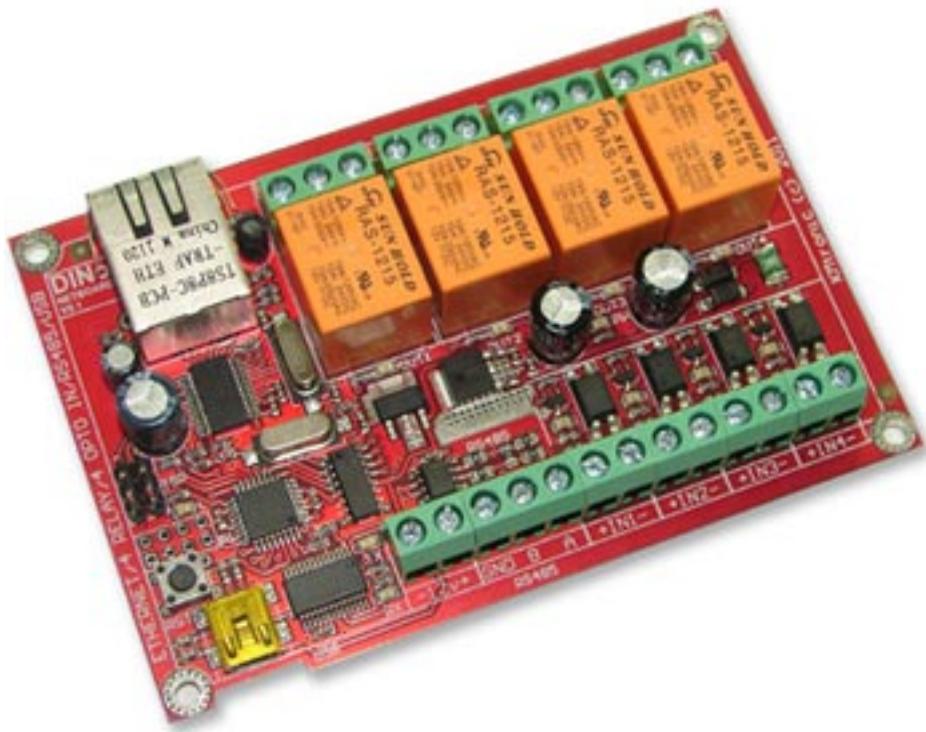


KMTronic DI No

Internet controlled relay board



Arduino compatible, fully assembled and tested. Complete Internet/Ethernet board with 4 Optically-Isolated Digital Inputs and 4 Relays.

Arduino is an open-source physical computing platform based on a simple i/o board and a user friendly development environment that implements the Processing/Wiring language.

Features

ATMEGA328 Microcontroller

ENC28J60 Ethernet Controller

Built-in USB FTDI USB to Serial COM port converter

Built-in RS-485 converter

4 Opto Isolated Digital Inputs

4 Relays 220VAC/10Am

Reset Button

Code upload via USB with the Bootloader

Specifications :

- Microcontroller: ATmega328
- Power Voltage: 12VDC
- Input Voltage: 5-24VDC
- Ethernet Controller: ENC28J60
- Digital Input Pins: 4
- Relays: 4
- Flash Memory: 32 KB (ATmega328) of which 2 KB used by bootloader
- SRAM: 2 KB (ATmega328)
- EEPROM: 1 KB (ATmega328)
- Clock Speed: 16 MHz

Relays has Normally Open (NO) and Normally Closed (NC) Contacts rated for voltages:

- 12VDC/15A
- 24VDC/15A
- 125VAC/15A
- 250VAC/10A

Relay's datasheet:

(relays used : RAS-1215 - 1C)

<http://www.sigma-shop.com/information/Relay/RAS.pdf>

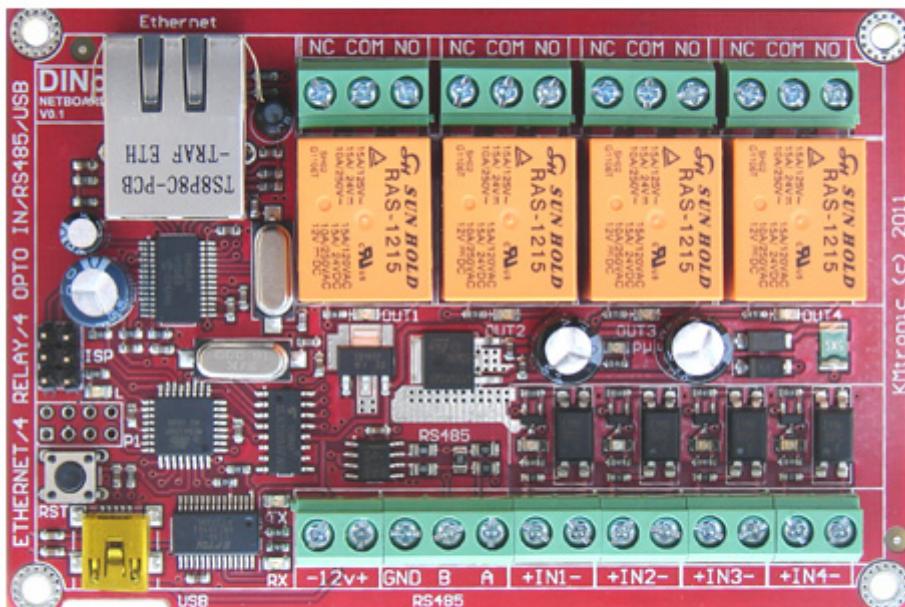
Dimensions:

