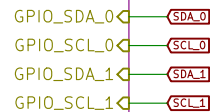
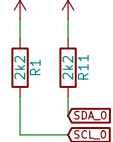


IRSensors

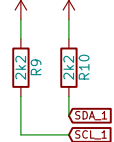


IRSensors.sch

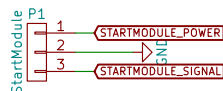
Pull-up resistors for I2C channel 0
+3V3 +3V3



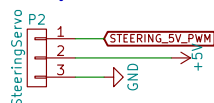
Pull-up resistors for I2C channel 1
+3V3 +3V3



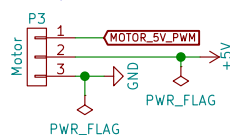
StartModule
Use a female 3pin header.
Accepts both 3V3 and 5V.
Power is supplied via GPIO, so that recycle can be done via software.



SteeringServo
PWM signal has been levelshifted from 3V3 to 5V logic.



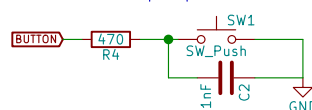
Motor
This is where 5V is supplied to the system!
PWM signal has been levelshifted from 3V3 to 5V logic.



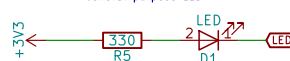
Ghost Sensorboard

A shield for the Ghost32 board.
Contains sensors and connectors.

General purpose switch.
Use internal pull-up resistor in ESP32.

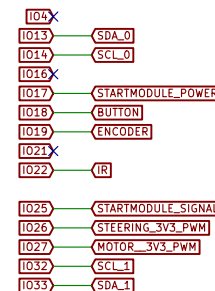


General purpose LED



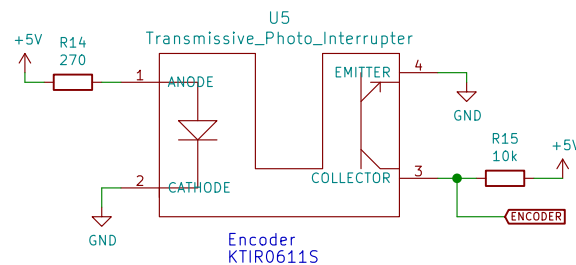
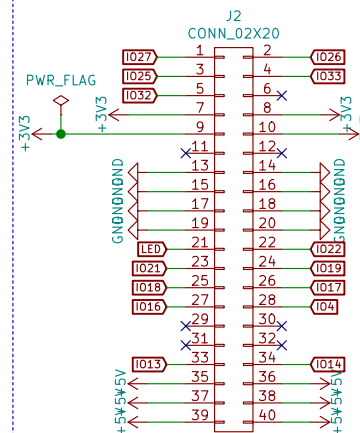
Mapping of ESP32 GPIO's
to physical devices

NB, IO23 is dedicated to LED
NB, IO32 (SCL) and IO33 (SDA) is dedicated to I2C

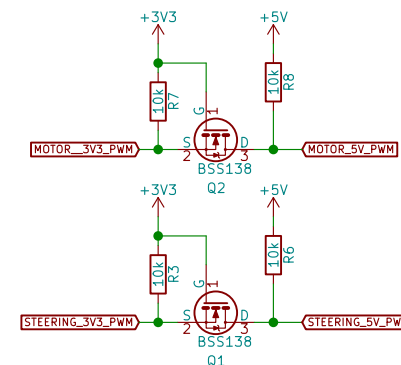


NB, GPIO pins from ESP is 3.3V level!

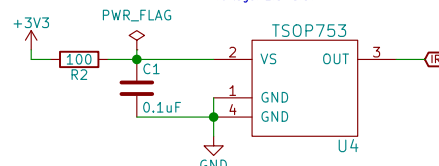
Bottom connector, 40 pin
Hirose FX8C-40S-SV5
Farnell no: 249-8688



Level shifting IO signals from 3V3 to 5V.



Infrared Receiver, 38kHz
(May optionally replace StartModule)
TSOP75538WIR, Farnell no: 225-1430 (or similar)
Voltage: 2.5-5.5V



