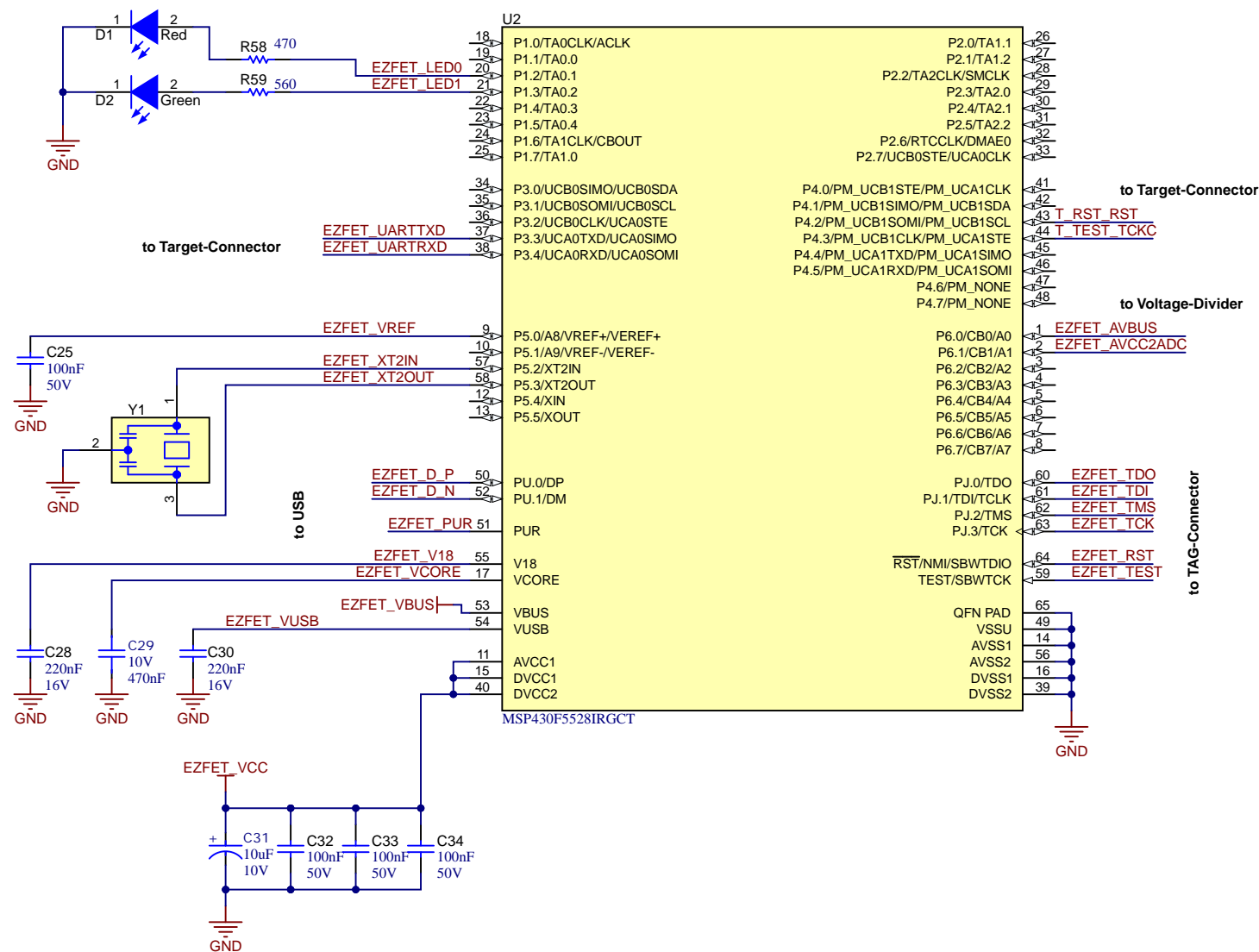
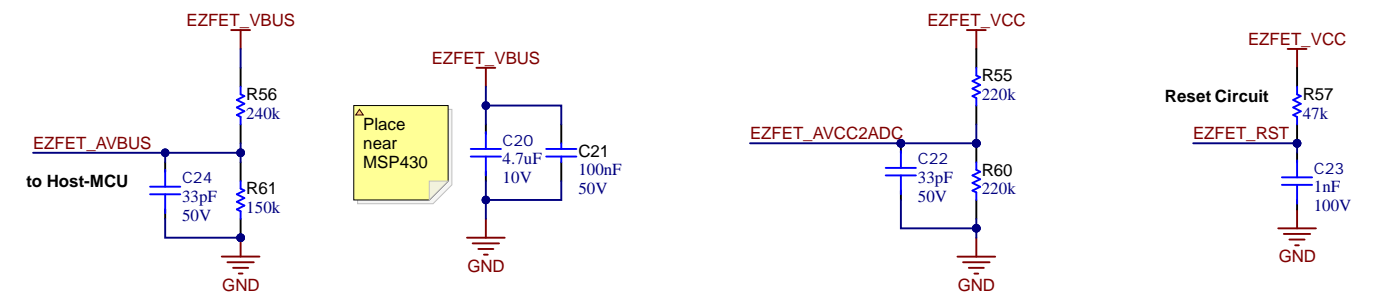