108 mm / 72 mm / 20 mm

Supply:

12 Volts DC / min 500mA

INTERNET 4 Relay Outputs



USB RS-485 4 Digital Inputs

DI No NETSTARTER Pinout definition:

Relays:

Relay1 - Digital Pin 8
Relay2 - Digital Pin 7
Relay3 - Digital Pin 6
Relay4 - Digital Pin 5

Inputs:

Input 1 - Analog Pin 5
Input 2 - Analog Pin 4
Input 3 - Analog Pin 3
Input 4 - Analog Pin 2

RS485 communication:

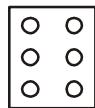
TX/RX control - Digital Pin 3
RX - Digital Pin 0
TX - Digital Pin 1

ENC28J60:

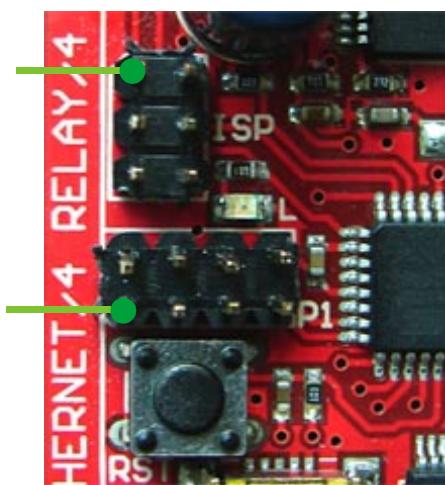
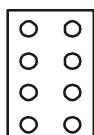
Connection on SPI port
ENC28J60_CONTROL_CS - Digital Pin 10
SPI_MOSI - Digital Pin 11
SPI_MISO - Digital Pin 12
SPI_SCK - Digital Pin 13

Aditional Connectors:

ISP - ICSP header



P1 header

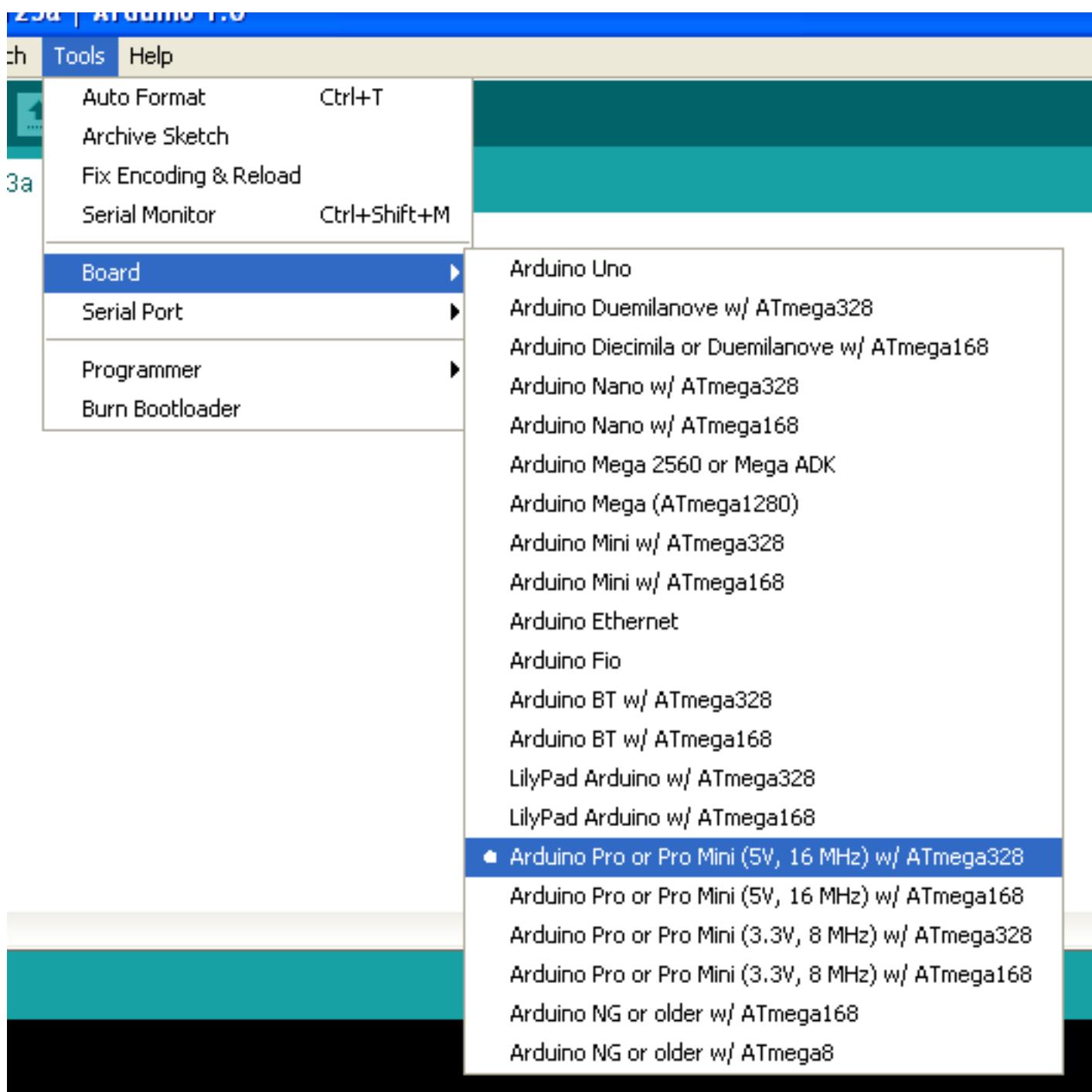


Arduino instalation and setup

Download the Arduino Software from
<http://arduino.cc/hu/Main/Software>

Unzip it to your own folder.

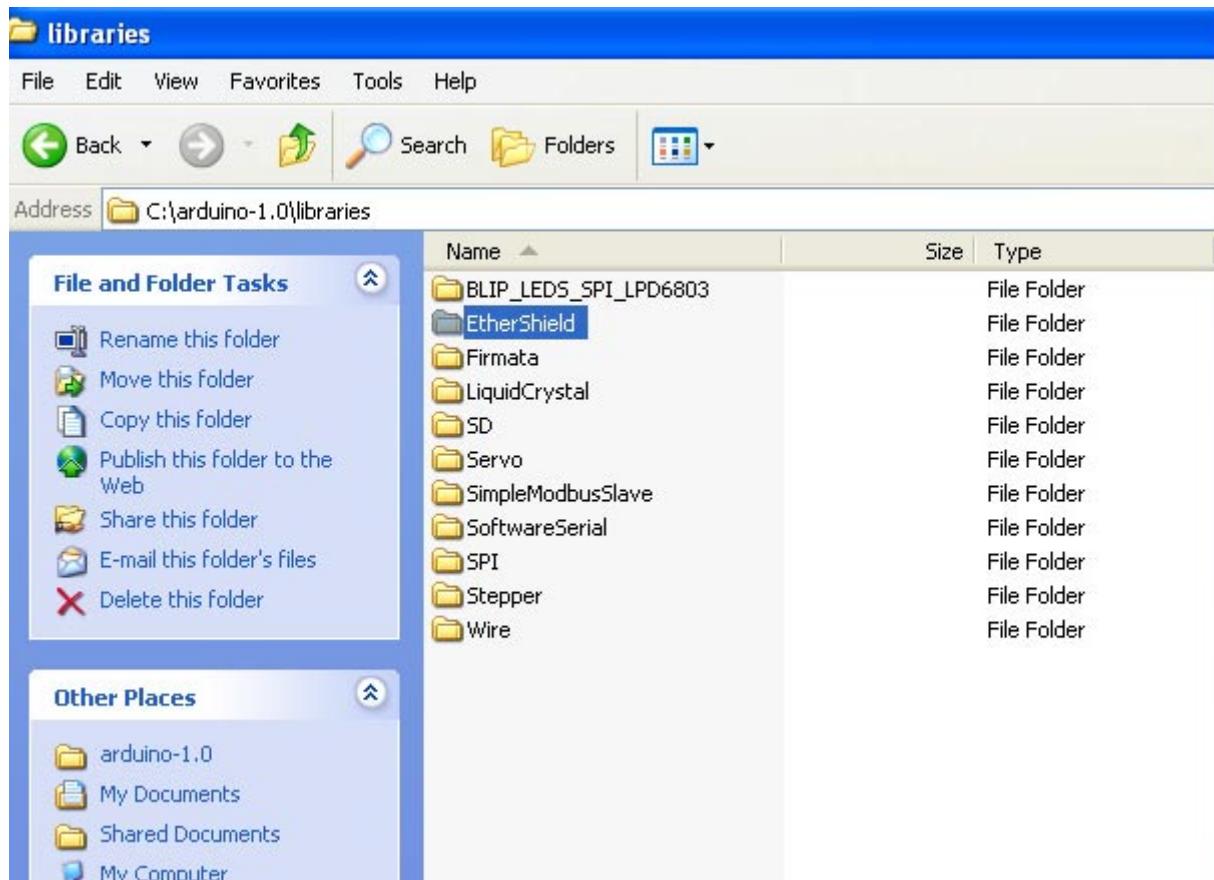
Run arduino.exe, go to Tools>Board and check Arduino Pro ..w/ ATmega328



Internet library instalation

Download and unzip in your Arduino libraries folder "ENC28J60 EtherShield Library's

http://www.kmtronic.com/software/DINo/UDP_Example/EtherShield_1.7.UDP.zip



Software examples:

<http://kmtronic.com/arduino-projects.html>