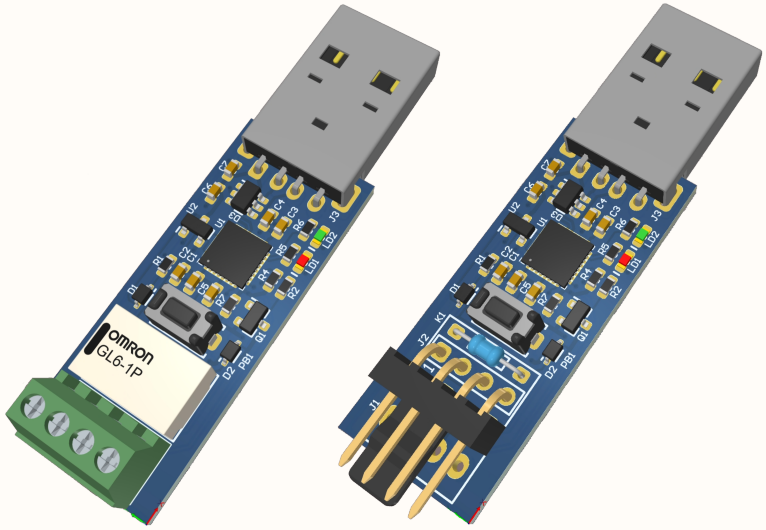
USB Controlled Relay

Variant: [No Variations]

Revision: A

RELEASED Mar-01-2025



RevisionHistory

MainSchematics

DESIGN CONSIDERATIONS

DESIGN NOTE:
Example text for informational design notes.

DESIGN NOTE:
Example text for critical design notes.

DESIGN NOTE:
Example text for cautionary design notes.

LAYOUT NOTE:
Example text for critical layout guidelines.

Project: *USB Controlled Relay*		Revision: *A*
Title:		
Sheet 1 of 3	Date: Mar-01-2025	Author: Alfredo Cortellini

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REVISION HISTORY

DATE	*PAGES*	*REVISION*
Mar-01-2025	**N/A**	**Initial release A**
TO DO	**3**	**Do some testing in order to remove Pull Down MAN_SW and COIL_CTL**
TO DO	**3**	**Add an input feedback when PWM Fan and Servo mode. This feediback will reverse the polarity of the PWM**

Project: *USB Controlled Relay*			Revision: *A*
Title: **Revision History**			
Sheet 2 of 3	Date: Mar-01-2025	Author: Alfredo Cortellini	

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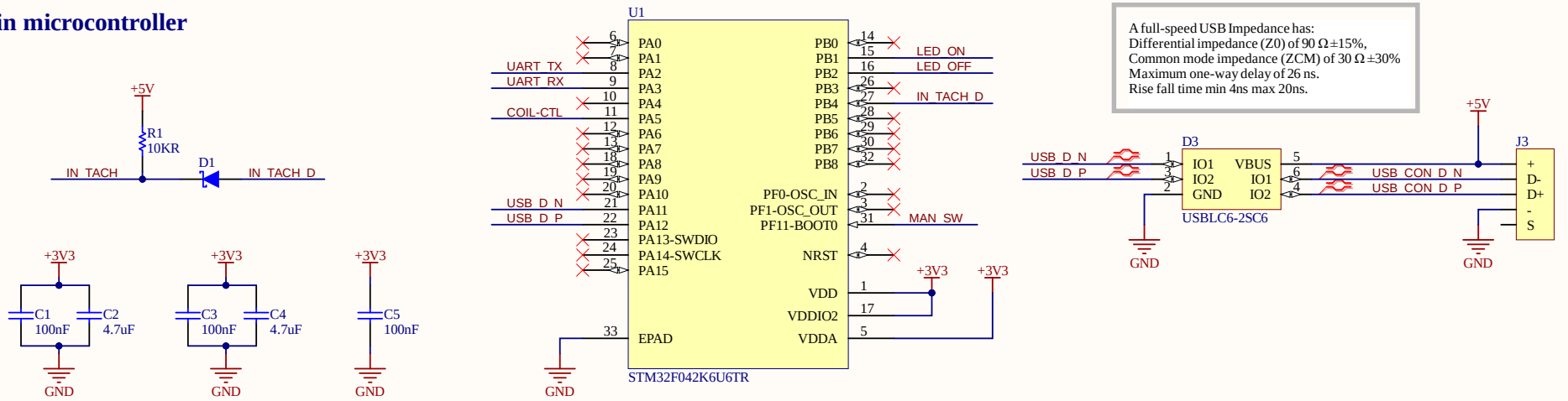
Main microcontroller



