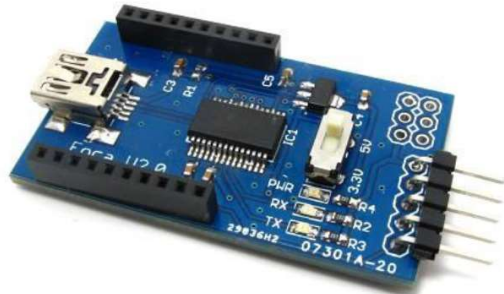


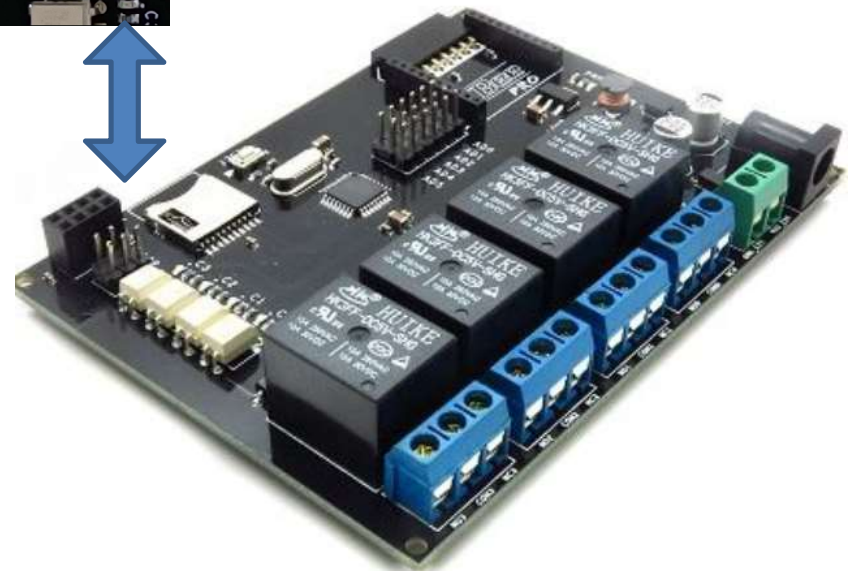
HA Rboard Hardware

Foca Board – USB For
programming arduino and for
serial monitoring

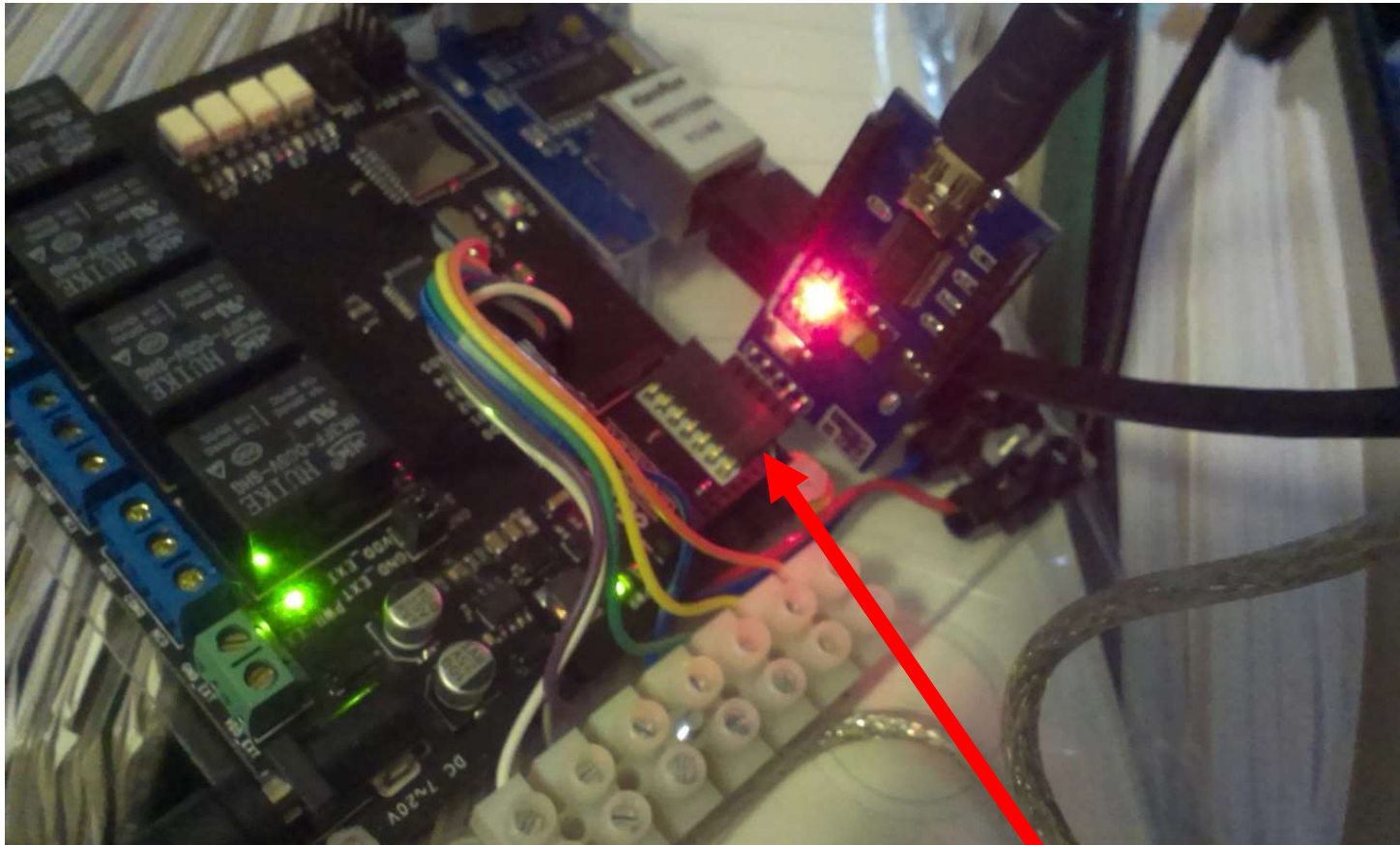


ATMega328p (32Kb / 2K Ram / EEPROM)
12 V Power, 5V/3.3V Board
Digital I/Os - 6 Analog inputs
Not used - XBee, nRF24L01+, ...
I2C / SPI