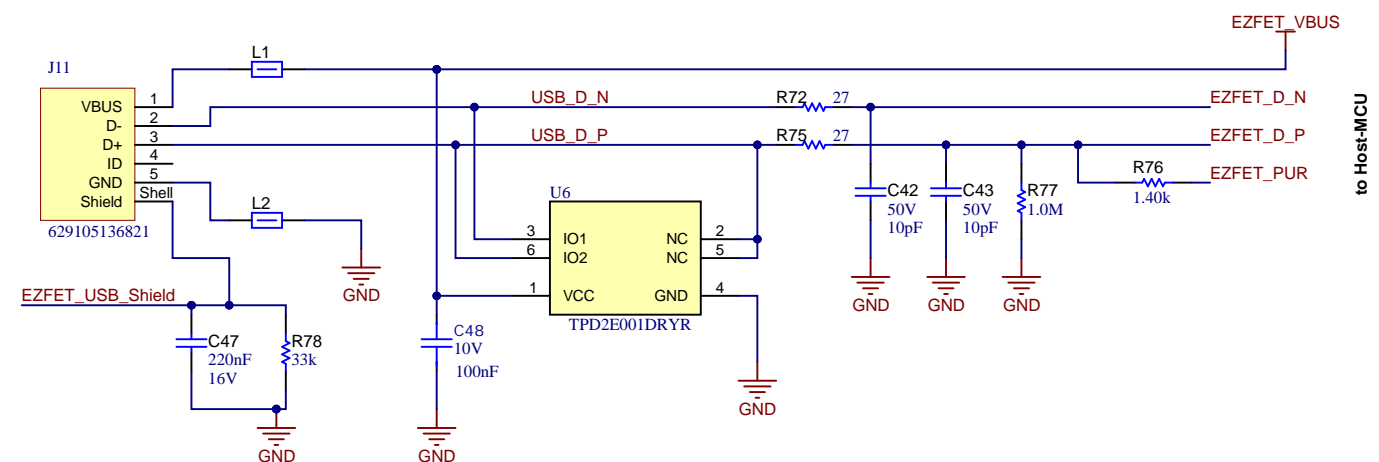