A full-speed USB Impedance has:
Differential impedance (Z0) of 90 Ω ±15%,
Common mode impedance (ZCM) of 30 Ω ±30%
Maximum one-way delay of 26 ns.
Rise fall time min 4ns max 20ns.

Option 1:
To use clean contact relay
Install J1, K1 Remove J2, R3

Option 2:
To power a 5V SSR short B6
Install J1, K1 Remove J2, R3
Pin 2: SSR +
GND: SSR -

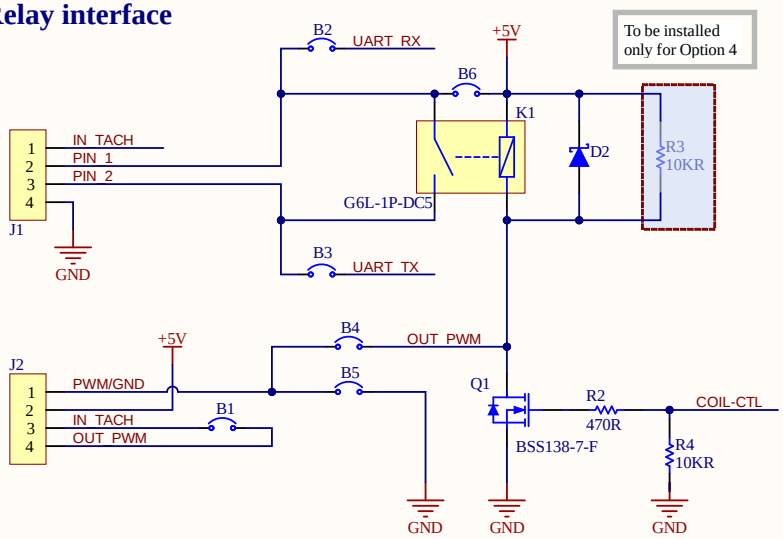
Option 3:
To power 3 or 2 pin FAN short B4
Install J2 Remove J1, K1, R3

Option 4:
To power 4 pin PWM FAN short B5
Install J2 Remove J1, K1
Install R3 on K1 coil holes

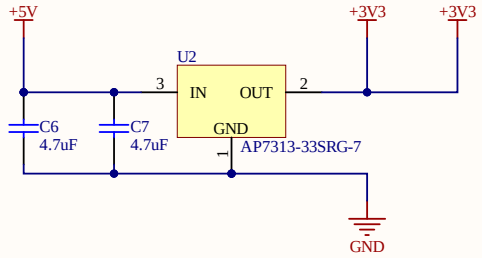
Option 5:
To power a servo short B5, B1
Install J2 Remove J1, K1, R3

Option 6:
To connect UART short B2, B3
Install J1 Remove J2, K1, R3
Pin 1: RX
Pin 2: TX

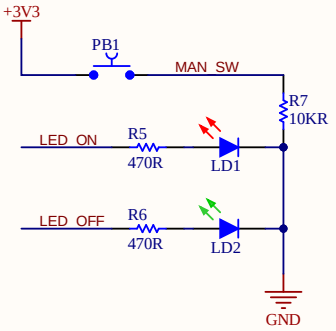
Relay interface



Power Supply



LED Status & Switch interface



Project: *USB Controlled Relay*			Revision: *A*
Title: **Main Schematics**			
Sheet 3 of 3	Date: Mar-01-2025	Author: Alfredo Cortellini	

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