

# SKAARHOJ

Installation and Operation Manual



February 2017

Welcome to the wonderful world of SKAARHOJ products

Please take notice - this manual is for non UniSketch based controllers. See [www.skaarhoj.com/support/manual](http://www.skaarhoj.com/support/manual) to find the manual for UniSketch.

This instruction manual will provide you with all the information you'll need to get your SKAARHOJ product up and running. If your ATEM switcher still has the default IP address your controller does not need further configuration. If you want to change IP address have a look at the next pages to learn how. All it takes is a few steps of configuration and soon you'll be ready to explore the cool features of your SKAARHOJ design.

We recommend you always check [www.skaarhoj.com/support/manual](http://www.skaarhoj.com/support/manual) for the latest manual and which ATEM Software we currently support.

/The SKAARHOJ Team

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# Getting Started

Blackmagicdesign



**SKAARHOJ**

## Introducing a Blackmagic, Arduino and SKAARHOJ Marriage

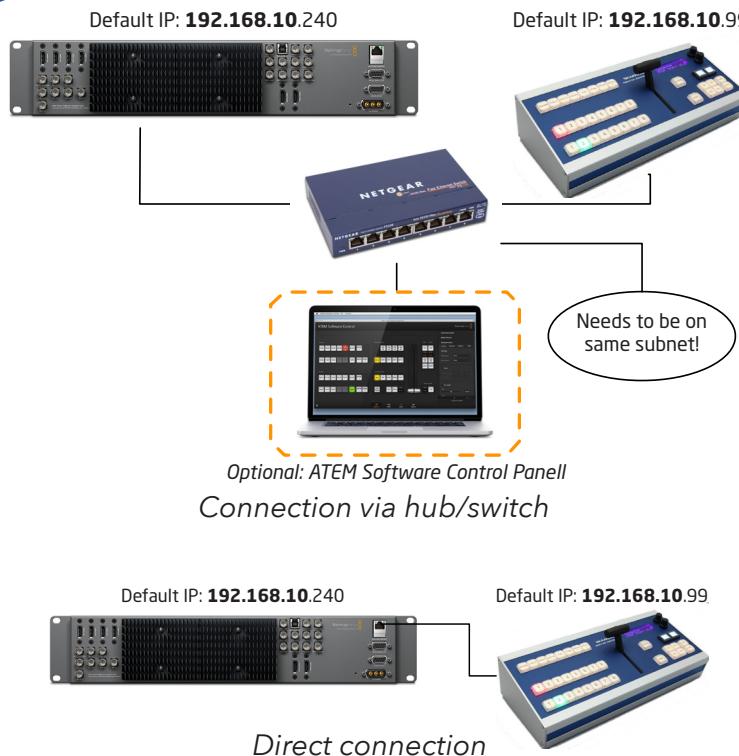
### A Missing Link

When we first laid eye on the ATEM switchers from BMD we were in love! And the Broadcast Panels - oh boy, don't get us started. However we were missing a happy mean between the software control Panel and the ATEM 1M/E Broadcast Panel. The Software Control Panel is a great tool, but there's only so much you can do with a click of a mouse. Sometimes it's just nice to have that real button feel with tactile feedback and being able to do simultaneous actions with the push of a single button. Furthermore there is a great advantage in having system control without the need of a PC/MAC.

We didn't see the Broadcast Panel as an option for a budget production, and the size itself can be a disadvantage for small setups.

SKAARHOJ was born to fill that void. That IS a long story short, and the single most important thing for a happy ending to that story, is the Arduino!

# Getting Started



## Connecting Hardware Interface and ATEM switcher

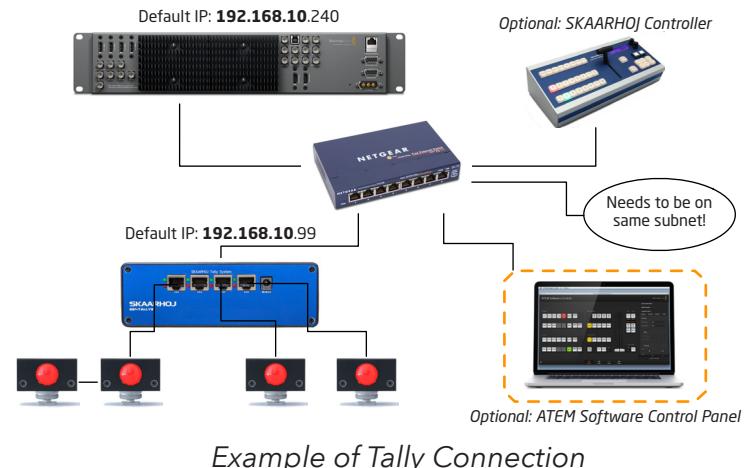
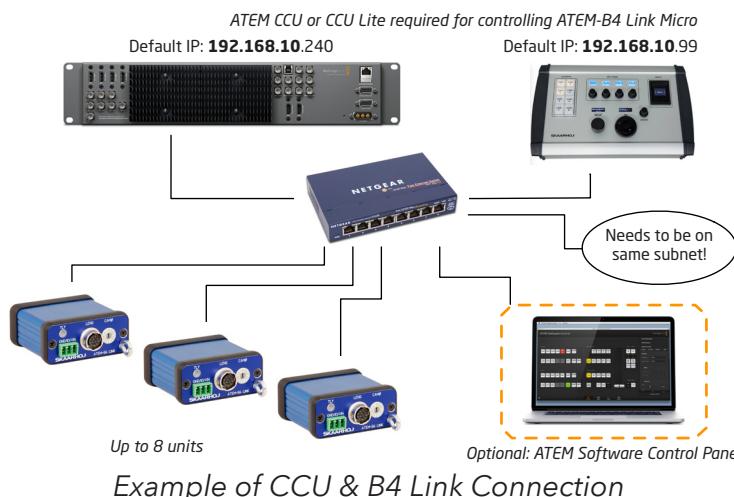
### Connecting your SKAARHOJ controller

The SKAARHOJ controller needs a network connection to the ATEM switcher and other peripherals you might want to control. This is done with a cable directly to the ATEM, or via a network hub or switch that connects the devices.

By default (unless otherwise stated or agreed upon) the IP address for the SKAARHOJ unit is always set to **192.168.10.99** and **192.168.10.240** for the ATEM switchers in all SKAARHOJ libraries.

Remember that the IP address for all the devices you wish to communicate with should be in the same subnet (192.168.10.\*).

You do **NOT** need a PC/Mac running the ATEM Software control panel for using the SKAARHOJ devices - they are independent units. But you can, and the changes made in either the SKAARHOJ controller or in the control panel will correlate with the other unit.



# Getting Started

## Identifying the Microprocessor in your Controller

Use these pictures to identify the type of microprocessor in your product.



Arduino Ethernet - FTDI Cable



Arduino Mega - USB Type B

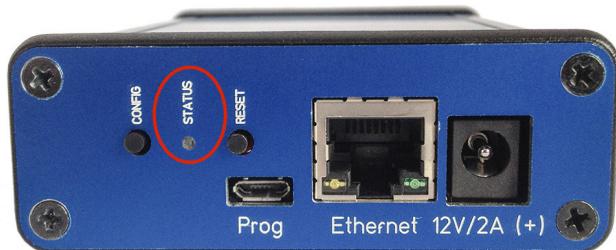


EtherMega - Micro USB



SKAARDUINO - Micro USB

# Getting Started



Arduino Mega or EtherMega

## Confirm Connection

Use the status LED to confirm the SKAARHOJ unit is connecting to the ATEM switcher and other peripherals.

### Controllers with Arduino Mega or EtherMega

The status LED will light green when connection to the ATEM is established.  
The status LED will light yellow if no connection is established during boot up.  
The status LED will light red if it loses connection while working.  
The status LED will blink in red, when in configuration mode.

### Controllers with SKAARDUINO

The status LED will light green when connection to the ATEM is established.  
The status LED will light yellow if no connection is established during boot up.  
The status LED will light red if it loses connection while working.  
The status LED will blink in blue, when in configuration mode.