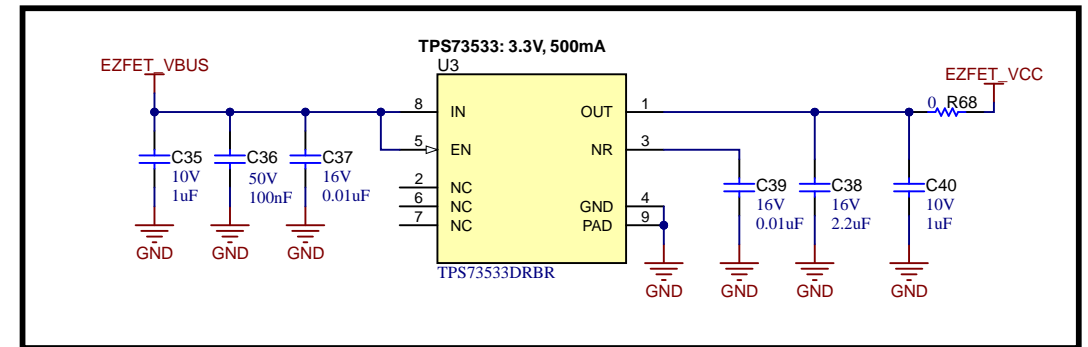
Host MCU for Emulation



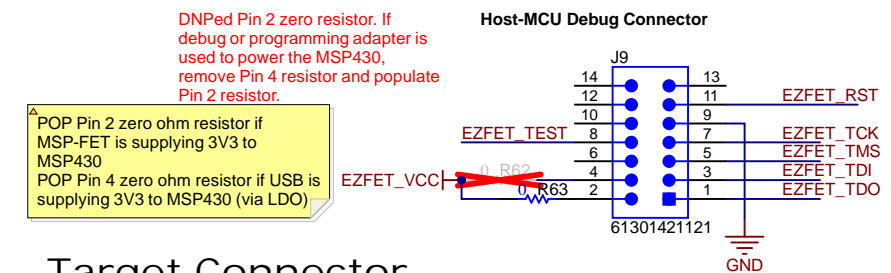
USB-Interface



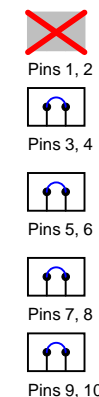
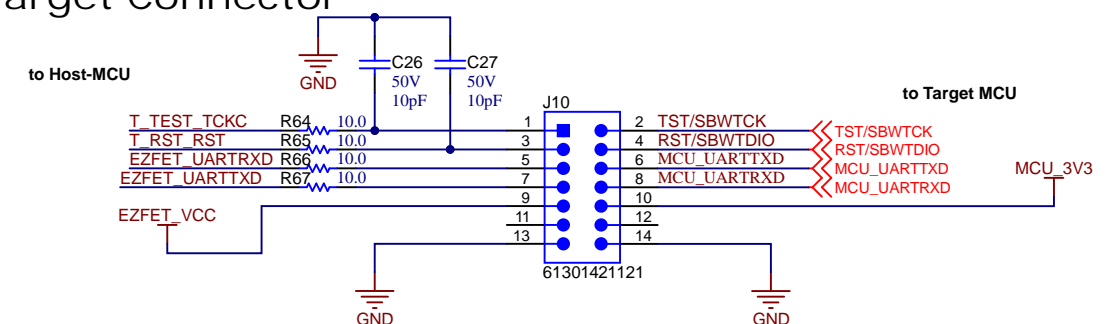
3.3V Power (EZFET_VCC)



JTAG-Connector (Host Debug)



Target Connector

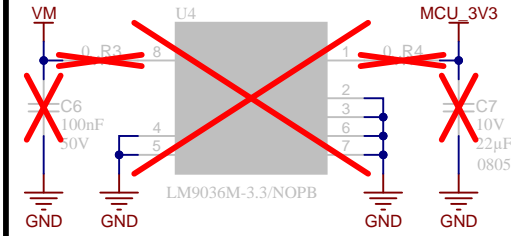


3.3V LDO

The diagram shows a 3.3V LDO regulator (U4: LM9036M-3.3/NOPB) with the following components and connections:

- Input:** VM (3.3V) connected to pin 8 via resistor R3. A 100nF capacitor (C6) is connected between pin 8 and GND. A 50V capacitor is connected between pin 4 and GND.
- Output:** MCU_3V3 connected to pin 1 via resistor R4. A 10V capacitor (C7) is connected between pin 1 and GND. A 22μF capacitor (0805) is connected between pin 1 and GND.
- Other Pins:** Pin 2 is connected to GND. Pin 3 is connected to GND. Pin 6 is connected to GND. Pin 7 is connected to GND.

The entire circuit is crossed out with a large red 'X', indicating it is not the correct configuration for the application.

