

Design heavily based on <https://cdn.sparkfun.com/datasheets/Wireless/Zigbee/XBee-Explorer-Dongle-v23.pdf>

TO TABLET

J1 USB_A

VBUS 1

D+ 3

D- 2

Shield 5

GND 4

GND

+5V

C3 0.01uF

D1 D_TVS

D1+ 27

R2 27

USBD+ 27

D1- 27

R1 27

USBD- 27

C1 47pF

C2 47pF

GND

GND

VOLTAGE REGULATOR

U3 AP2114H-3.3TRG1

VIN 3

VOUT 4

GND 1

GND 2

+5V

C5 4.7uF

GND

+3.3V

C6 4.7uF

GND

PIC CIRCUIT

U1 PIC16F26K83

MCLR 1

RA0 2

RA1 3

RA2 4

RA3 5

RA4 6

RA5 7

OSC1 9

OSC2 10

CS 11

SCK 12

MOSI 13

MISO 14

RESET 15

RC4 16

RC3 17

RC2 18

RC1 19

RC0 20

RA6/OSC2 21

RA7/OSC1 22

RB1 23

RB2 24

RB3 25

RB4 26

RB5 27

ICSPDAT 28

ICSPCLK 29

DIN 30

DOUT 31

RTS 32

CTS 33

VSS 34

VSS 35

VDD 36

ICSPDAT 37

ICSPCLK 38

DIN 39

DOUT 40

RTS 41

CTS 42

VSS 43

VSS 44

+3.3V

R3 10k

GND

+3.3V

C10 0.1uF

GND

LoRa RADIO

U5 RFM95W-915S2

SCK 4

MOSI 3

MISO 2

NSS 5

RESET 6

ANT 9

DIO5 7

DIO4 12

DIO3 11

DIO2 16

DIO1 15

DIO0 14

GND 1

GND 8

GND 10

+3.3V

R4 10k

C5

+3.3V

R5 10k

C8 10uF

GND

TO ANTENNA

J2 Conn_Coaxial

GND

USB TO UART

U2 FT231XS

3V3OUT 13

USBDM 12

USBDP 11

RESET 14

VCC 15

VCCIO 3

TXD 20

RXD 4

RTS 2

CTS 9

DTR 1

DSR 7

DCD 8

RI 5

CBUS0 18

CBUS1 17

CBUS2 10

CBUS3 19

GND 6

GND 16

GND

GND

C4 0.1uF

GND

TO PIC PROGRAMMER

J4 Conn_01x05_Female

1 MCLR

2

3

4 ICSPDAT

5 ICSPCLK

GND

+5V

Sheet: /

File: Dongle.sch

Title:

Size: A4 Date:

KiCad E.D.A. kicad (5.0.0) Rev:

Id: 1/1

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Size: A4	Date:	Rev:
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