SKAARDUINO

# Getting Started

The screenshot shows a web browser window titled "SKAARHOJ Device Config" with the URL "192.168.10.99". The interface includes the following sections:

- SKAARHOJ**
- SKAARHOJ Device IP Address:** Input field containing "192.168.10.99".
- ATEM Switcher IP Address:** Input field containing "192.168.10.240".
- Set functions for 2 top buttons:**

Left Button:	Right Button:
ATEM1M	ATEM1M
Default	Default
- Set functions for 2 side buttons:**

Top Button:	Bottom Button:
ATEM1M	ATEM1M
Default	Default
- Set functions for 6 top row buttons:**

Button 1:	Button 2:	Button 3:	Button 4:	Button 5:	Button 6:
ATEM1M	ATEM1M	ATEM1M	ATEM1M	ATEM1M	ATEM1M
Default	Default	Default	Default	Default	Default
- Set functions for 6 bottom row buttons:**

Button 1:	Button 2:	Button 3:	Button 4:	Button 5:	Button 6:
ATEM1M	ATEM1M	ATEM1M	ATEM1M	ATEM1M	ATEM1M
Default	Default	Default	Default	Default	Default
- Slider:** Input field containing "ATEM1M".

Example of a web interface

## Web Interface

For controllers with the Arduino Mega/EtherMega and SKAARDUINO inside it is possible to configure the controller in a web interface. The web interface is generated by the controller itself.

By accessing the web interface you can set IP address for the SKAARHOJ device and the IP address for the ATEM Switcher or other peripherals the device is configured to operate.

Per default our controllers will be shipped with the following settings:

192.168.10.99 SKAARHOJ Controller IP address

192.168.10.240 ATEM Switcher IP address (default ATEM settings)

255.255.255.0 Subnetmask

The level of settings in the web interface varies from controller to controller.

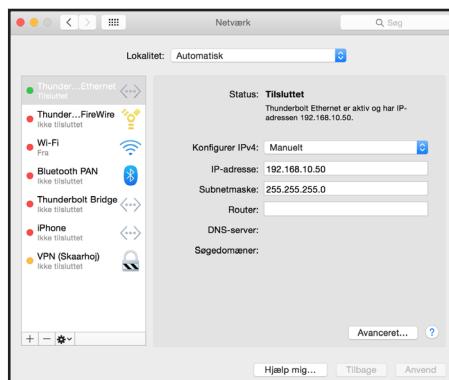
The web interface IP is **always** set to <http://192.168.10.99> even if you change the "SKAARHOJ Device IP Address" in the web interface.

See the next two pages for instructions in accessing the web interface.

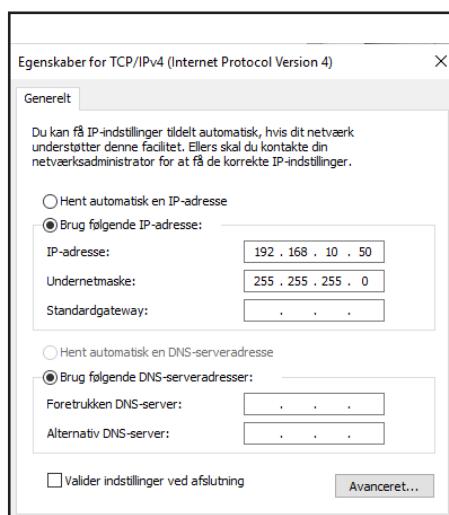
# Getting Started



*Direct ethernet connection to PC or Mac*



*Manual IP settings for Mac*



*Manual IP settings for PC*

## Accessing web interface for models with Arduino Mega or EtherMega

### Set manual IP address for PC/Mac

We recommend connecting your SKAARHOJ controller directly to your PC/Mac with a ethernet cable in order to access the web interface.

Turn off your wifi and set your IP manually:

192.168.10.50 PC/Mac IP address

255.255.255.0 Netmask

192.168.10.1 Gateway/Router IP address if necessary

### Enter configuration mode

- **Step 1** - Connect SKAARHOJ device to PC/Mac with ethernet cable and power up the unit. Let it boot up.
- **Step 2** - Press and hold the config button
- **Step 3** - While holding down the config button press reset button
- **Step 4** - When status LED blinks red release the config button
- **Step 5** - Access web interface by entering **http://192.168.10.99/** in your browser

### Note about IP address for Configuration Mode

The web interface IP is **always** set to http://192.168.10.99 even if you change the "SKAARHOJ Device IP Address" in the web interface.

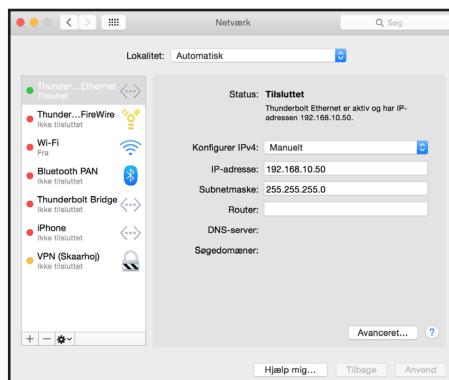
### Access to web interface if SKAARHOJ controller is connected via network router

We always recommend a direct ethernet connection with manual IP in order to gain access to the web interface. But depending on your network router settings you might be able to connect to the web interface without setting a manual IP address on your PC/Mac.

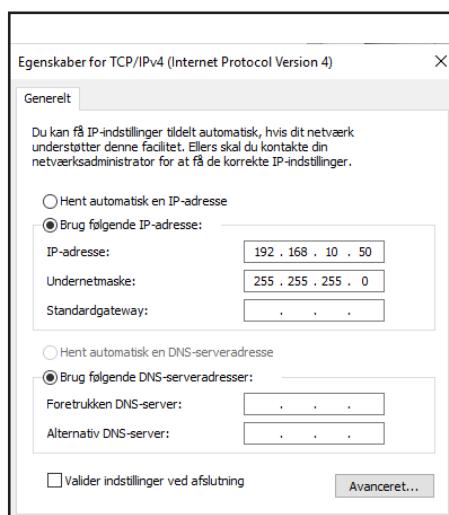
# Getting Started



*Direct ethernet connection to PC or Mac*



*Manual IP settings for Mac*



*Manual IP settings for PC*

## Accessing web interface for models with SKAARDUINO

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Turn off your wifi and set your IP manually:

192.168.10.50 PC/Mac IP address

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192.168.10.1 Gateway/Router IP address if necessary

### Enter configuration mode

- **Step 1** - Connect SKAARHOJ device to PC/Mac with ethernet cable and power up the unit. Let it boot up.
- **Step 2** - Press and hold the config button until the status LED blinks blue
- **Step 3** - Access web interface by entering **http://192.168.10.99/** in your browser

### Note about IP address for Configuration Mode

The web interface IP is **always** set to http://192.168.10.99 even if you change the "SKAARHOJ Device IP Address" in the web interface.

### Access to web interface if SKAARHOJ controller is connected via network router

We always recommend a direct ethernet connection with manual IP in order to gain access to the web interface. But depending on your network router settings you might be able to connect to the web interface without setting a manual IP address on your PC/Mac.

## Uploading New Firmware

### For controllers with Arduino Mega/EtherMega

If you have a controller with the Arduino Mega/EtherMega you can use our Firmware Updater Application to upgrade the firmware on your device. Please go to [www.skaarhoj.com/support/firmware-updater/](http://www.skaarhoj.com/support/firmware-updater/) for instructions and for firmware files. If you can't find a .hex file (firmware file) for your particular model please contact us.

### For controllers with Arduino Ethernet

If you have a controller with the Arduino Ethernet or if you need to upload firmware via the Arduino IDE please follow the instructions on the next pages.

## Installing Arduino IDE

### Getting Started with Arduino

The Arduino is the microcontroller (MCU) we use in our products. It interprets the push of the buttons and transforms it into commands to the equipment connected. This is done via the ATEM Library for Arduino developed by SKAARHOJ.

If you want to change/update the software on your controller besides from what is possible in the webinterface. Or you need to install a sketch (firmware update) you have received from us, you need the Arduino **I**ntegrated **D**evelopment **E**nvironment software installed.

### Arduino Software

Download latest version at <http://arduino.cc/en/Main/Software>

Please see the Getting Started with Arduino page at  
<http://arduino.cc/en/Guide/HomePage>

They offer a great step-by-step guide for installing on Mac, PC and Linux.

