

Blue Pill

[Optional] R7 replaces R10 on the Blue Pill. You MUST remove R10 on the Blue Pill when installing R7.

USB_CONN

USB_D+

5V

GND

3.3V

Serial Port

SER_RX

SER_TX

GND

Pinout Details:

Pin	Label	Function
1	_DIR	PB12
2	_STEP	PB13
3	_DKWE	PB14
4	_SIDE	PB15
5	_RDY	PA8
6	SER_TX	PA9
7	SER_RX	PA10
8	USB_D-	PA11
9	USB_D+	PA12
10		PA15
11	_DKRD	PB3
12	_DKWD	PB4
13	INDEX	PB5
14	_TRKO	PB6
15	_WRPROT	PB7
16	_DENSEL	PB8
17	_DENSEL	PB9
18	5V	5V
19	GND	GND
20	3V3	3V3

USB Module (U1) Pinout:

Pin	Label	Function
1	GND	GND
2	40	GND
3	3V3	3V3
4	RST	RST
5	37	RST
6	36	MTR0
7	35	SELO
8	34	MTR1
9	33	SEL1
10	32	SEL1
11	31	SEL1
12	30	SEL1
13	29	SEL1
14	28	SEL1
15	27	SEL1
16	26	SEL1
17	25	SEL1
18	24	ID1
19	23	ID0
20	22	ACT
21	21	VBat

Blue Pill Module (U2) Pinout:

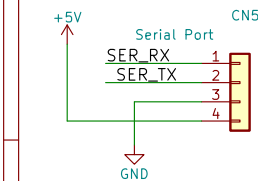
Pin	Label	Function
1	SPARE1	PIN 4
2	FLIPPY	USER PIN 4
3	SPARE2	PIN 6
4	USB_CONN	USB_CONN
5	ID1	GW F1 ID
6	ID0	GW F1 ID
7	ACT	ACT
8	VBat	VBat

Additional Connections:

- 5V** source connected to pin 18 (5V) and pin 9 (USB_D+).
- GND** connected to pin 19 (GND) and pin 8 (USB_D-).
- 3.3V** source connected to pin 20 (3V3) and pin 3 (3V3).
- Serial Port** connected to pin 6 (SER_TX) and pin 7 (SER_RX).
- USB** module connected to pins 1-9 (USB_CONN) and pins 10-19 (USB module pins).
- Blue Pill** module connected to pins 1-9 (Blue Pill pins) and pins 10-19 (Blue Pill module pins).

Notes:

- Don't move! (pins 11, 12, 13, 14, 15, 16, 17, 18, 19, 20)
- sink 3mA source 0mA 30pF 2MHz
- u PWM pin
- 5V tolerant
- GW F1 ID = F1 Plus
- F1 Plus (unbuffered)
- F1 + DSKCHG



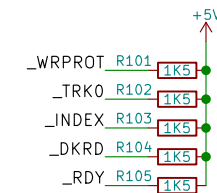
The diagram illustrates the electrical connections for the Blue Pill board. It is divided into two main sections: 'Blue Pill' and 'Input Pullups'.

Blue Pill Section:

- USB_CONN:** A USB connector with pins 1 through 10. Pin 1 is labeled 'DIR', pin 2 is '_STEP', pin 3 is '_DKWE', pin 4 is '_SIDE', pin 5 is '_RDY', pin 6 is 'SER_TX', pin 7 is 'SER_RX', pin 8 is 'USB_D-', pin 9 is 'USB_D+', and pin 10 is 'GND'.
- USB:** A USB connector with pins 1 through 10. Pin 1 is labeled 'DIR', pin 2 is '_STEP', pin 3 is '_DKWE', pin 4 is '_SIDE', pin 5 is '_RDY', pin 6 is 'SER_TX', pin 7 is 'SER_RX', pin 8 is 'USB_D-', pin 9 is 'USB_D+', and pin 10 is 'GND'.
- Microcontroller Pins:** The diagram shows various pins of the microcontroller, including PB12, PB13, PB14, PB15, PA8, PA9, PA10, PA11, PA12, PA15, RX3, TX3, ADC9, ADC8, MOSI1, MISO1, and others.
- Power Connections:** A +3.3V supply is connected to the GND pin of the USB connector and the GND pin of the microcontroller.

Input Pullups Section:

- Input Pins:** The diagram shows five input pins: _WRPROT, _TRK0, _INDEX, _DKRD, and _RDY.
- Pullup Resistors:** Each input pin is connected to a 1K5 resistor, which is then connected to a +5V supply.



Blue Pill Pin Connections

Don't Move!