<https://github.com/Scalpel78/Ghost/tree/master/KiCad/GhostSensorboard/Rev2>

Frode Lillerud

Sheet: /

File: GhostSensorboard.sch

Title: Ghost Sensorboard

Size: A4

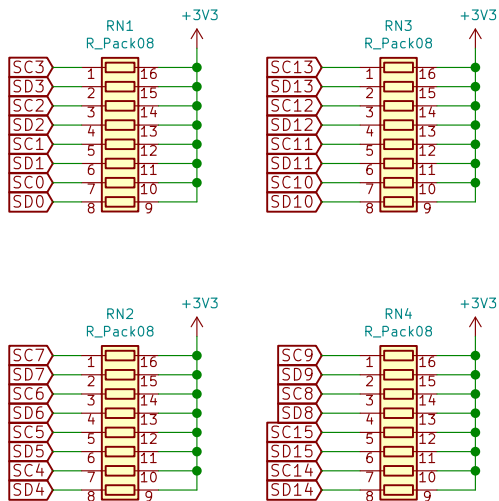
Date: 2017-03-20

KiCad E.D.A. kicad no-vcs-found-ecdfa4058ubuntu16.04.1

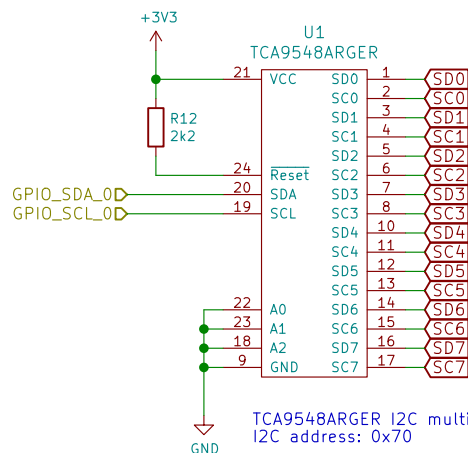
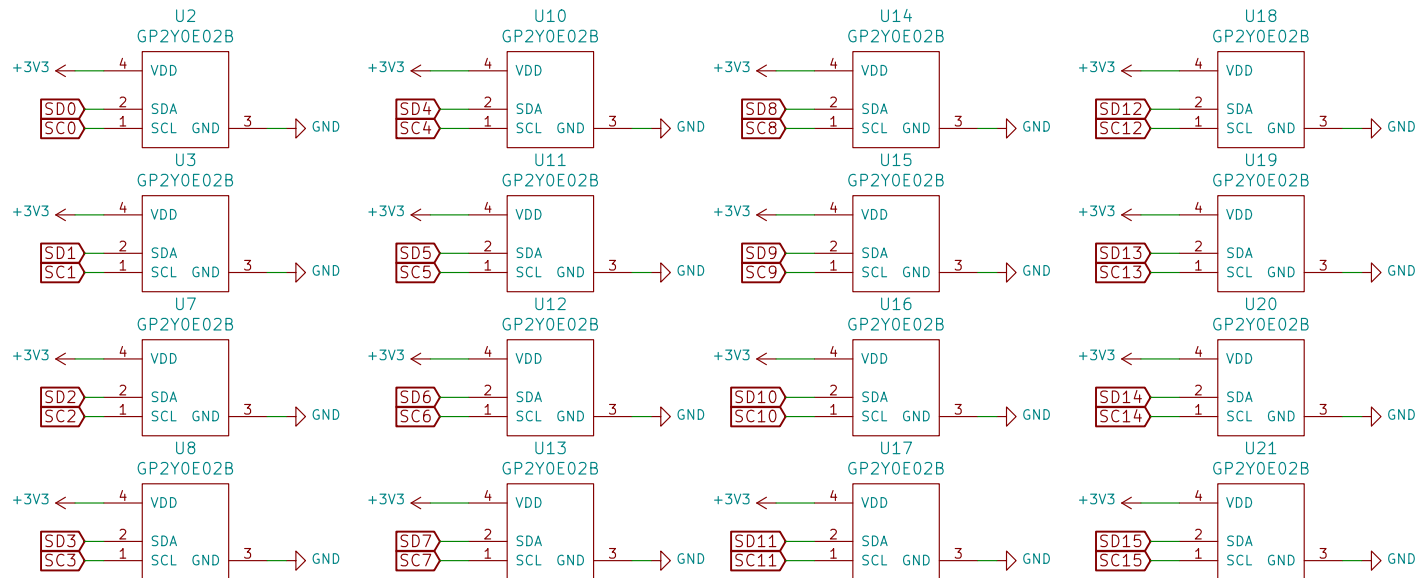
Rev: 2

Id: 1/2

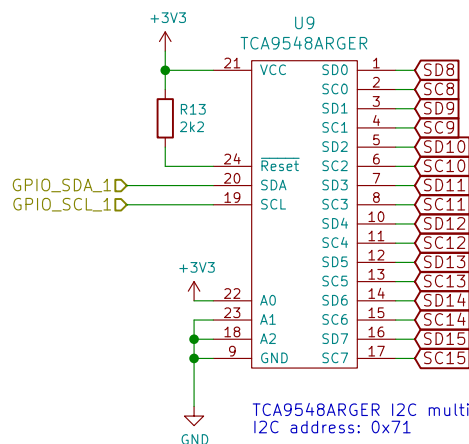
Pull-up resistors for the IR-sensors
8 x 1k ohm resistor network
Farnell no: 137-7053



Sharp GP2Y0E02B IR sensors
I2C address: 0x80
Range 4-50 cm
JST SH connectors, 4 pin, 1mm pitch



TCA9548ARGER I2C multiplexer
I2C address: 0x70



TCA9548ARGER I2C multiplexer
I2C address: 0x71

<https://github.com/Scalpel78/Ghost/tree/master/KiCad/GhostSensorboard/Rev2>

Frode Lillerud

Sheet: /IRSensors/

File: IRSensors.sch

Title: Ghost Sensorboard

Size: A4

Date: 2017-03-20

KiCad E.D.A. kicad no-vcs-found-ecdfa4058ubuntu16.04.1

Rev: 2

Id: 2/2