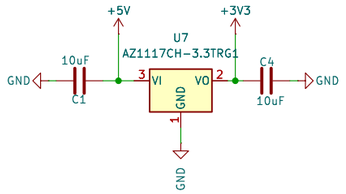
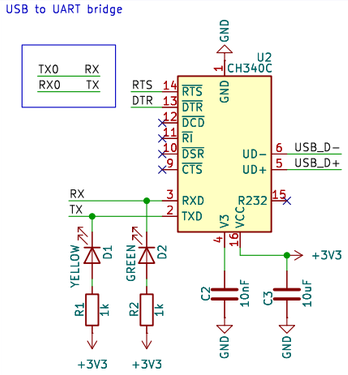
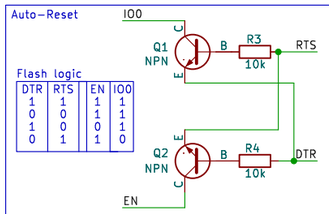
5V -> 3.3V Linear voltage regulator



USB to UART bridge



Auto-Reset



Flash logic

DTR	RTS	EN	IO0
1	1	1	1
0	0	1	1
1	0	0	1
0	1	1	0

Strapping pins

Pin	Default	Run	Bootloader
IO0	Pull-up	1	0
IO3	Floating	Don't-care	Don't-care
IO45	Pull-down	Don't-care	Don't-care
IO46	Pull-down	Don't-care	0

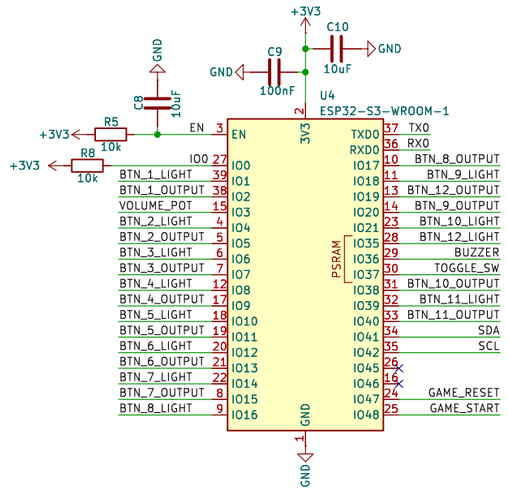
IO0 and IO46 are used to configure the booting mode

IO3 and IO45 can be combined with certain EFUSE parameters respectively control specific JTAG/SPI behaviours

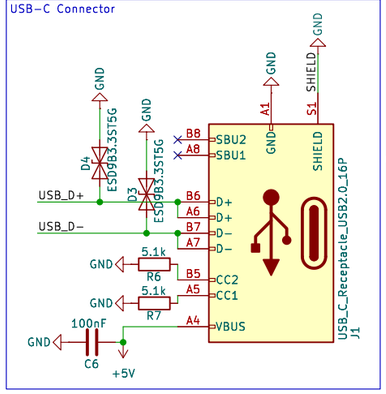
If DTR is LOW:
Changing RTS from HIGH to LOW
will cause the ESP to switch to run mode

If RTS is HIGH:
Changing DTR from LOW to HIGH
will cause the ESP to switch to the bootloader