- _DKRD: 11
- _DKWD: 12
- _INDEX: 13
- _TRK0: 14
- _WRPROT: 15
- _DENSEL: 16
- USER PIN 2: 17
- GND: 18
- 5V: 19
- GND: 20
- 3V3: 21

Blue Pill Pins

- PB3: 22
- PB4: 23
- PB5: 24
- PB6: 25
- PB7: 26
- PB8: 27
- PB9: 28
- SCL1: 29
- SDA1: 30
- PC15: 31
- PC14: 32
- LED: 33
- PC13: 34
- VBat: 35

Blue Pill Pins

- ADC4 PA4: 36
- ADC3 PA3: 37
- ADC2 PA2: 38
- ADC1 PA1: 39
- ADC0 PA0: 40
- PC15: 41
- PC14: 42
- LED: 43
- PC13: 44
- VBat: 45

Blue Pill Pins

- SPARE1 PIN 4: 46
- FLIPPY: 47
- SPARE2 PIN 6: 48
- USB_CONN: 49
- ID1: 50
- ID0: 51
- ACT: 52

Blue Pill Pins

- SPARE1 PIN 4: 53
- FLIPPY: 54
- SPARE2 PIN 6: 55
- USB_CONN: 56
- ID1: 57
- ID0: 58
- ACT: 59

Blue Pill Pins

- SPARE1 PIN 4: 60
- FLIPPY: 61
- SPARE2 PIN 6: 62
- USB_CONN: 63
- ID1: 64
- ID0: 65
- ACT: 66

Blue Pill Pins

- SPARE1 PIN 4: 67
- FLIPPY: 68
- SPARE2 PIN 6: 69
- USB_CONN: 70
- ID1: 71
- ID0: 72
- ACT: 73

Blue Pill Pins

- SPARE1 PIN 4: 74
- FLIPPY: 75
- SPARE2 PIN 6: 76
- USB_CONN: 77
- ID1: 78
- ID0: 79
- ACT: 80

Blue Pill Pins

- SPARE1 PIN 4: 81
- FLIPPY: 82
- SPARE2 PIN 6: 83
- USB_CONN: 84
- ID1: 85
- ID0: 86
- ACT: 87

Blue Pill Pins

- SPARE1 PIN 4: 88
- FLIPPY: 89
- SPARE2 PIN 6: 90
- USB_CONN: 91
- ID1: 92
- ID0: 93
- ACT: 94

Blue Pill Pins

- SPARE1 PIN 4: 95
- FLIPPY: 96
- SPARE2 PIN 6: 97
- USB_CONN: 98
- ID1: 99
- ID0: 100
- ACT: 101

Blue Pill Pins

- SPARE1 PIN 4: 102
- FLIPPY: 103
- SPARE2 PIN 6: 104
- USB_CONN: 105
- ID1: 106
- ID0: 107
- ACT: 108

Blue Pill Pins

- SPARE1 PIN 4: 109
- FLIPPY: 110
- SPARE2 PIN 6: 111
- USB_CONN: 112
- ID1: 113
- ID0: 114
- ACT: 115

Blue Pill Pins

- SPARE1 PIN 4: 116
- FLIPPY: 117
- SPARE2 PIN 6: 118
- USB_CONN: 119
- ID1: 120
- ID0: 121
- ACT: 122

Blue Pill Pins

- SPARE1 PIN 4: 123
- FLIPPY: 124
- SPARE2 PIN 6: 125
- USB_CONN: 126
- ID1: 127
- ID0: 128
- ACT: 129

Blue Pill Pins

- SPARE1 PIN 4: 130
- FLIPPY: 131
- SPARE2 PIN 6: 132
- USB_CONN: 133
- ID1: 134
- ID0: 135
- ACT: 136

Blue Pill Pins

- SPARE1 PIN 4: 137
- FLIPPY: 138
- SPARE2 PIN 6: 139
- USB_CONN: 140
- ID1: 141
- ID0: 142
- ACT: 143

Blue Pill Pins

- SPARE1 PIN 4: 144
- FLIPPY: 145
- SPARE2 PIN 6: 146
- USB_CONN: 147
- ID1: 148
- ID0: 149
- ACT: 150

Blue Pill Pins

- SPARE1 PIN 4: 151
- FLIPPY: 152
- SPARE2 PIN 6: 153
- USB_CONN: 154
- ID1: 155
- ID0: 156
- ACT: 157

Blue Pill Pins

- SPARE1 PIN 4: 158
- FLIPPY: 159
- SPARE2 PIN 6: 160
- USB_CONN: 161
- ID1: 162
- ID0: 163
- ACT: 164

