

Title Block Diagram

Size	Number	Revision
A4	1	
Date:	2-04-2026	Sheet of
File:	C:\Users\.\Block-Diagram.SchDoc	Drawn By: Nilay N

A

A

B

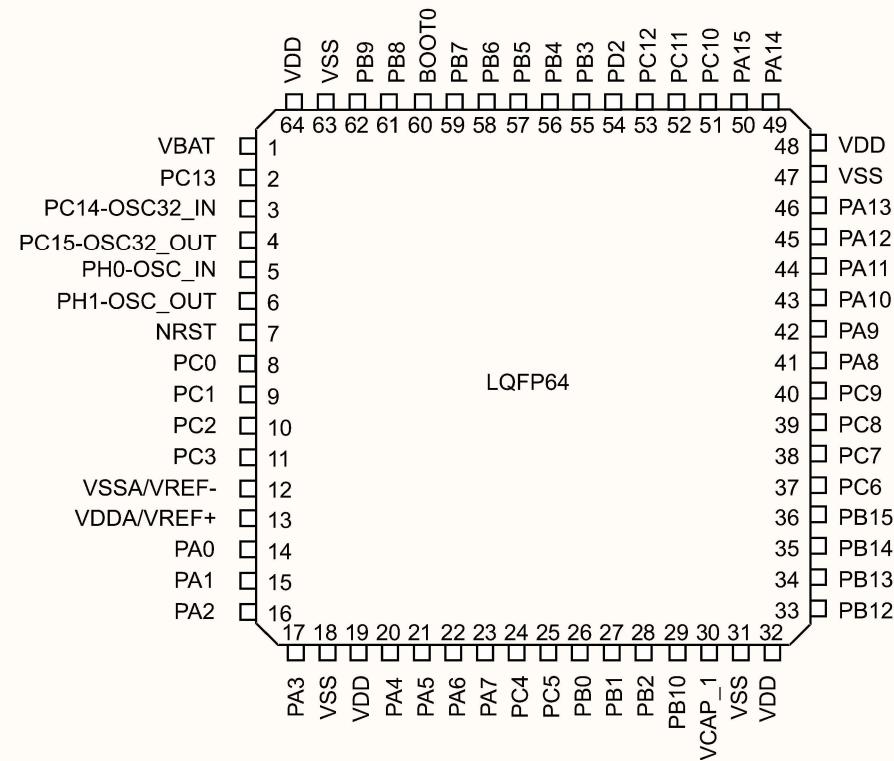
B

C

C

D

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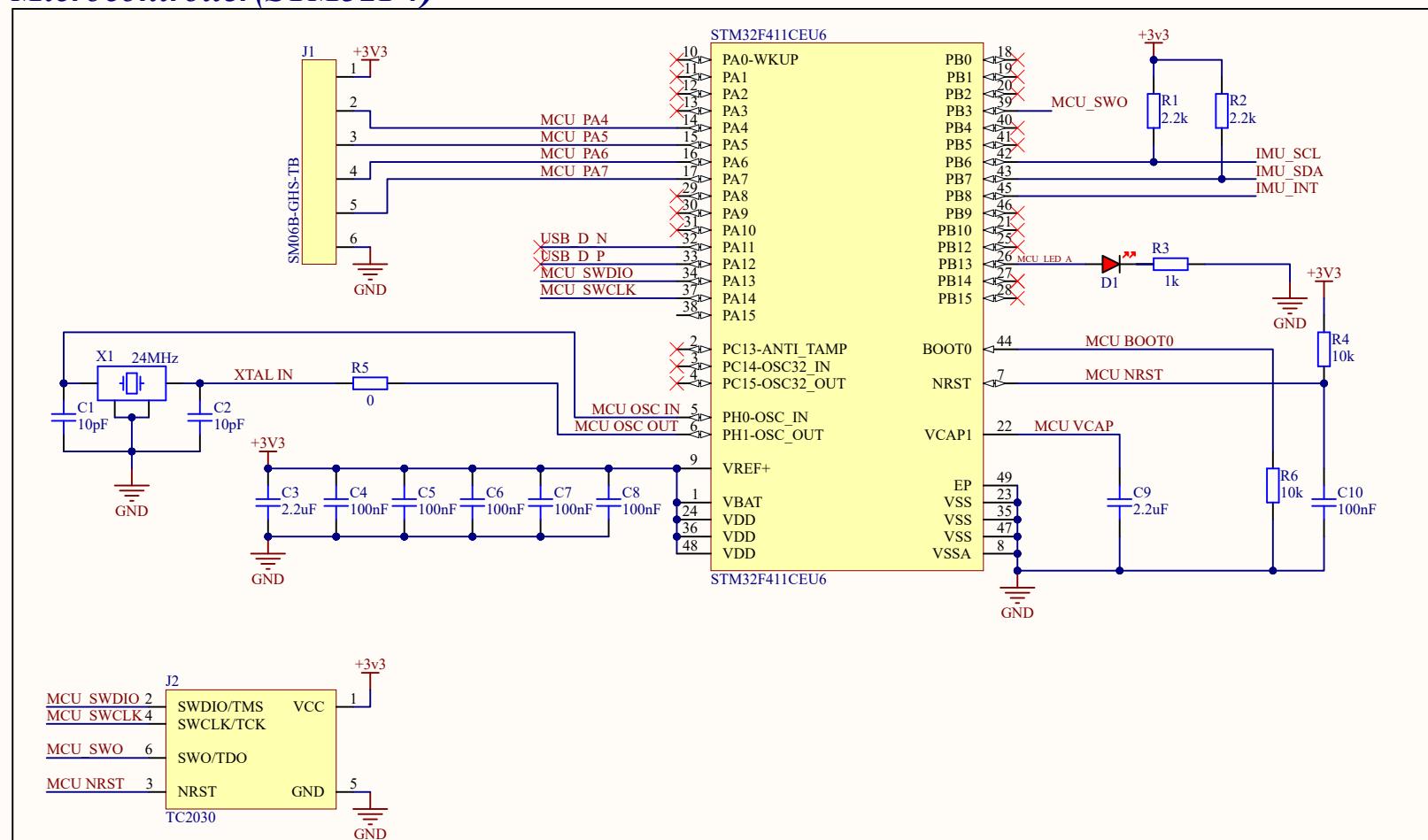