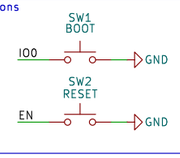
ESP32



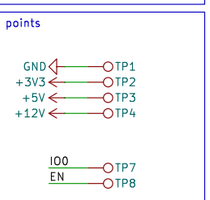
USB-C Connector



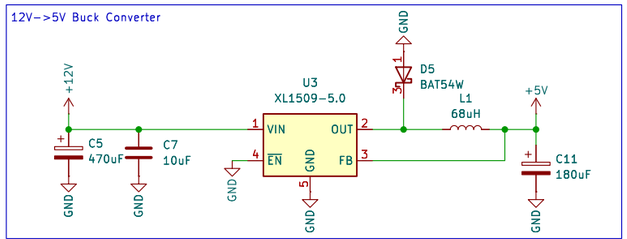
Buttons



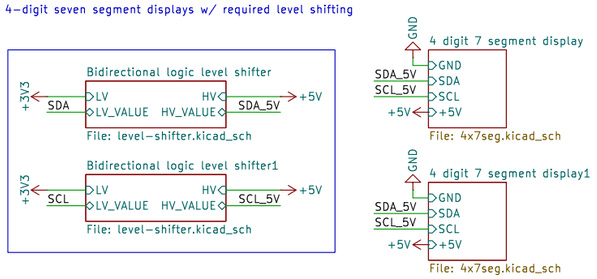
Test points



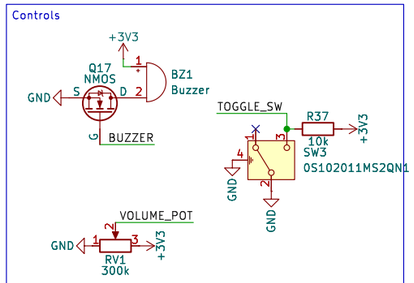
12V->5V Buck Converter



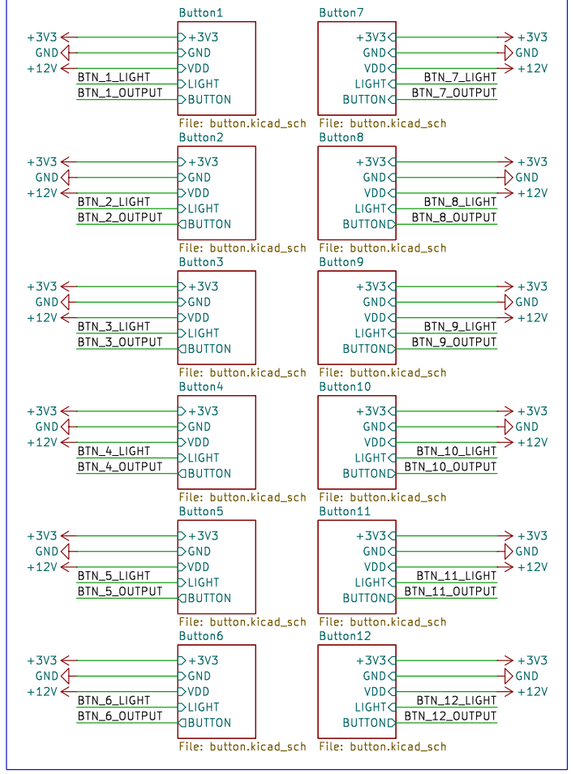
2x 4-digit seven segment displays w/ required level shifting



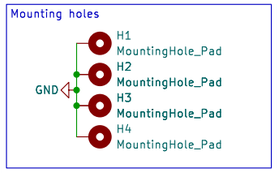
Controls



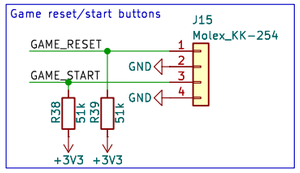
Button connectors



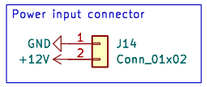
Mounting holes



Game reset/start buttons



Power input connector



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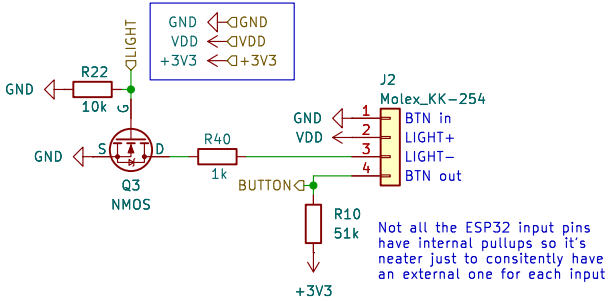
KiCad E.D.A. 9.0.0	Id: 1/17



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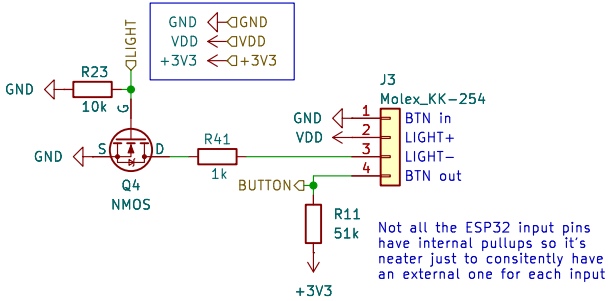
KiCad E.D.A. 9.0.0		Id: 2/17



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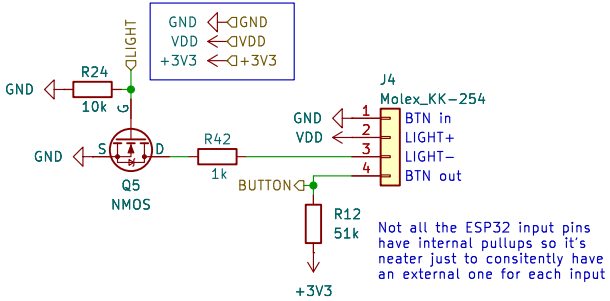
KiCad E.D.A. 9.0.0		Id: 3/17