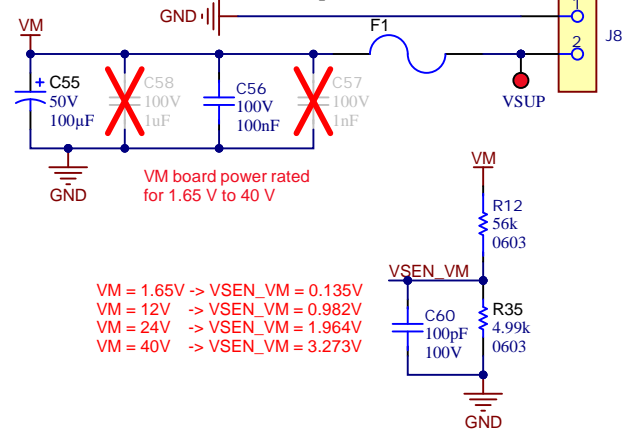


Board power

The diagram illustrates the power supply and decoupling network for a board. It shows a main power supply rail (VM) connected to a series of capacitors (C55, C58, C56, C57) and a fuse (F1). The capacitors are labeled with their values: C55 (50V, 100μF), C58 (100V, 1μF), C56 (100V, 100nF), and C57 (100V, 1nF). A red 'X' is placed over C55 and C57, indicating they are not used. The ground connection is labeled GND. A voltage source (VSUP) is connected to the output of the capacitors. A secondary power supply rail (VM) is shown connected to a resistor (R12, 56k, 0603) and a capacitor (C60, 100pF, 100V). The output of this network is labeled VSEN_VM and is connected to a resistor (R35, 4.99k, 0603) and a ground connection (GND).

VM board power rated for 1.65 V to 40 V

VM = 1.65V -> VSEN_VM = 0.135V
 VM = 12V -> VSEN_VM = 0.982V
 VM = 24V -> VSEN_VM = 1.964V
 VM = 40V -> VSEN_VM = 3.273V



Output Connector

GND

VM

TP8

TP10

OUT1

OUT2

OUT1

OUT2

J1

1

2

GND

GND

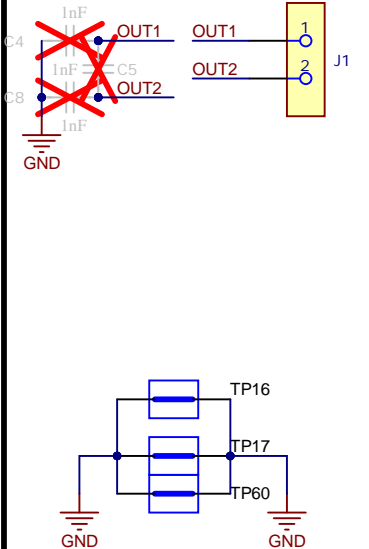
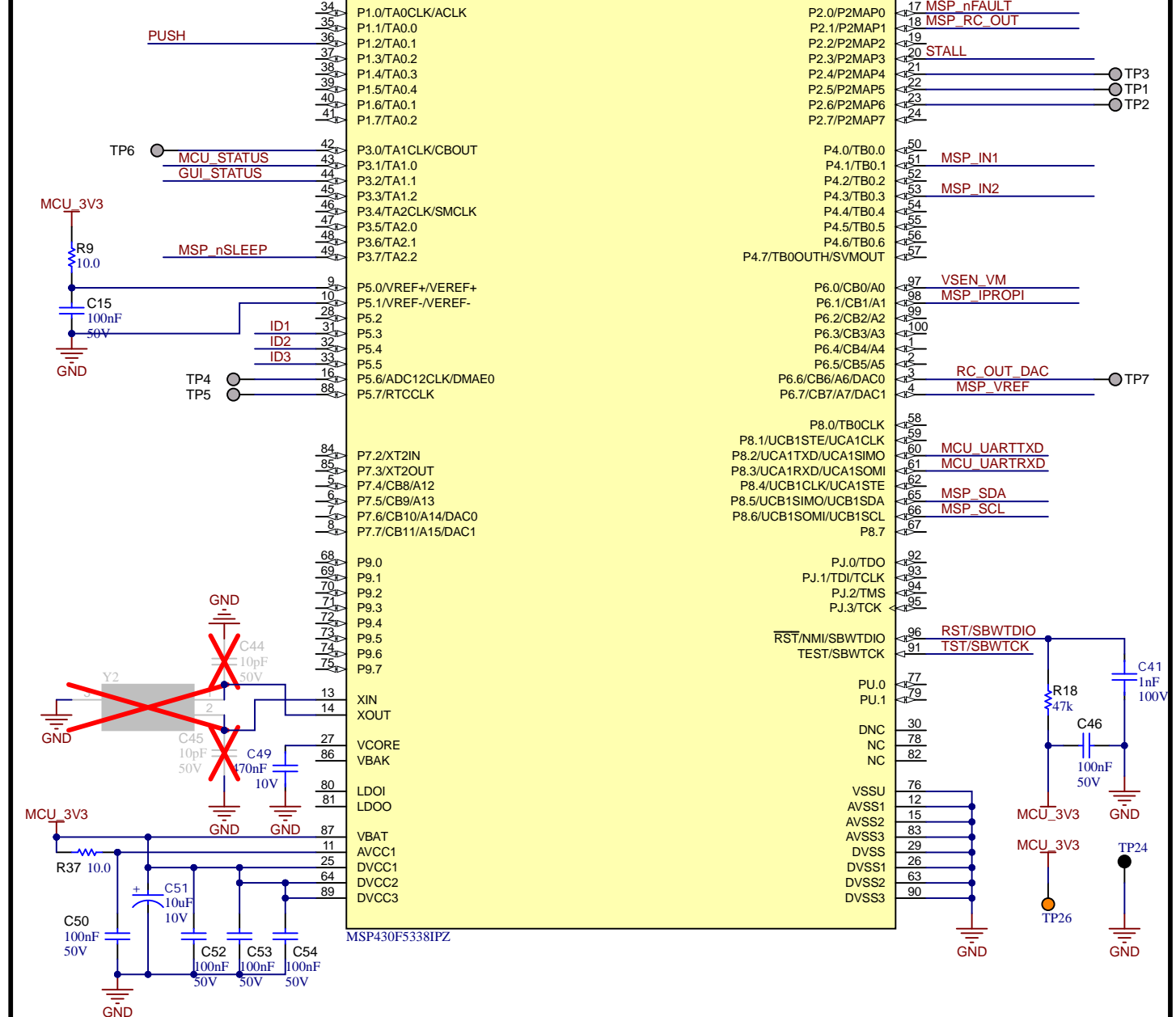
TP16

TP17

TP60

GND

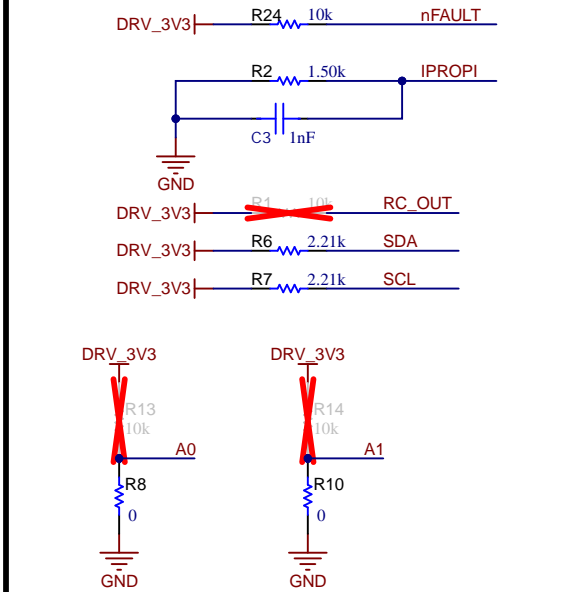
GND

[illegible]

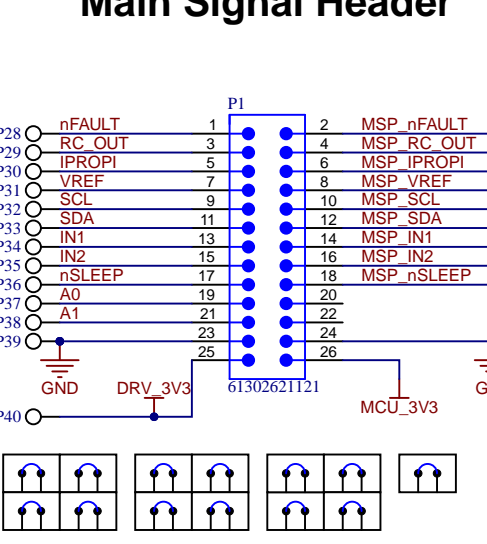
External pull-up/pull-down

The diagrams illustrate various external pull-up and pull-down configurations for the STM32F407VGT6. The components and their values are as follows:

- nFAULT:** Pull-up to DRV_3V3 using R24 (10k).
- IPROPI:** Pull-up to DRV_3V3 using R2 (1.50k) and a capacitor C3 (1nF) to GND.
- RC_OUT:** Pull-up to DRV_3V3 using R1 (10k) is crossed out.
- SDA:** Pull-up to DRV_3V3 using R6 (2.21k).
- SCL:** Pull-up to DRV_3V3 using R7 (2.21k).
- A0:** Pull-up to DRV_3V3 using R13 (10k) is crossed out. Pull-down to GND using R8 (0).
- A1:** Pull-up to DRV_3V3 using R14 (10k) is crossed out. Pull-down to GND using R10 (0).