4 Relays

Ethernet Board – Hanrun
ENC28C60 module



Foca Board connection (programming)



<https://www.itead.cc/wiki/Foca>

Important – line up the pins to outer most side.

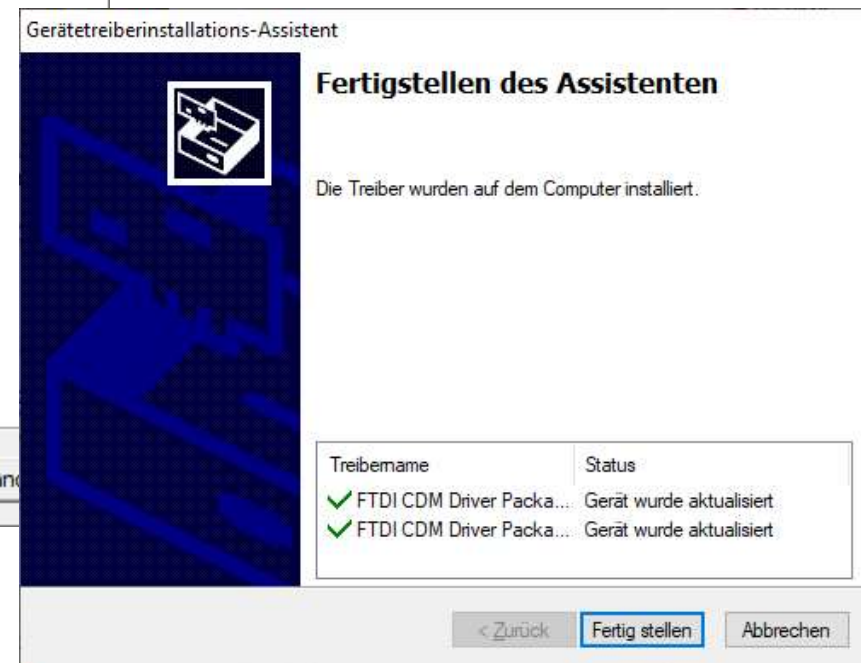
Arduino IDE Settings : ATmega328p, Duemilanove, Programmer: AVRISP mkII

Press reset button immediately after you see the upload... in IDE.

Foca Virtual COM Port Installation

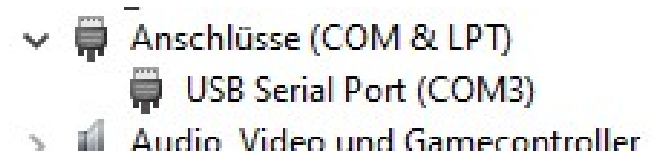


Download the setup executable
Extract the setup.exe
Run as Administrator !!!!!

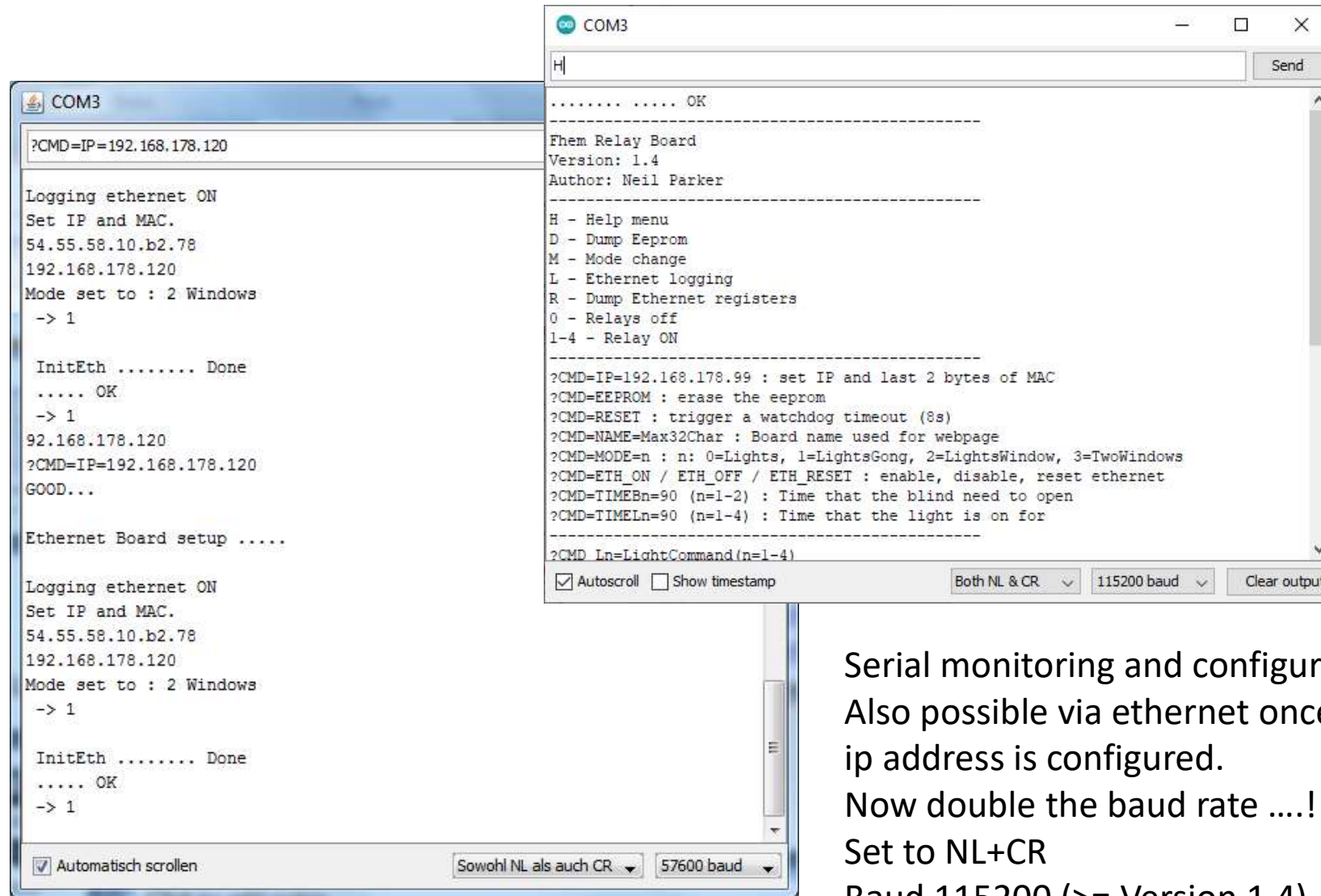


<https://ftdichip.com/drivers/vcp-drivers/>

https://ftdichip.com/wp-content/uploads/2020/08/AN_396-FTDI-Drivers-Installation-Guide-for-Windows-10.pdf



Board Configuration



The image displays two screenshots of a serial terminal window, likely a Minicom or similar application, showing the configuration of a 'Fhem Relay Board'.