Title STM-32 Pinouts

Size	Number	Revision
A4	1	
Date:	2-04-2026	Sheet of
File:	C:\Users\Nilay N\Stm32 Pinouts.SchDoc	Drawn By: Nilay N

A

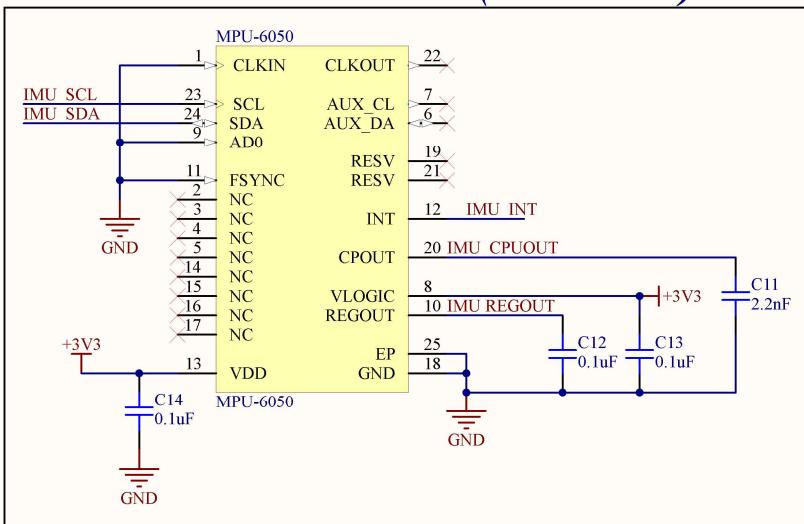
## Microcontroller(STM32F4)



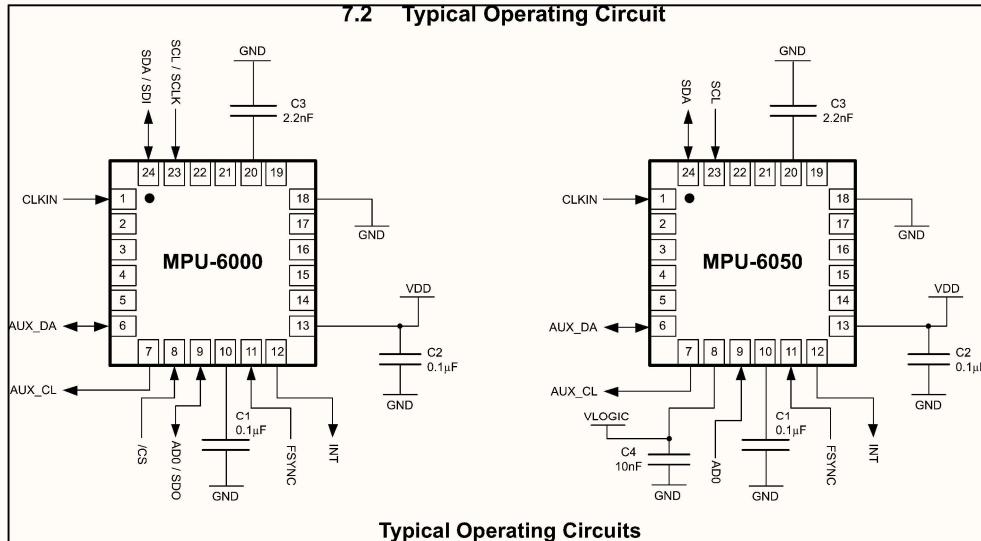
Title Microcontroller(STM32F4)

