRARY:

Line 35 of NextUpload.cpp, comment.
// #include <SoftwareSerial.h>

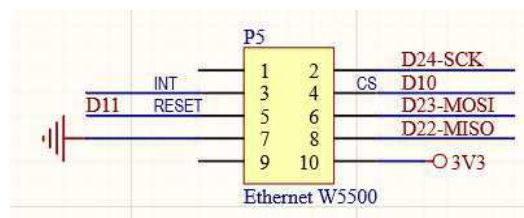
Line 29..37 of NexConfig.h, change

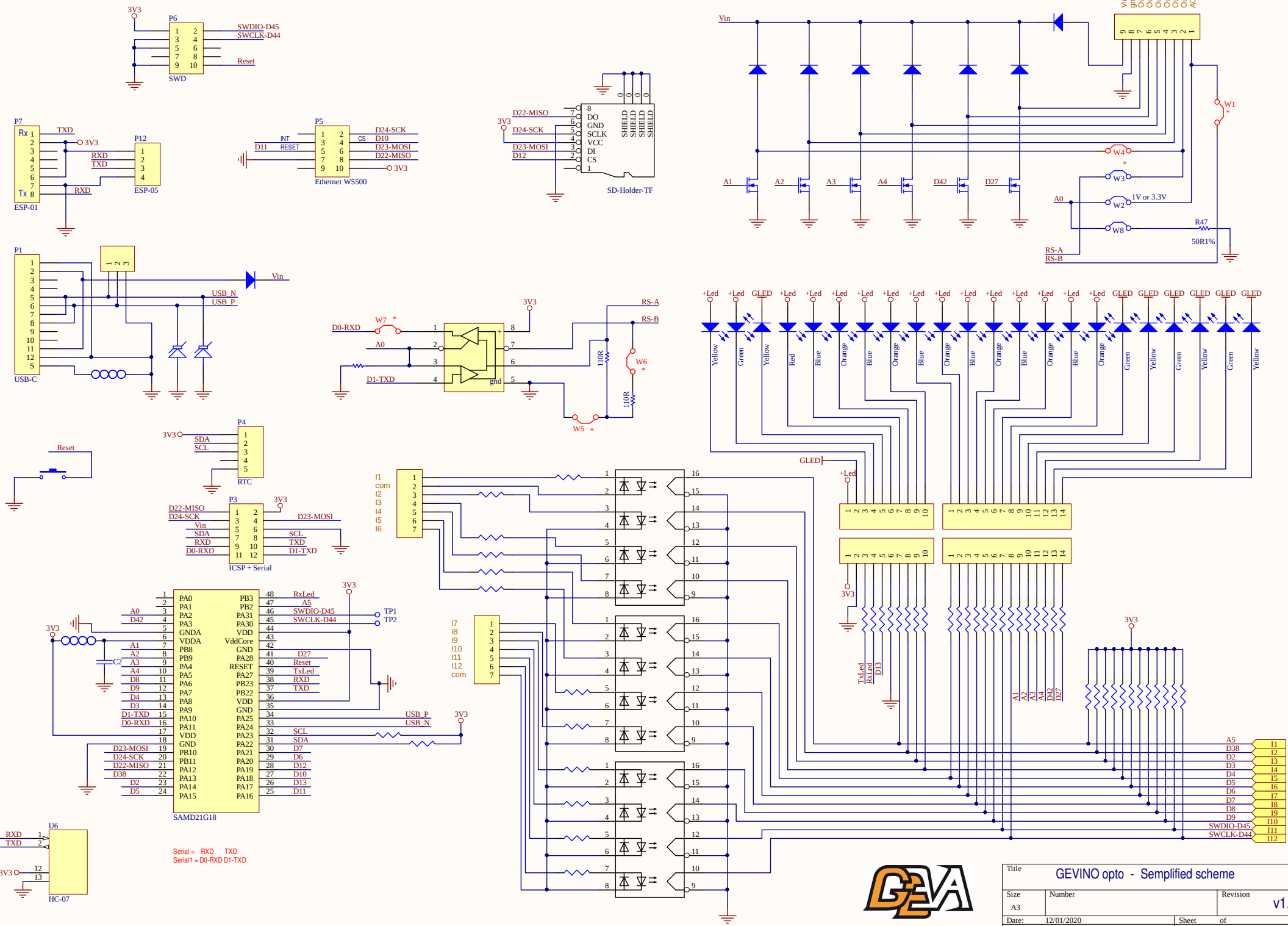
```
#define dbSerial SerialUSB
#define nexSerial Serial1 (or Serial)
```

CAN Bus:

MCP2515 module
Replace driver with TCAN332DR IC
Connected at W5500 Ethernet connector

p10 = VCC
P7 = GND
p4 = CS = D10
P8 = SO
P6 = SI
P2 = SCK
P5 = INT = D11





Title				GEVINO opto - Simplified scheme			
Size	Number			Revision			v1.3
A3							
Date:	12/01/2020			Sheet	of		
File:	C:\Users\A\GEVINO Opto - Simplified			Drawn By:			