

TOP SIDE

COLOR CODES

POWER	RED
GND	BLACK
ARDUINO TX	BLUE
ARDUINO RX	ORANGE
CAMERA FEED	PINK
SIGNAL	GREEN
ETHERNET	PURPLE

Fuse Calculation

As there're 8 thrusters powered by 12v / 18 amps on maximum speed so it's rated 216 watts each .
 Each camera consumes maximum of 4 watts and nine cameras are used
 Boards along with the Solenoids consume about 10 watts maximum
 So the maximum load at the worst case scenario will be :
 $7 * 216 + 4 * 9 + 10 = 1558$ watts
 (Micro ROV and ball collector thruster will never work together)
 therefore the maximum current required will be $\frac{1558}{48} = 32.45$ amps
 Applying the mandatory safety factor , the required fuse value is
 $32.45 * 1.5 = 48.68$ amps
 As per ELEC-008E , the maximum current supplied to the ROV is 30 amps
 So a 30 amps fuse is chosen .

TEHTER
3xCat6e
2x12AWG

Above Water Level
Below Water Level

Thrusters

ARDUINO NANO

Communication

ARDUINO NANO

Sensors

BOTTOM SIDE