Size	Number	Revision
A4		
Date: 2-04-2026	Sheet of	
File: C:\Users\.\STM32 MCU.SchDoc		Drawn By: Nilay N

## Inertial Measurement Unit (MPU-6050)



### 7.2 Typical Operating Circuit



### 7.3 Bill of Materials for External Components

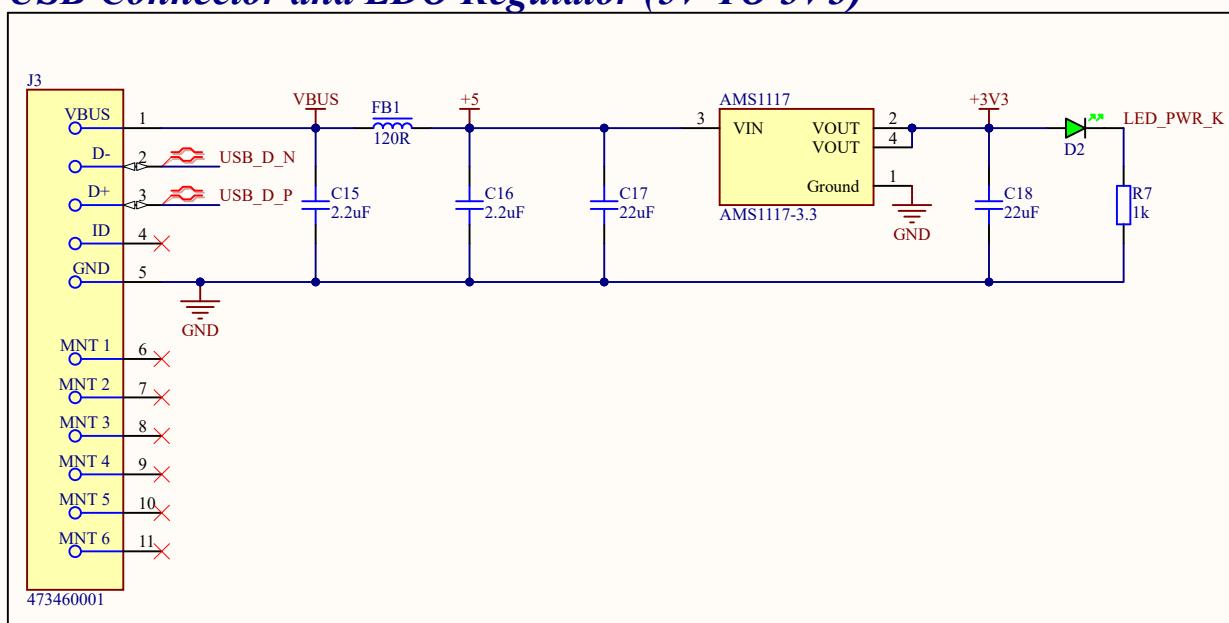
Component	Label	Specification	Quantity
Regulator Filter Capacitor (Pin 10)	C1	Ceramic, X7R, 0.1µF ±10%, 2V	1
VDD Bypass Capacitor (Pin 13)	C2	Ceramic, X7R, 0.1µF ±10%, 4V	1
Charge Pump Capacitor (Pin 20)	C3	Ceramic, X7R, 2.2nF ±10%, 50V	1
VLOGIC Bypass Capacitor (Pin 8)	C4*	Ceramic, X7R, 10nF ±10%, 4V	1

\* MPU-6050 Only.

Title MPU 6050

Size	Number	Revision
A4		
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File:	C:\Users...\MPU-6050.SchDoc	Drawn By:

## USB Connector and LDO Regulator (5V TO 3V3)



A

A

B

B

C

C

D

D

Title USB and LDO

Size	Number	Revision
A4		
Date:	2-04-2026	Sheet of
File:	C:\Users\.\Power.SchDoc	Drawn By: