Z axis

Mega to EasyDriver (ED):

Pin 10 to Enable

Pin 11 to Dir

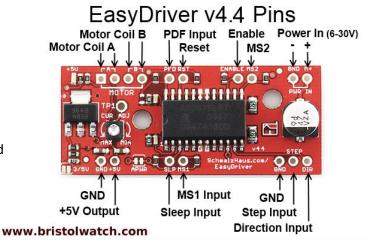
Pin 12 to Step

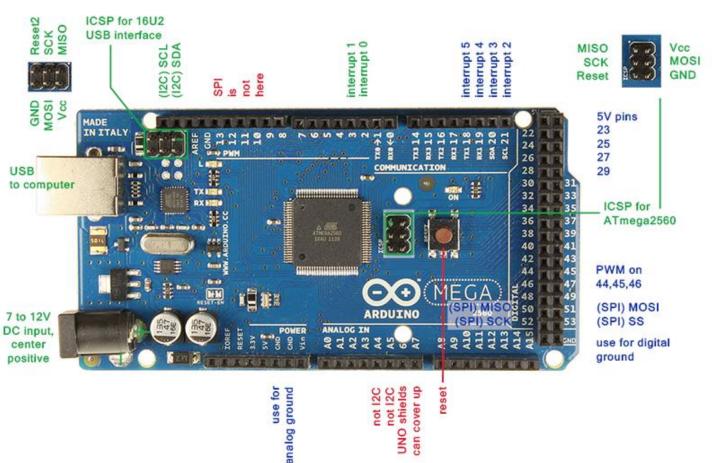
Mega Ground to ED Ground

Other ED connections:

Motor connections to Coil A and B (on my motors Red goes to A1, Green to A2, Yellow to B1 and Blue to B2) Motor power supply to power in + & -

More motors: same wiring but with pins on Arduino Given in subroutine select_motor



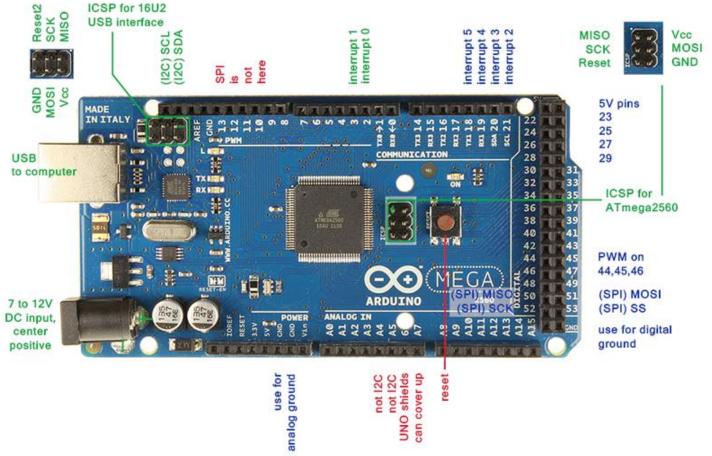


Mega to Rotary encoder:

Pin 13 to Encoder press switch pin
Pin 2 to Encoder Quadtrature op centre pin
Pin 3 to Encoder Quadtrature op right pin
Other Encoder connections:

Pin for other side of press switch to Mega earth Left pin of Encoder Quadrature op to Mega earth

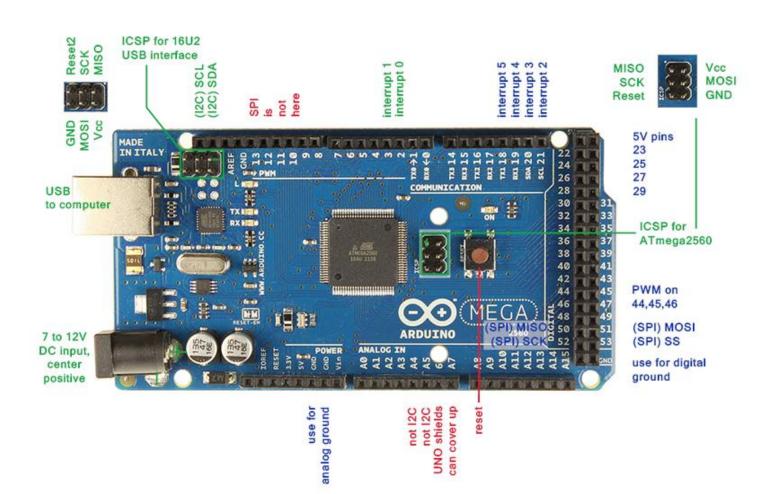




Wiring from Arduino to 4 line I2C LED display:

Pin 20 to SDA
Pin 21 to SLA
5V on Mega to Vcc
Ground on Mega to Ground on I2C





Camera, flash and reset connections:

Camera shutter:

Anode (pin 1) on a 4N35 is connected to Mega Pin 15 via a 330 Ohm R. Cathode (pin 2) goes to Mega Ground. 4N35 pin 4 goes to camera remote common. 4N35 Pin 5 goes to camera remote shutter pin.

Camera prefocus:

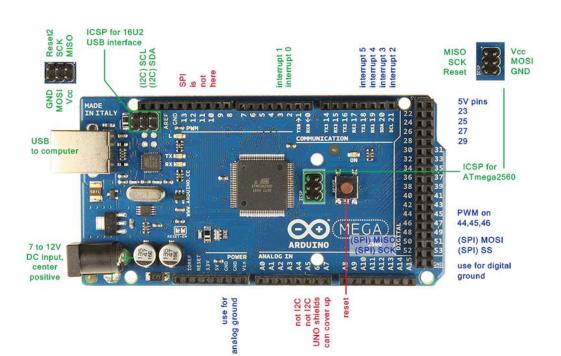
Anode (pin 1) on another 4N35 is connected to Mega Pin 16 via a 330 Ohm R. Cathode (pin 2) goes to Mega Ground. 4N35 pin 4 goes to camera remote common. 4N35 Pin 5 goes to camera remote prefocus pin.

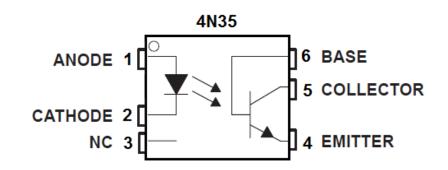
Flash:

Anode (pin 1) on a 4N35 is connected to Mega Pin 17 via a 330 Ohm R. Cathode (pin 2) goes to Mega Ground. 4N35 pin 4 goes to flash common. 4N35 Pin 5 goes to flash trigger pin.

Reset:

Mega reset pin via push switch to earth to allow reset of device





Notes: I used a little piece of perf board to wire 3 x 4N35s side by side with their current limiting resistors and put header sockets at either end for inputs and outputs.

You may not need the flash connections – the camera can fire your flashes when it is triggered. Prefocus may not be necessary if not using AF.

While it will work, camera 'common (earth)' should not be connected to Mega earth.

Busbars for Mega 5V and Mega ground will make it easier to make multiple connections to earth and power.

Do not disconnect a motor when box is powered up.

I used an old computer brick psu to power the motors. The Arduino is currently powered from USB.