### Programming Drivers

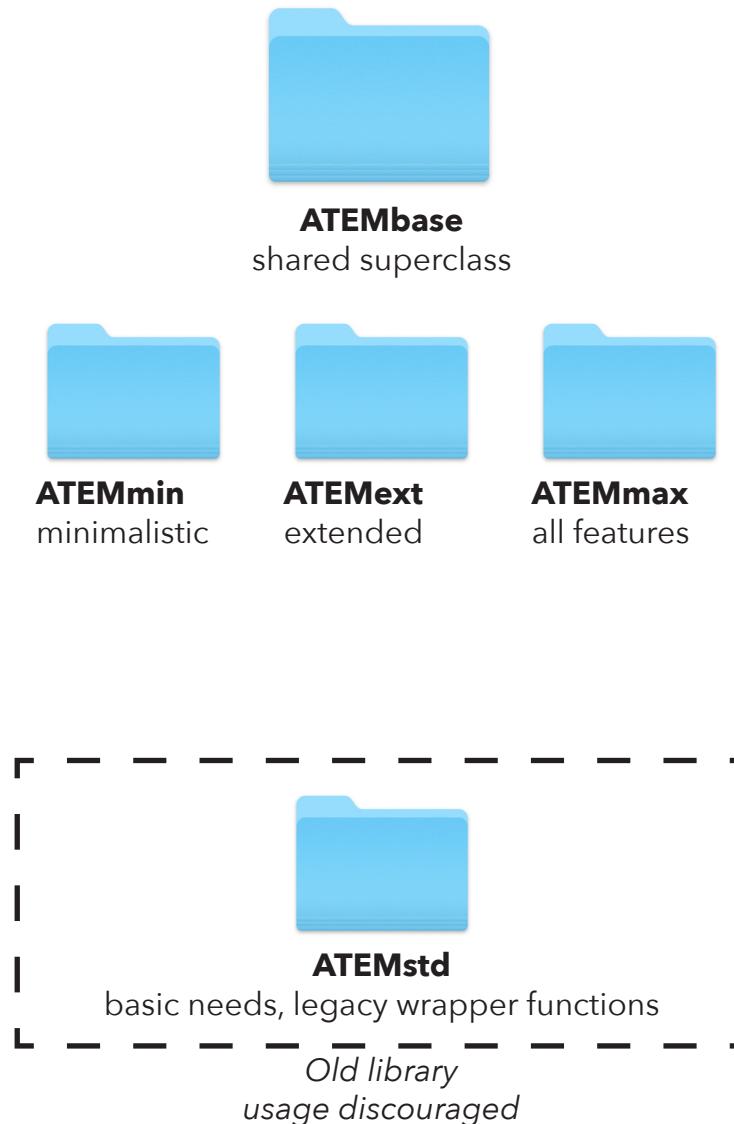
Hardware from SKAARHOJ with **Arduino Mega/EtherMega** models do *not* need additional drivers. Hardware from SKAARHOJ with **Arduino Ethernet**, need the FTDI chip driver installed.

### FTDI Programming Drivers (Arduino Ethernet only)

Download FTDI programming drivers at <http://www.ftdichip.com/Drivers/VCP.htm>  
Choose version that fits your operating system (reboot system after install).

Important! For the programming cable remember the black wire against the BLK pin.

# Installing Libraries



## Installing Libraries

Once the Arduino IDE have been successfully installed, download the ATEM/Arduino library. Various versions of the library exist in order to accomodate different needs in terms of flash and dynamic memory usage on the Arduino boards.

The **ATEMbase** is a main library needed for the following versions:

**ATEMmin**: Lighweight version of the library with the most common features

**ATEMext**: A extended version

**ATEMmax**: All features included

The library just named "ATEM" is the *old* library and usage of this is discouraged - use **ATEMstd** instead.

Please check out the example sketches distributed with the libraries for examples of usage.

The libraries are hosted at GitHub together with other system files that are required for a controller sketch to compile. The GitHub repository are continous updated.

## Download Libraries

All libraries and system files can be downloaded in a single .zip file

<https://github.com/kasperskaarhoj/SKAARHOJ-Open-Engineering/blob/master/ArduinoLibs.zip?raw=true>

The following instructions will help you to (re)upload/modify the software for your particular model.

# Getting Started

## Special Note for Ethernet Shield V2.0

### Replace library

For controllers shipped from July 2015 with the Arduino Mega (not EtherMega) the Ethernet Shield have been upgraded to version 2.0. Internal disputes at the Arduino organization forced us to perform this upgrade.

You can detect if your controller have the Ethernet Shield V2.0 either by "V2" being engraved on the enclosure at the ethernet plug, a note on your invoice or both.

To compile a sketch with the original Arduino IDE, the original Ethernet Shield library needs to be replaced.

Download the new library at:

[https://github.com/Wiznet/WIZ\\_Ethernet\\_Library](https://github.com/Wiznet/WIZ_Ethernet_Library)

For MAC:

- Go to Applications/Arduino.app
- Right-click->Show Package Contents
- Contents->Java->libraries->Ethernet
- Copy and replace folder "src" from Arduino IDE 1.5.x->Ethernet from the zip

For Windows:

- Go to Local Disk (C:) -> Program Files (x86) -> Arduino -> libraries -> Ethernet
- Copy and replace folder "src" from Arduino IDE 1.5.x->Ethernet from the zip

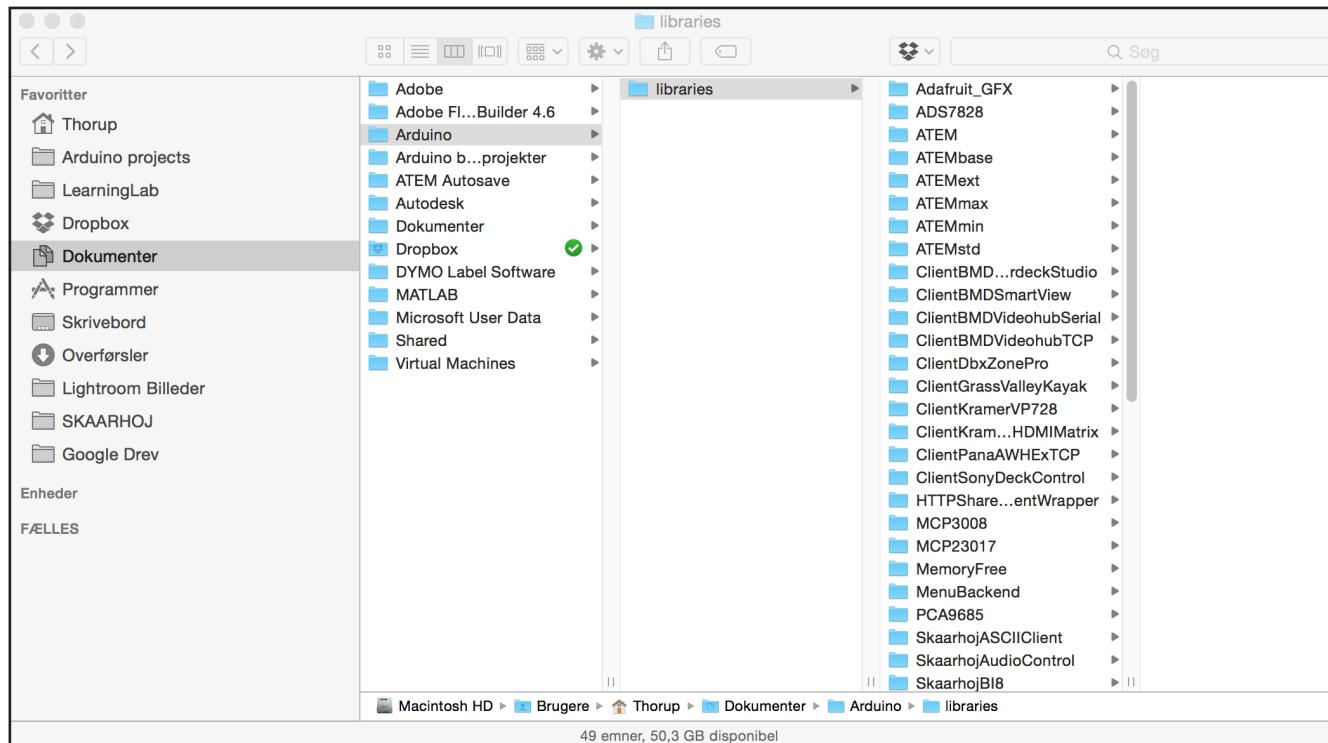
# Getting Started

## Installing Libraries - Mac

- **Step 1** - Install Arduino IDE
- **Step 2** - Download ArduinoLibs.zip
- **Step 3** - Move all the folders to /Users/Your Username/Arduino/libraries