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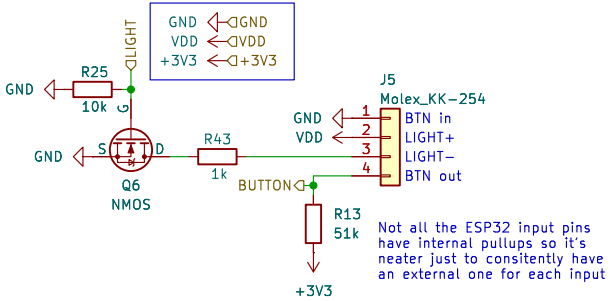
KiCad E.D.A. 9.0.0		Id: 4/17



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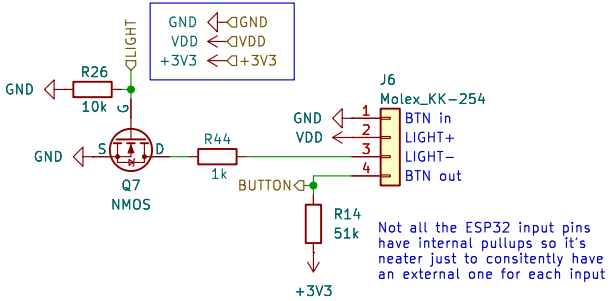

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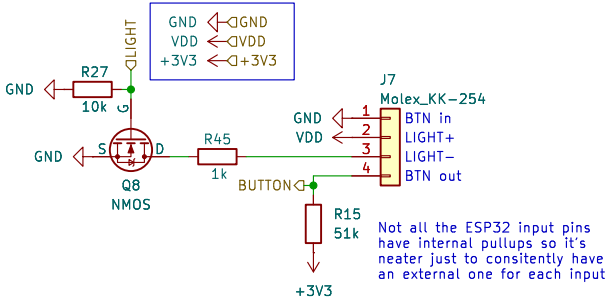

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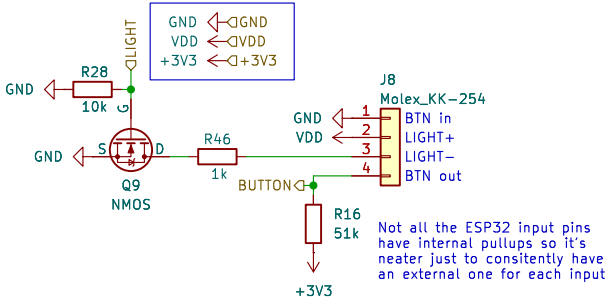
KiCad E.D.A. 9.0.0		Id: 7/17



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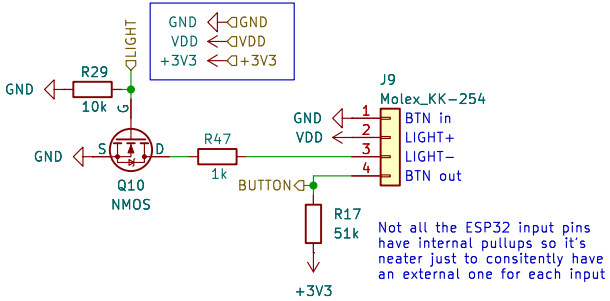

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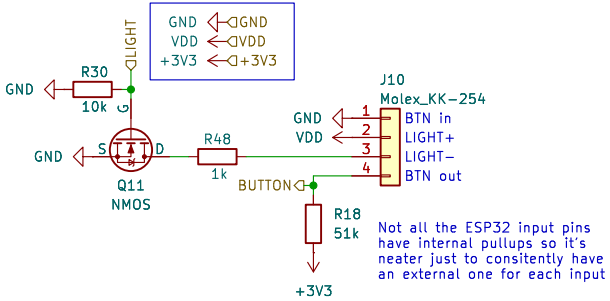
KiCad E.D.A. 9.0.0		Id: 9/17



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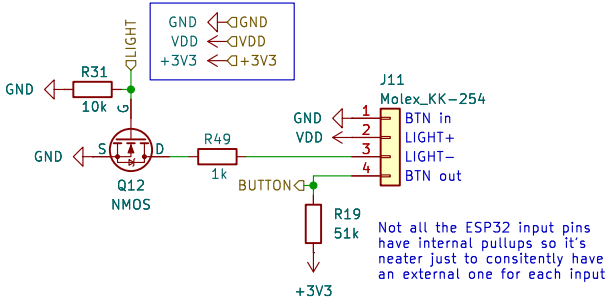

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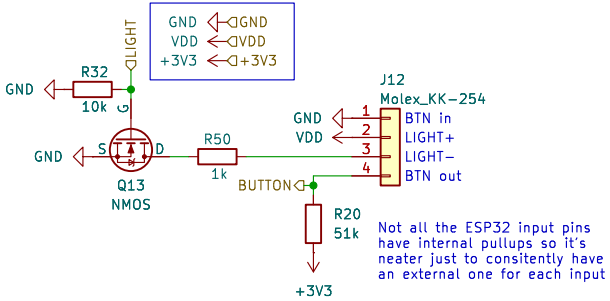

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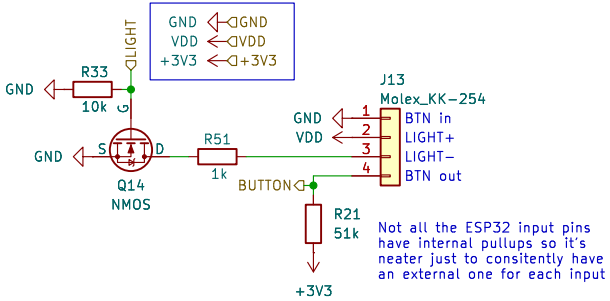

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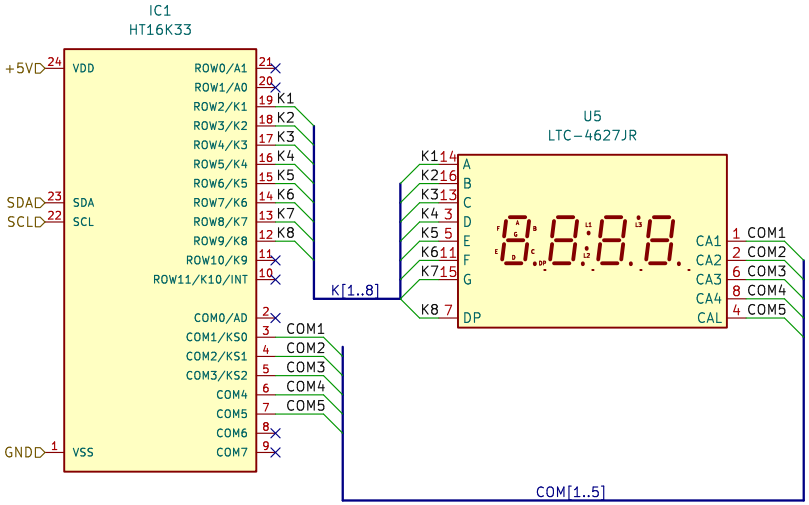

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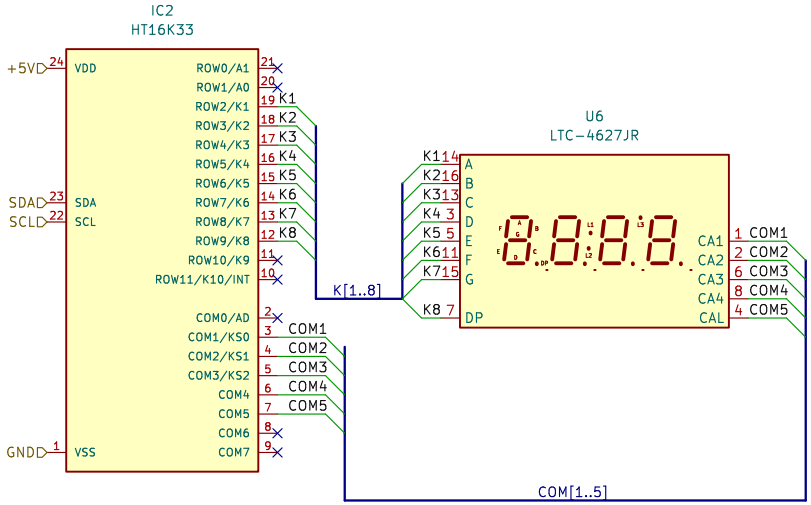

Sheet: /4 digit 7 segment display1/		
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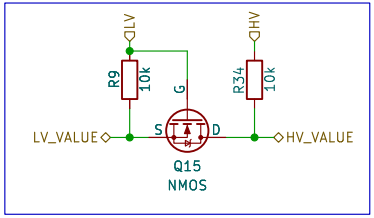
KiCad E.D.A. 9.0.0		Id: 15/17

Copied from SparkFun's breakout board (thanks!)
http://cdn.sparkfun.com/datasheets/BreakoutBoards/Logic_Level_Bidirectional.pdf



Sheet: /Bidirectional logic level shifter/
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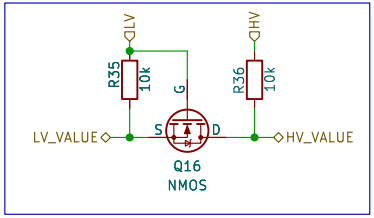
Size: A5	Date:	**Rev:**
KiCad E.D.A. 9.0.0		Id: 16/17

Copied from SparkFun's breakout board (thanks!)
http://cdn.sparkfun.com/datasheets/BreakoutBoards/Logic_Level_Bidirectional.pdf



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