Blue Pill Pins

- SPARE1 PIN 4: 165
- FLIPPY: 166
- SPARE2 PIN 6: 167
- USB_CONN: 168
- ID1: 169
- ID0: 170
- ACT: 171

Blue Pill Pins

- SPARE1 PIN 4: 172
- FLIPPY: 173
- SPARE2 PIN 6: 174
- USB_CONN: 175
- ID1: 176
- ID0: 177
- ACT: 178

Blue Pill Pins

- SPARE1 PIN 4: 179
- FLIPPY: 180
- SPARE2 PIN 6: 181
- USB_CONN: 182
- ID1: 183
- ID0: 184
- ACT: 185

Blue Pill Pins

- SPARE1 PIN 4: 186
- FLIPPY: 187
- SPARE2 PIN 6: 188
- USB_CONN: 189
- ID1: 190
- ID0: 191
- ACT: 192

Blue Pill Pins

- SPARE1 PIN 4: 193
- FLIPPY: 194
- SPARE2 PIN 6: 195
- USB_CONN: 196
- ID1: 197
- ID0: 198
- ACT: 199

Blue Pill Pins

- SPARE1 PIN 4: 200
- FLIPPY: 201
- SPARE2 PIN 6: 202
- USB_CONN: 203
- ID1: 204
- ID0: 205
- ACT: 206

Blue Pill Pins

- SPARE1 PIN 4: 207
- FLIPPY: 208
- SPARE2 PIN 6: 209
- USB_CONN: 210
- ID1: 211
- ID0: 212
- ACT: 213

Blue Pill Pins

- SPARE1 PIN 4: 214
- FLIPPY: 215
- SPARE2 PIN 6: 216
- USB_CONN: 217
- ID1: 218
- ID0: 219
- ACT: 220

Blue Pill Pins

- SPARE1 PIN 4: 221
- FLIPPY: 222
- SPARE2 PIN 6: 223
- USB_CONN: 224
- ID1: 225
- ID0: 226
- ACT: 227

Blue Pill Pins

- SPARE1 PIN 4: 228
- FLIPPY: 229
- SPARE2 PIN 6: 230
- USB_CONN: 231
- ID1: 232
- ID0: 233
- ACT: 234

Blue Pill Pins

- SPARE1 PIN 4: 235
- FLIPPY: 236
- SPARE2 PIN 6: 237
- USB_CONN: 238
- ID1: 239
- ID0: 240
- ACT: 241

Blue Pill Pins

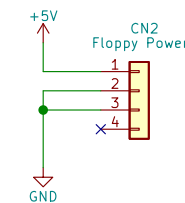
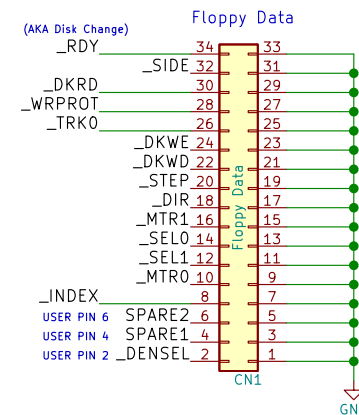
- SPARE1 PIN 4: 242
- FLIPPY: 243
- SPARE2 PIN 6: 244
- USB_CONN: 245
- ID1: 246
- ID0: 247
- ACT: 248

Blue Pill Pins

- SPARE1 PIN 4: 249
- FLIPPY: 250
- SPARE2 PIN 6: 251
- USB_CONN: 252
- ID1: 253
- ID0: 254
- ACT: 255

Blue Pill Pins

- SP

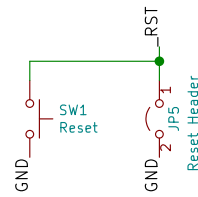
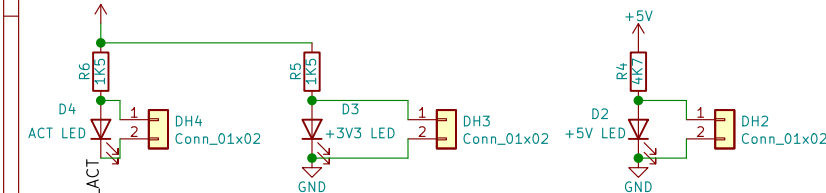


Status LEDs and Reset

The schematic shows the following components and connections:

- ACT LED:** Connected to +3.3V via resistor R6 (1K5) and to GND via resistor R5 (1K5).
- +3V3 LED:** Connected to +3V3 via resistor R5 (1K5) and to GND via resistor R4 (1K7).
- +5V LED:** Connected to +5V via resistor R4 (1K7) and to GND via resistor R3 (1K5).
- Reset Button (SW1):** Connected to GND and to the Reset Header (JP5) pin 1.
- Reset Header (JP5):** Pins 1 and 2 are connected to GND.
- Mounting Holes:** H1, H2, H3, and H4 are indicated for component placement.

The layout is divided into sections 1 through 6.



Mounting Holes

Title: Greaseweazle F1 Plus Mini

Rev: 1
Id: 1/1