It is important you maintain the folder structure

You should now be able to see all the files in the Arduino.app (restart app if not) in:  
File -> Examples -> libraries



Screenshot from OS X 10.10.1

# Getting Started

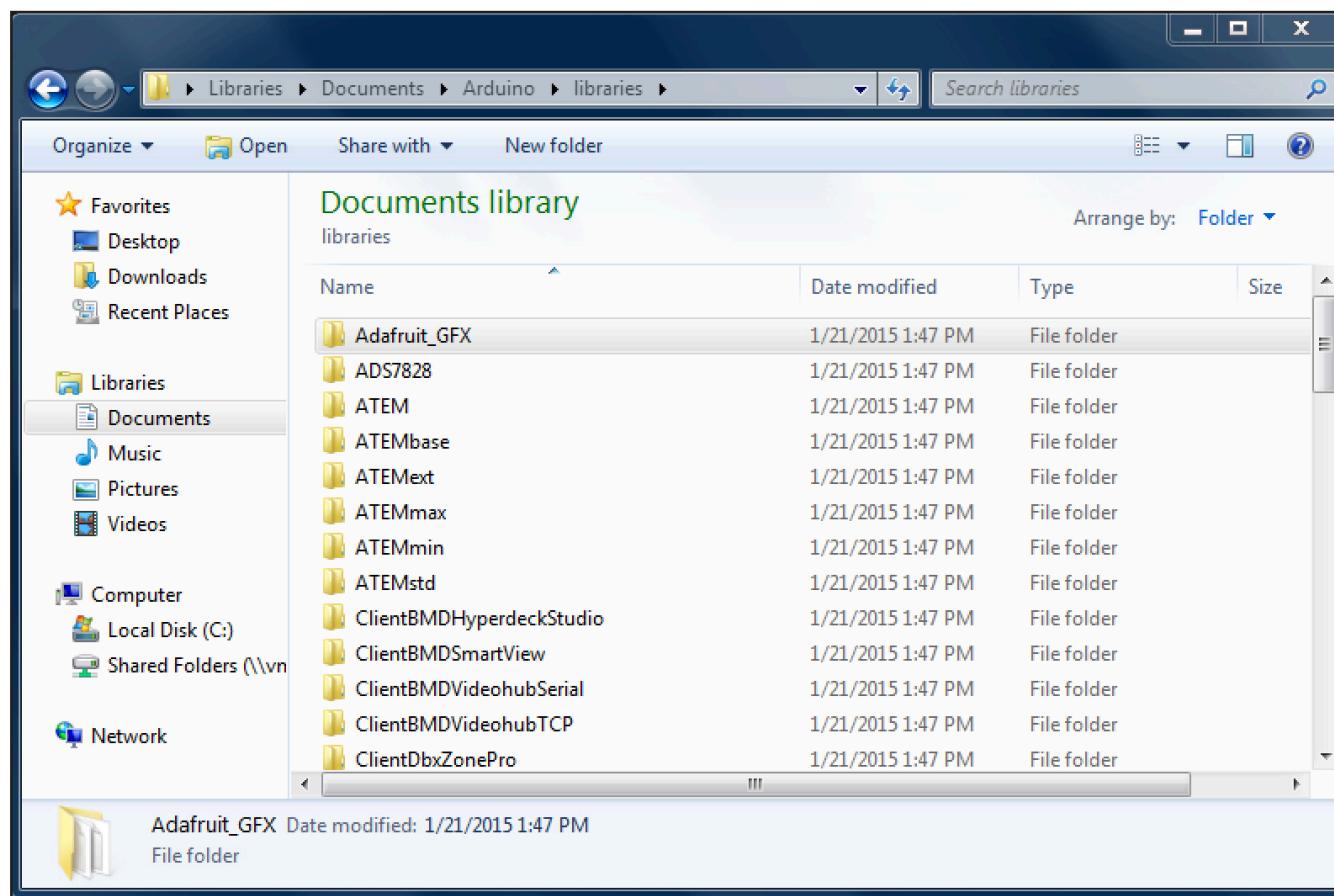
## Installing Libraries - PC

- **Step 1** - Install Arduino IDE
- **Step 2** - Download ArduinoLibs.zip
- **Step 3** - Move all the folders to:  
C:\Users\Your Username\Documents\Arduino\libraries

Given that your operating system is installed on C:

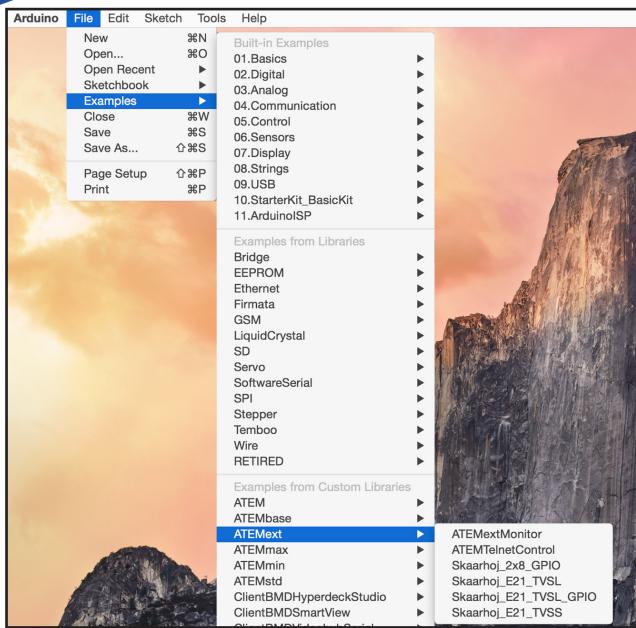
It is important you maintain the folder structure

You should now be able to see all the files in the Arduino.app (restart app if not) in:  
File -> Examples -> libraries



Screenshot from Windows 7 Professional

# Getting Started



Location of example sketches

```

Skaarhoj_E21TVS | Arduino 1.6.7

1 //*****
2 * Basis control for the SKAARHOJ E21TVS series devices
3 * This example is programmed for ATEM TVS versions
4 * The button rows are assumed to be configured as 1-2-3-4-5-6 (PGM) / 1-2-3-4-5-6 (PRV) /
5 *
6 * This example also uses several custom libraries which you must install first.
7 * Search for "#include" in this file to find the libraries. Then download the libraries fr
8 *
9 * Works with ethernet-enabled arduino devices (Arduino Ethernet or a model with Ethernet s
10 * Make sure to configure IP and addresses first using the sketch "ConfigEthernetAddresses"
11 *
12 * - kasper
13 */
14
15
16
17 // Including libraries:
18 #include <SPI.h> // needed for Arduino versions later than 0018
19 #include <Ethernet.h>
20 #include <EEPROM.h> // For storing IP numbers
21 #include <SkaarhojPgmSpace.h>
22
23 // Include ATEM library and make an instance:
24 #include <ATEMbase.h>
25 #include <ATEMstd.h>
26 ATEMstd AtemSwitcher;

```

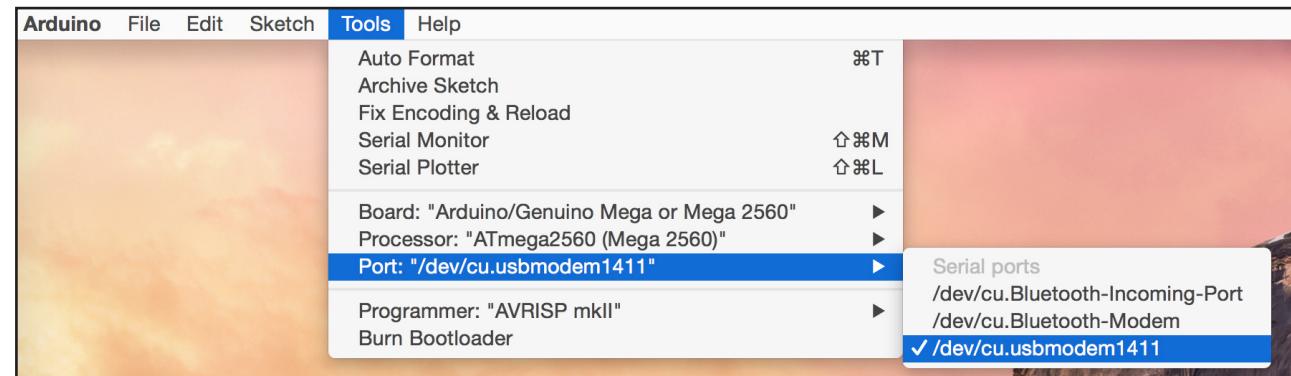
Example sketch

## Upload a Sketch - Mac

With the Arduino IDE installed and the ATEM Library downloaded and placed correctly you are ready to upload a sketch. A sketch is basically a program you upload to the Arduino microcontroller. Various standard sketches can be found in the ATEMmin, ATEMext and ATEMmax. If you have received a sketch from us, it can be placed anywhere.

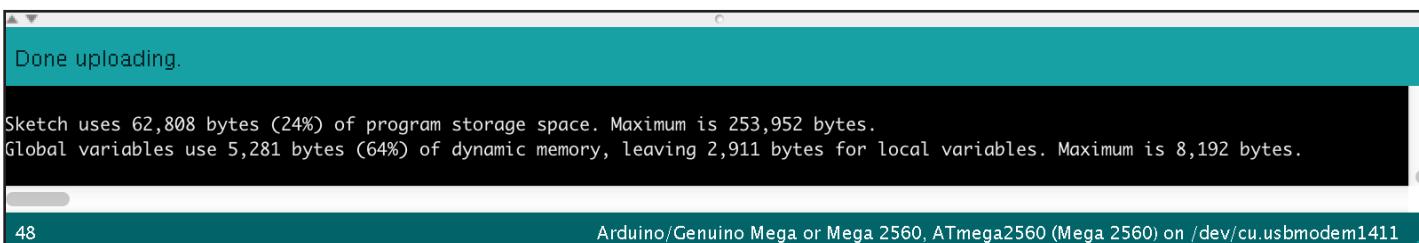
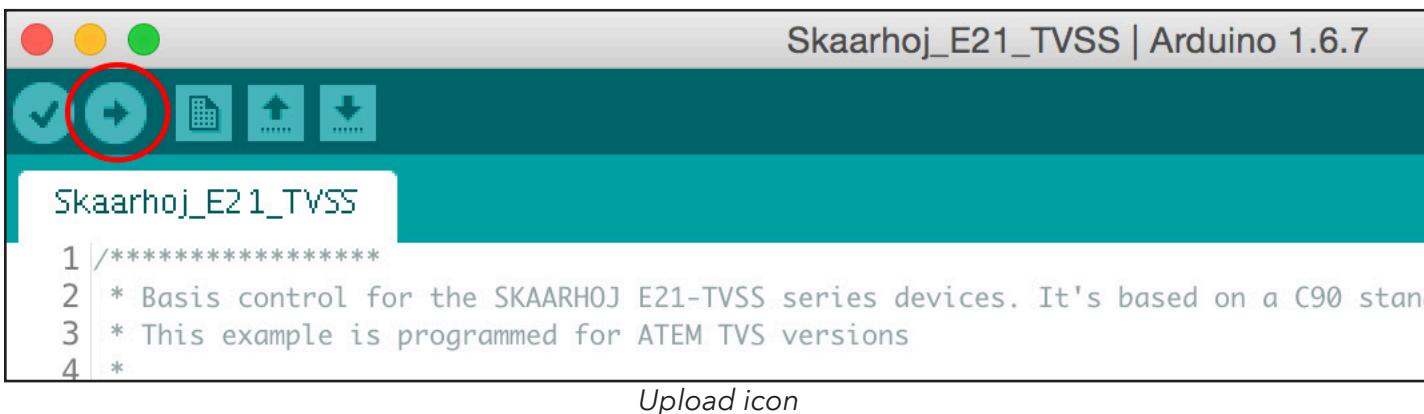
- **Step 1** - Open the Arduino IDE
- **Step 2** - Open sketch you have received from us, or find example sketches in File -> Examples -> ATEMmin / ATEMext / ATEMmax
- **Step 3** - Connect your SKAARHOJ device via the USB or FTDI programming cable
- **Step 4** - Set your board in Tools -> Board to either **Arduino Ethernet** or **Arduino/Genuino Mega or 2560** depending on model
- **Step 5** - Select the right port in Tools -> Port
- **Step 6** - Upload by pressing the upload icon

The sketch will first be compiled and then uploaded. You might be prompted to select the right "Serial Port".



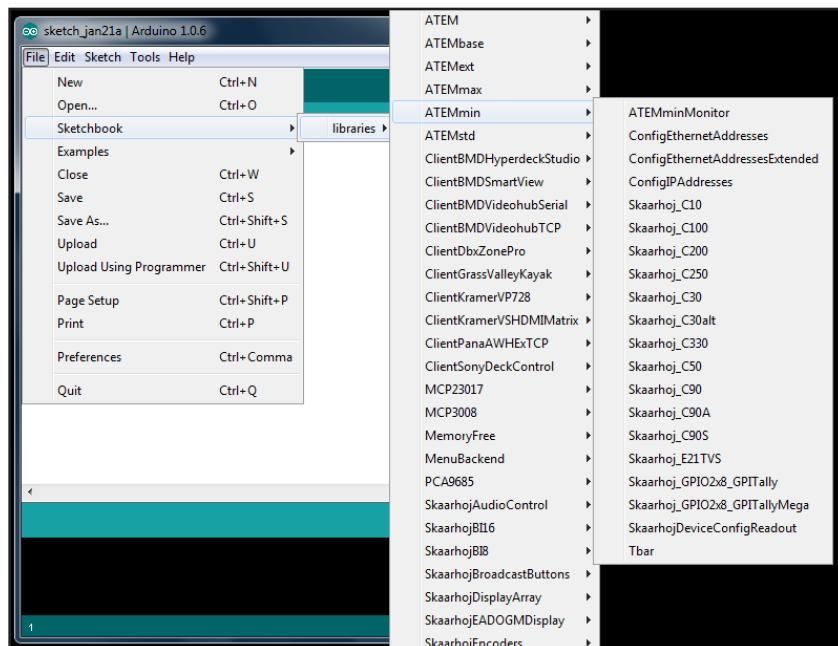
Board, processor and port selection for the EtherMega

## Upload a Sketch - Mac



When the sketch have been properly uploaded it will report "Done uploading."

# Getting Started



## Upload a Sketch - PC

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- **Step 5** - Select the right port in Tools -> Port
- **Step 6** - Upload by pressing the upload icon

The sketch will first be compiled and then uploaded. You might be prompted to select the right "Serial Port".

Setting the right serial port for controllers with Arduino Ethernet for windows, might involve further actions. See the next pages for installing drivers and setting the right port.

# Driver Installation Arduino Ethernet

## FTDI Programming Drivers (Arduino Ethernet only)

If you have a product with the Arduino Ethernet and you want to upload a new sketch, or if you want to change the IP address, you first need to install the FTDI programming drivers.

### Download Drivers and Install

Download FTDI programming drivers at <http://www.ftdichip.com/Drivers/VCP.htm>  
Choose version that fits your operating system (reboot system after install).