Left Screenshot: The terminal shows the execution of the command `?CMD=IP=192.168.178.120`. The output indicates that the IP address has been successfully configured, and the board is now logging Ethernet ON. The user is prompted to press '1' to continue.

Right Screenshot: This screenshot shows the main menu of the board, which lists various commands and their functions. The user has entered the command `?CMD=IP=192.168.178.99` to set the IP address and the last 2 bytes of the MAC address. The board also displays the current IP address (192.168.178.120) and the MAC address (54.55.58.10.b2.78).

Board Configuration Details:

- Board Name: Fhem Relay Board
- Version: 1.4
- Author: Neil Parker
- Commands and Functions:
 - H - Help menu
 - D - Dump Eeprom
 - M - Mode change
 - L - Ethernet logging
 - R - Dump Ethernet registers
 - 0 - Relays off
 - 1-4 - Relay ON
- Commands and Functions:
 - ?CMD=IP=192.168.178.99 : set IP and last 2 bytes of MAC
 - ?CMD=EEPROM : erase the eeprom
 - ?CMD=RESET : trigger a watchdog timeout (8s)
 - ?CMD=NAME=Max32Char : Board name used for webpage
 - ?CMD=MODE=n : n: 0=Lights, 1=LightsGong, 2=LightsWindow, 3=TwoWindows
 - ?CMD=ETH_ON / ETH_OFF / ETH_RESET : enable, disable, reset ethernet
 - ?CMD=TIMEBn=90 (n=1-2) : Time that the blind need to open
 - ?CMD=TIMELn=90 (n=1-4) : Time that the light is on for

Terminal Settings:

- Autoscroll: ☒ (Automatisch scrolle)
- Show timestamp: ☐
- Both NL & CR: ☒ (Sowohl NL als auch CR)
- Baud rate: 115200 baud (57600 baud)
- Clear output:

Serial monitoring and configuration
Also possible via ethernet once the
ip address is configured.
Now double the baud rate!
Set to NL+CR
Baud 115200 (>= Version 1.4)

Board Status and Configuration via IP



Board Configuration via IP (Timer)

- <http://192.168.178.106/help>
- Light timer off
http:// 192.168.178.106/?CMD=TIMEL4=0
- Light timer 90s
http:// 192.168.178.106/?CMD=TIMEL4=90
- Press and hold the light switch to switch on light without a timer

Board Status last error.

1	WaitUntilPhyFinished	15000us SPI MISTAT_BUSY timeout
2	sendSPI	40000 cycles timeout
3	enc28j60PacketReceive	packet length max 1000 exceeded
4	enc28j60PacketReceive	CRC
5	enc28j60PacketReceive	uint8_t tmpEIR = enc28j60Read(EIR); if((tmpEIR & (EIR_RXERIF)) (enc28j60Read(ECON1) & (ECON1_RXRST)))
6	enc28j60PacketReceive	if((tmpEIR & (EIR_TXERIF)) (enc28j60Read(ECON1) & (ECON1_TXRST)))
7	enc28j60PacketSend	timeout waiting for last transmission to complete (1mS)
10	linkup missing	No cable link
11	Chip configuration changed	ENC chip configuration has changed
12	watchdog	No received TCP command for 10s

STATE_B2=255 ([Open.](#)) ([Close.](#)) ([Force!](#)) ([Stop](#))
STATE_I1=OFF Count=0
STATE_I2=OFF Count=0
STATE_I3=OFF Count=0
STATE_I4=OFF Count=0
STATE_I5=OFF Count=0
STATE_I6=ONHOLD Count=1

ErrorCount=10, LastError=12