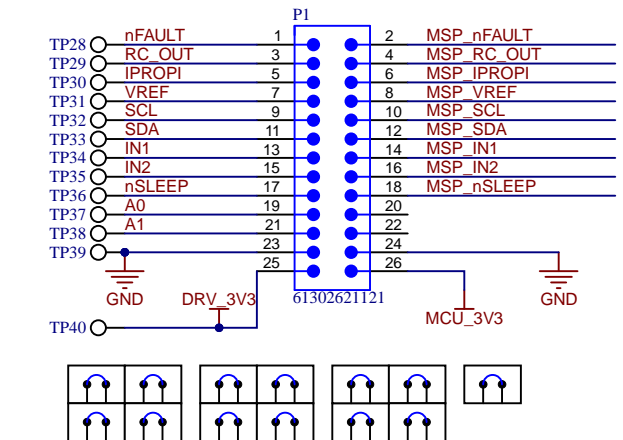
Main Signal Header



The diagram illustrates the Main Signal Header (P1) with 26 pins. The connections are as follows:

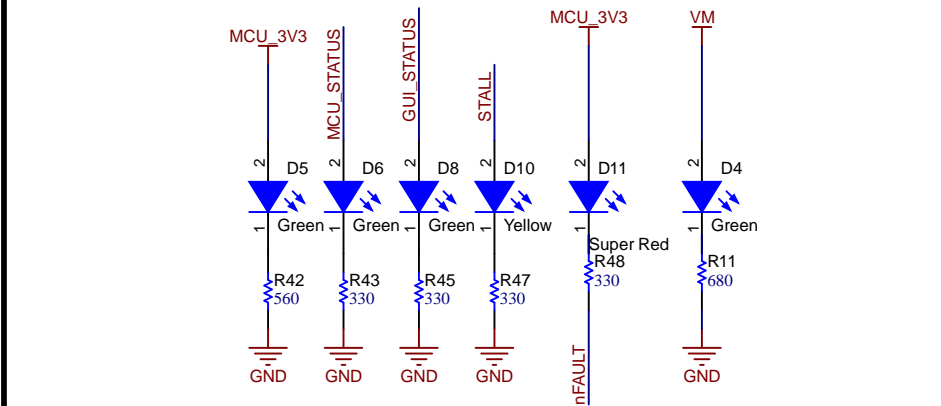
- TP28:** nFAULT (Pin 1)
- TP29:** RC_OUT (Pin 3)
- TP30:** IPROPI (Pin 5)
- TP31:** VREF (Pin 7)
- TP32:** SCL (Pin 9)
- TP33:** SDA (Pin 11)
- TP34:** IN1 (Pin 13)
- TP35:** IN2 (Pin 15)
- TP36:** nSLEEP (Pin 17)
- TP37:** A0 (Pin 19)
- TP38:** A1 (Pin 21)
- TP39:** GND (Pin 23)
- TP40:** GND (Pin 25)
- MSP nFAULT:** (Pin 2)
- MSP RC_OUT:** (Pin 4)
- MSP IPROPI:** (Pin 6)
- MSP VREF:** (Pin 8)
- MSP SCL:** (Pin 10)
- MSP SDA:** (Pin 12)
- MSP IN1:** (Pin 14)
- MSP IN2:** (Pin 16)
- MSP nSLEEP:** (Pin 18)
- DRV_3V3:** (Pin 25)
- MCU_3V3:** (Pin 26)

The header is labeled P1 and includes pin numbers 1 through 26. Ground connections are shown for pins 23, 25, and 26. The diagram also shows four 2x2 grids of pins, each with a blue arrow pointing to the top-right pin, indicating a specific connection point.