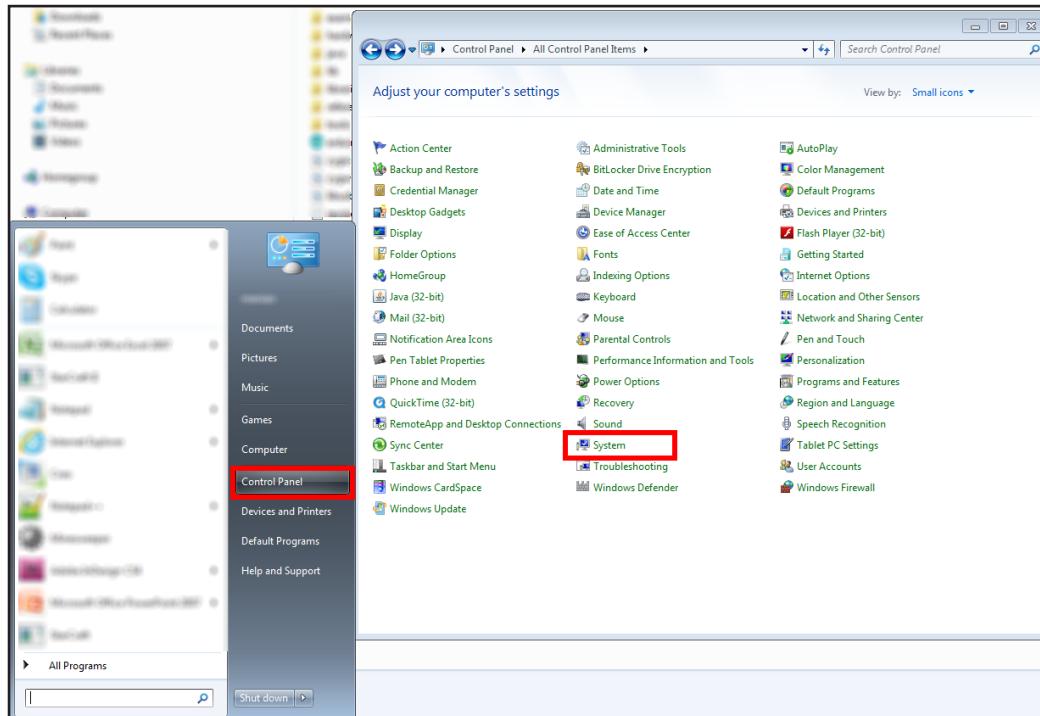
Important! For the programming cable remember the black wire against the BLK pin.

Mac users can now upload a sketch. See "Changing IP Address on the Arduino Ethernet" for instructions.

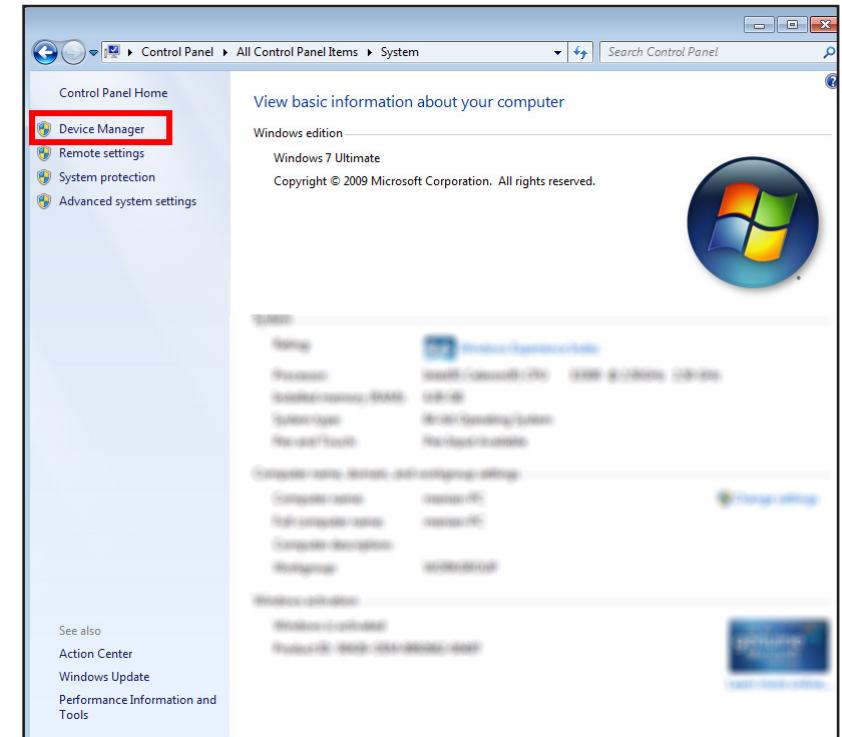
PC users should follow the next instructions in order to finish the driver installation.

# Upload a Sketch - PC. Driver installation for Arduino Ethernet/FTDI Programming cable.

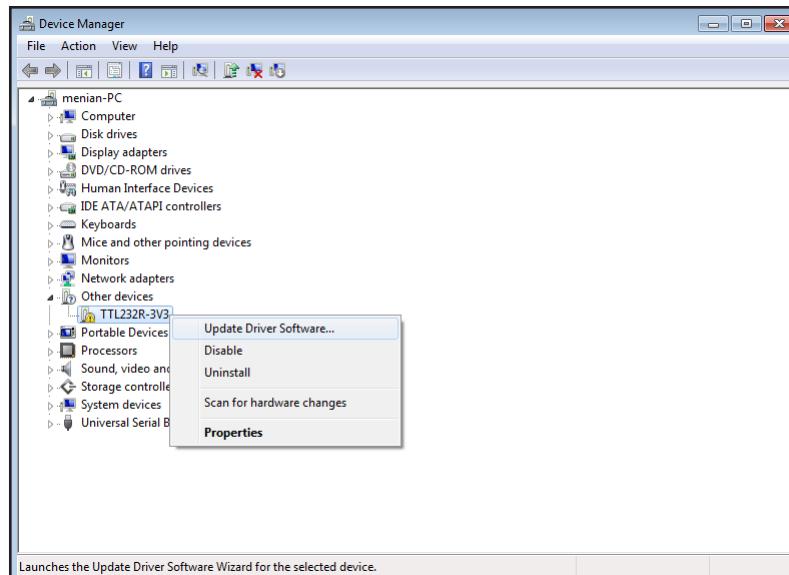
This will guide you thorough installing Arduino Ethernet on a Windows machine.



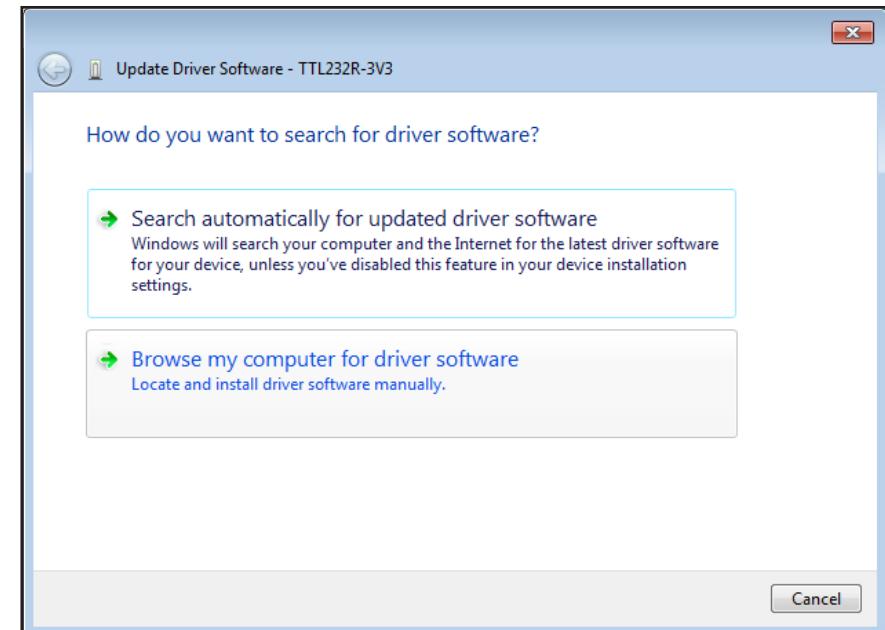
- Step 1** Connect the Arduino board to the computer via USB. Windows will begin driver installation but it will fail. Click on the Start Menu and open up the Control Panel. Click on the "System" icon. It will bring the system settings.



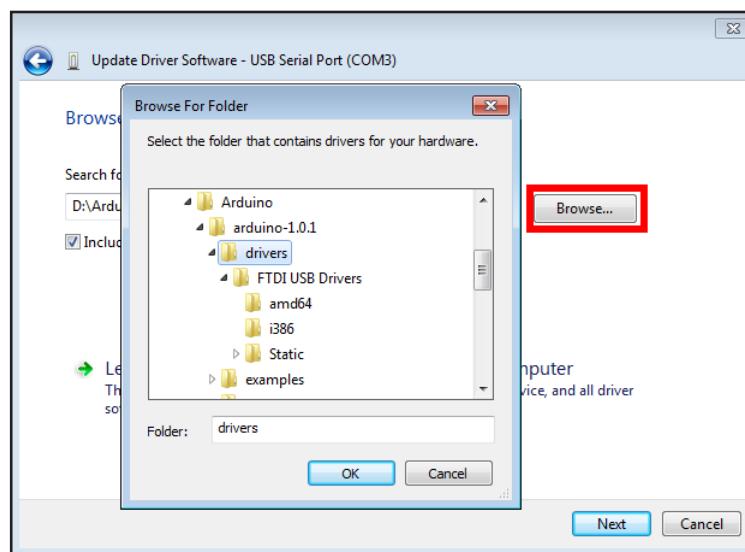
- Step 2** Click on the Device Manager.



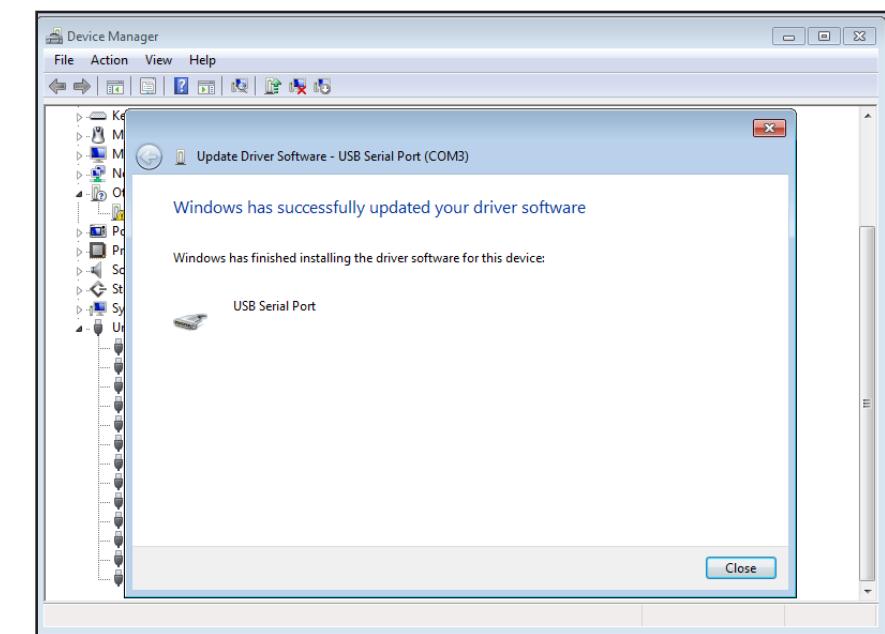
- **Step 3** You should see "Other devices" and if it is not opened, click on the little triangle to the left of it to expand it. Your board should be listed there



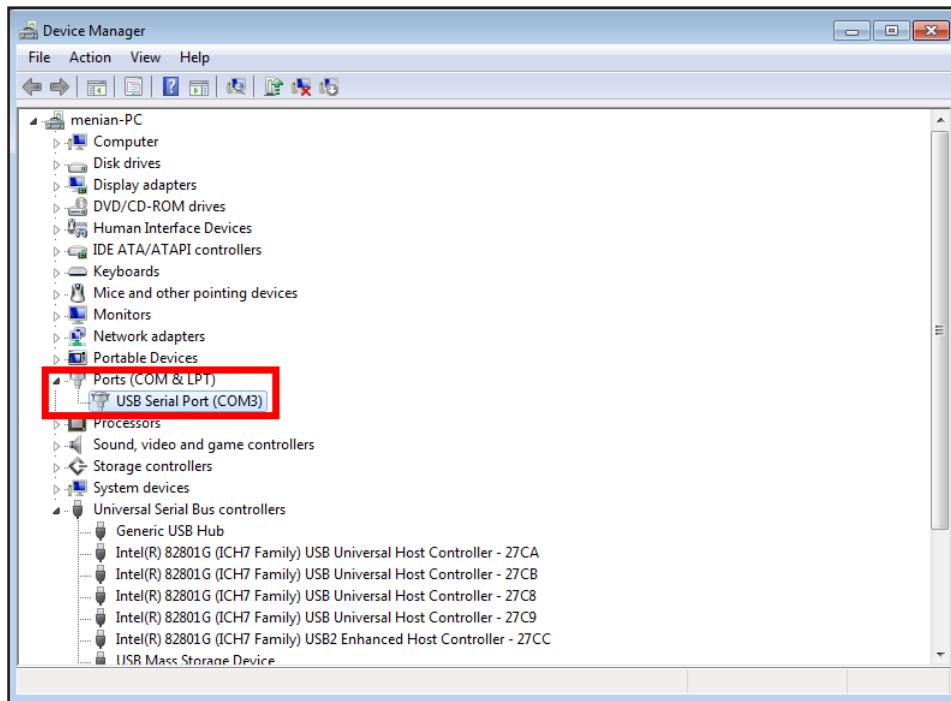
- **Step 4** Right-click on the name of the board and choose "Update Driver Software" option. Choose "Browse my computer for driver software" option.



- **Step 5** Browse to the directory of Arduino and select the "drivers" folder. Click "OK" and "Next"



- **Step 6** Windows will install the drivers. Click "OK" and "Next"

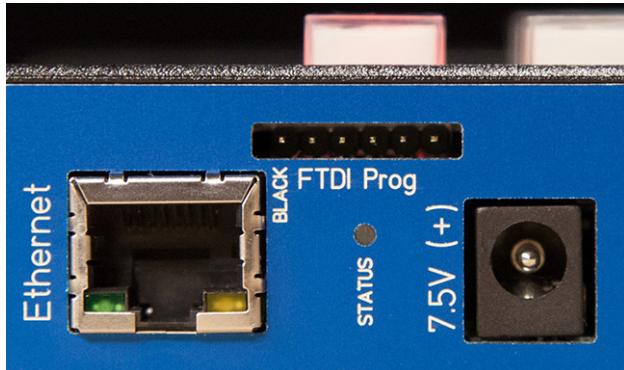


- **Step 7** The Device Manager should have USB Serial Port (COM3) under Ports (COM & LPT).

## Upload a Sketch - PC

The drivers should now be installed and you can upload a sketch to the Arduino Ethernet.

# Getting Started



*Notice the BLACK marking*



*The black wire goes against the black marking*

## Changing IP address on the Arduino Ethernet

If you have a product with the Arduino Ethernet you can change the IP addresses by uploading a sketch that saves the IP addresses in the EEPROM (internal memory). This requires you have successfully installed the Arduino IDE AND installed the ATEM/Arduino libraries as described on the previous pages.

- **Step 1** - Open the Arduino IDE
- **Step 2** - Find the sketch 'ConfigIPAddresses' in File -> Examples -> ATEM -> ConfigIPAddresses
- **Step 3** - Connect your SKAARHOJ device via the USB/FTDI programming cable
- **Step 4** - Change the sketch with the IP addresses wanted
- **Step 5** - Set your board in Tools -> Board to **Arduino Ethernet**
- **Step 6** - Upload by pressing the upload icon

With the IP addresses changed, you need to **upload the sketch for your particular controller**.

