Arduino Board

Shield & Connectors

XA1

RX0/D0 — D0 — D0
TX0/D1 — D1 — D1
INT0/D2 — D2 — D2
INT1/D3 — D3 — D3
D4 — D4 — D4
D5 — D5 — D5
D6 — D6 — D6
D7 — D7 — D7
D8 — D8 — D8
D9 — D9 — D9
D10 — D10 — D10
TX1/D11 — D11 — D11
RX1/D12 — D12 — D12
D13 — D13 — D13

GPIO

+3.3V VCC
VCC VCC
3V3 3.3V
GND GND
GND

SPI

SPI_MISO MISO — MISO_D12
SPI_MOSI MOSI — MOSI_D11
SPI_SCK SCK — SCK_D13
RST_OUT RST_OUT — RST_D10

RTS RTS RTS
DTR DTR DTR

RESET — RST — Reset

disable auto-reboot

Reset
C1
47µ
GND

Leds for Serial

VCC
R8 R9
1k 1k
D6 D7
TX_CH340 RX_CH340

USB-Serial Pinout

TX_CH340 — D0
RX_CH340 — D1
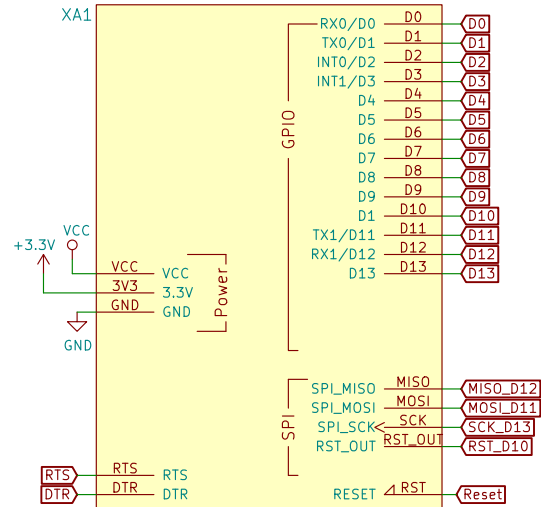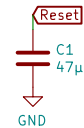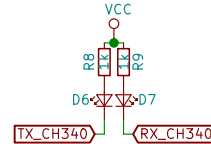
ESP8266

Stuff for starting

+3.3V +3.3V
R7 1k
C2 47µ
CHIP_EN
GND

ESP-01 Connector

J3
ESP_Flash
+3.3V
GPIO_3 1 2
GPIO_0 3 4 ESP_Reset
GPIO_2 5 6 CHIP_EN
7 8 GPIO_1
GND
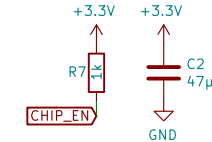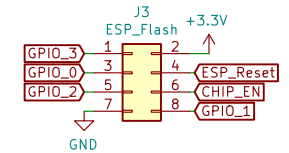
OverVoltage Protection

RX_ESP8266 R2 1k GPIO_3
TX_ESP8266 R5 1k GPIO_1
R6
D1 D5
3V6 3V6
GND

flash over USB

ESP_Reset
Q1 R10 10k — DTR
Q2 R11 10k — RTS
GPIO_0

PinOut

J4
ESP_GPIOs
GPIO_0 1
GPIO_1 2
GPIO_2 3
GPIO_3 4

Serial Connection

JP1
RX_Serial_ESP_Connect_to
TX_CH340 1 3 D11
RX_ESP8266 2

JP2
TX_Serial_ESP_Connect_to
RX_CH340 1 3 D12
TX_ESP8266 2
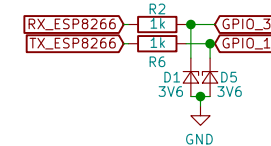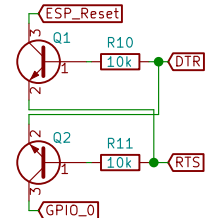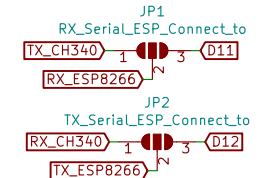
UPDI Programming Interface

UPDI Pinout

UPDI_PIN — D6

Resistor

UPDI_OUT — R1 4.7k — UPDI_PIN

UPDI Connector

VCC
UPDI_OUT 1
2 J2
3 UPDI
GND
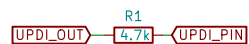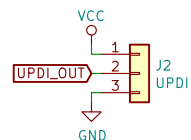
High Voltage Programming

VCC must be 5V!

U1
ST662a
VCC 5 VCC Vout 6 +12V R17 1k — 12V_1k
C3 C4
4.7µ 100n
2 C1+ C2+ 4
C5 C6
1 C1- C2- 3
220n 220n
8 SHDN
7 Gnd
GND GND

12V_1k
Q3 RST
D6 JP3
GND
GND

RST R12 1k D13
!RESET from transistor
SCI R13 1k D12
Target Clock Input
SDO R14 1k MOSI_D11
Target Data Output
SII R15 1k RST_D10
Target Instruction Input
SDI R16 1k SCK_D13
Target Data Input
VCC_Tiny — D7
Target VCC

J5
HVP Connector
SCI 1 2 12V_1k
3 4 SDO
GND 5 6 SII
VCC_Tiny 7 8 SDI

ISP Programming LED

LED_HB
D9 R3 1k D2 GND

LED_ERR
D8 R4 1k D3 GND

LED_PMODE
D7 R5 1k D4 GND

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Rev:
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