LEDS

The diagram shows six LEDs connected to different MCU pins and ground. Each LED is represented by a blue triangle with two arrows pointing outwards, indicating light emission. The pins are labeled in red text above the LEDs: MCU_3V3, MCU_STATUS, GUI_STATUS, STALL, MCU_3V3, and VM. The LEDs are labeled in black text above the triangles: D5, D6, D8, D10, D11, and D4. The colors of the LEDs are indicated in black text below the triangles: Green, Green, Green, Yellow, Super Red, and Green. Each LED is connected to ground (GND) through a resistor. The resistors are labeled in blue text below the LEDs: R42 (560), R43 (330), R45 (330), R47 (330), R48 (330), and R11 (680). The ground symbols are shown in red at the bottom of each LED circuit.



RST/PUSH Button

MCU_3V3

Reset Circuit

R19
47k

RST/SBWTDIO

C59
1nF
100V

GND

DEFAULT
PINS 1-2

J6

1 2 3

RST/SBWTDIO 1 2

PUSH

S1

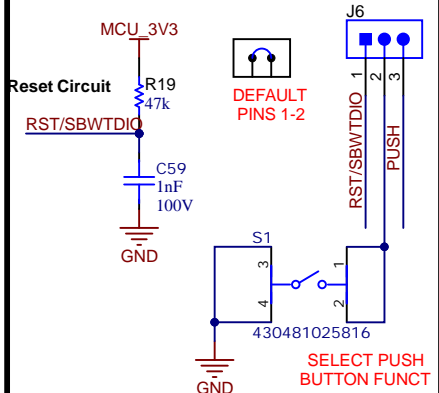
3 4

1 2 3

430481025816

GND

SELECT PUSH
BUTTON FUNCT



Device ID Resistor

The resistors on the ID[2:0] nets inform the firmware which device ID variant is on this board

Device	ID1	ID2
DRV8213	1	1
DRV8214	1	0
DRV8234	0	0
DRV8215	0	1
DRV8235	Hi-Z	0

MD068-001

Type	ID3
PreRelease	0
Release	1

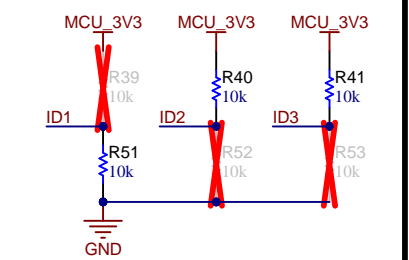
The diagram illustrates the hardware configuration for device identification. It shows three signal lines, ID1, ID2, and ID3, each connected to a 3V3 supply through a pull-up resistor (R39, R40, R41) and to ground through a pull-down resistor (R51, R52, R53). The presence or absence of the pull-up resistors (R39, R40, R41) determines the ID1 and ID2 values for different device variants. For example, the DRV8213 variant has all three pull-up resistors, resulting in ID1=1, ID2=1, and ID3=1. The DRV8214 variant lacks R39, resulting in ID1=1, ID2=0, and ID3=1. The DRV8234 variant lacks both R39 and R40, resulting in ID1=0, ID2=0, and ID3=1. The DRV8215 variant lacks R41, resulting in ID1=0, ID2=1, and ID3=1. The DRV8235 variant has no pull-up resistors, resulting in ID1=Hi-Z, ID2=0, and ID3=1.

The resistors on the ID[2:0] nets inform the firmware which device ID variant is on this board

Device.	ID1	ID2
DRV8213	1	1
DRV8214	1	0
DRV8234	0	0
DRV8215	0	1
DRV8235	Hi-Z	0

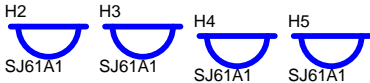
MD068-001

Type	ID3
Prerelease	0
Release	1





PCB Number: MD069
PCB Rev: C



LBL1
PCB Label
THT-14-423-10
Size: 0.65" x 0.20 "

Label Table	
Variant	Label Text
001	DRV8214EVM
002	DRV8234EVM
003	DRV8215EVM
004	DRV8235EVM

ZZ1
Assembly Note
These assemblies are ESD sensitive, ESD precautions shall be observed.

ZZ2
Assembly Note
These assemblies must be clean and free from flux and all contaminants. Use of no clean flux is not acceptable.

ZZ3
Assembly Note
These assemblies must comply with workmanship standards IPC-A-610 Class 2, unless otherwise specified.

ZZ4
Label Assembly Note
This Assembly Note is for PCB labels only

1

2

3

4

5

6