The image is a screenshot of the Arduino IDE interface. The title bar says 'ConfigIPAddresses | Arduino 1.0.5'. The main window shows the code for the 'ConfigIPAddresses' sketch. The code is as follows:

```

/*
 * Setting IP Addresses for a SKAARHOJ device
 *
 * - kasper
 */
// Including libraries:
#include <EEPROM.h>      // For storing IP numbers

static uint8_t mac[6];

static uint8_t ip[] = {
  192, 168, 10, 99 };    // IP address of your SKAARHOJ device, typical default is 192.168.10.99

static uint8_t atemip[] = {
  192, 168, 10, 240 };   // IP address of your ATEM switcher, factory default is 192.168.10.240

```

# Configurations



## ATEM-B4 Link IP Settings

Currently the ATEM CCU and the ATEM CCU Lite will only connect to ATEM-B4 units with the IP address range x.x.x.81 to x.x.x.88

The camera selector on the ATEM-B4 selects the last digit in the IP address. So for the default setup (as we ship them) **all** ATEM-B4 links will have address 192.168.10.80 in the webinterface. When camera 1 is selected on the camera selector, the unit will have IP 192.168.10.81. When camera 2 is selected on the camera selector, the unit will have IP 192.168.10.82 and so forth.

For accessing the webinterface of a ATEM-B4 Link the default address is 192.168.10.99 (see more at page 6).

Lets say you want to change IP address of the ATEM CCU/CCU Lite to 10.20.10.99, then the IP address of all the ATEM-B4 Links should be set to 10.20.10.80 in the webinterface.

Master stations such as the ATEM CCU and ATEM CCU Lite needs to be on the same subnet as the ATEM-B4 Link units.

# Configurations

**SKAARHOJ**

**SKAARHOJ Device IP Address:**  
192 . 168 . 10 . 99

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**ATEM Switcher IP Address:**  
192 . 168 . 10 . 240

---

**Use MultiViewer:**  
Multi Viewer 1

---

**Use AUX:**  
AUX 1

---

**Custom Setting Banks:**

**Custom1:** Camera Gain, Camera Shutter, Camera White Balance, Camera Zoom

**Custom2:** Camera Focus, Contrast, Saturation, Hue

---

**Camera Port for ATEM-B4 Link:**  
Port 80

(The IP and the port number selected on the ATEM-B4 Links, must match with the ATEM CCU / CCU Lite port and IP settings.)

---

**Submit**

(Reset / Pull the power after submitting the form successfully)

Web interface ATEM CCU

**SKAARHOJ**

**SKAARHOJ Device IP Settings:**  
192 . 168 . 10

---

**Camera Port for SKAARHOJ ATEM-B4 Link:**  
Port 80

(The IP and the port number selected on the ATEM-B4 Links, must match with the ATEM CCU / CCU Lite port and IP settings. The IP address of each ATEM-B4 Link is equal to the port number plus the number of the camera selector on ATEM-B4 Link.)

---

**Submit**

(Reset / Pull the power after submitting the form successfully)

Web interface ATEM B4-Link

# Troubleshooting

## ATEM Version

We recommend using ATEM Version 6.9 (as of February 2017). The firmware of the ATEM Switcher and the ATEM Software Control can be updated by the application 'ATEM Setup Utility' which comes with the ATEM software package. Learn more in the ATEM Operation Manual.

## Missing Library/Sketch Does Not Compile

If a library is missing, the controller sketch will not compile and upload. It is important to keep the folder structure of the downloaded ATEM library, and install it correctly. See the instructions in this manual.

## Demo Mode

Many of our units have a demo mode where all buttons and displays will light up, and cycle through various combinations. Hold the config button while you reset the unit - this will make the status LED blink red. Wait 10 minutes and the demo mode will start.

## For the DIY explorer

### Compatible Arduinos

Our libraries have been designed to work on the Arduino Ethernet and the Arduino EtherMega with Ethernet Shield (+ EtherMega).

### Debugging

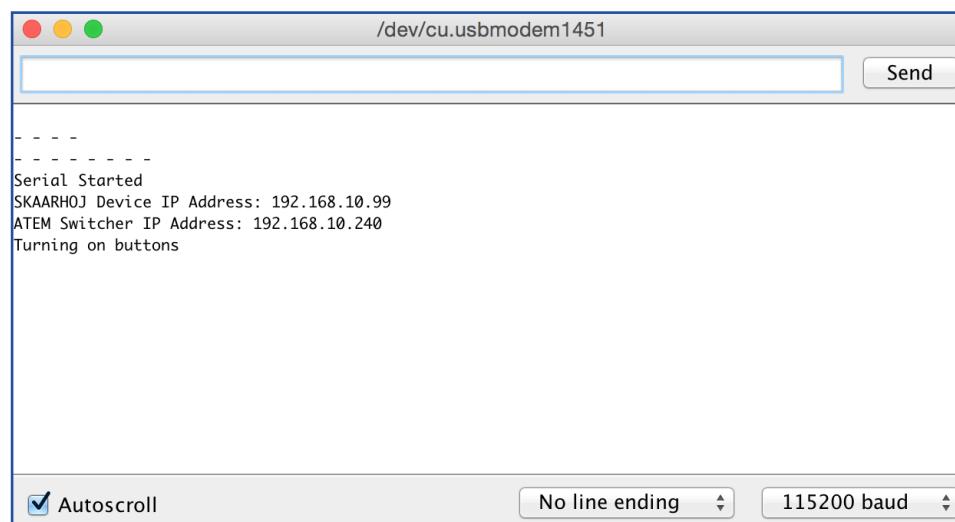
In the Arduino folder "SkaarhojUtils" various sketches can be found to help with debugging.

# Troubleshooting

## Using the Arduino IDE Serial Monitor

By connecting your SKAARHOJ controller with the USB programming cable to your PC/Mac and opening the Serial Monitor in the Arduino IDE, you can check the state of your controller. This is a great way to analyze problems or connection issues.

- **Step 1** - Connect your controller with the ATEM swticher and other peripherals you might be controlling
- **Step 2** - Connect the USB programming cable and power the unit
- **Step 3** - Open Arduino IDE
- **Step 4** - Set the right "Board", "Processor" and "Port" in "Tools"
- **Step 5** - Go to "Tools" and open "Serial Monitor"
- **Step 6** - Set baud rate to "115200 baud" in serial monitor window.



Serial monitor in the Arduino IDE

## Contact Support

You are always welcome to contact us for support questions - write an email to [support@skaarhoj.com](mailto:support@skaarhoj.com) and we will do our best to accomondate your request.

Please state which:

- Which SKAARHOJ unit it is about
- The serial number of your device if there is one (small silver label with 6 digits)
- The nature of the problem
- Which hardware device(s) you are controlling and their firmware version
- If you have successfully installed the Firmware Updater Application and made contact with your device though the Serial Monitor (you need the USB programming cable)
- Your operating system

# Warranty, Terms and Conditions

[www.SKAARHOJ.com](http://www.SKAARHOJ.com)

[www.SKAARHOJ.com/wiki](http://www.SKAARHOJ.com/wiki)

[www.github.com/kasperskaarhoj](http://www.github.com/kasperskaarhoj)

## Return Policy:

Unfortunately we can't offer you any right of returning the assembled designs. We will always quality check the products before they leave our production line and at this time they will conform to the functionality described on the website and demonstrated in videos as well as any individual agreements we have made. We believe this policy is a fair consequence of the fact, that every unit that leave us is essentially tailor made for you.

If you pay by PayPal / Credit Card you do it in the understanding that you waive your chargeback rights.

## Warranty, Terms and Conditions:

For the full Terms and Conitions document go to:

[www.skaarhoj.com/fileadmin/terms.pdf](http://www.skaarhoj.com/fileadmin/terms.pdf)

We offer a 1 year warranty on the hardware kits and service work we sell. This relates to the functional state of the assembled design when shipped.

Generally the designs announced on this site - be it hardware or software - is based on open source and "distributed in the hope that it will be useful, but WITHOUT ANY WARRANTY; without even the implied warranty of MERCHANTABILITY or FITNESS FOR A PARTICULAR PURPOSE" - as it is stated in the well known GNU/GPL license.

## The ATEM Protocol disclaimer:

In particular we can't guarantee for any change outside of our direct control and an example of that could be if Blackmagic Design decided to obfuscate their ATEM protocol so that the Arduino ATEM Library is rendered useless. There is no guarantee that this won't happen some day and therefore no products are sold as ATEM-compatible, rather this is given as a typical application, which by experience is known to be valid in the past and present. So to summarise: None of our ATEM compatible products are officially supported or endorsed by BlackMagic Design - yet! But so far they work with all known firmwares (last checked February 2017).