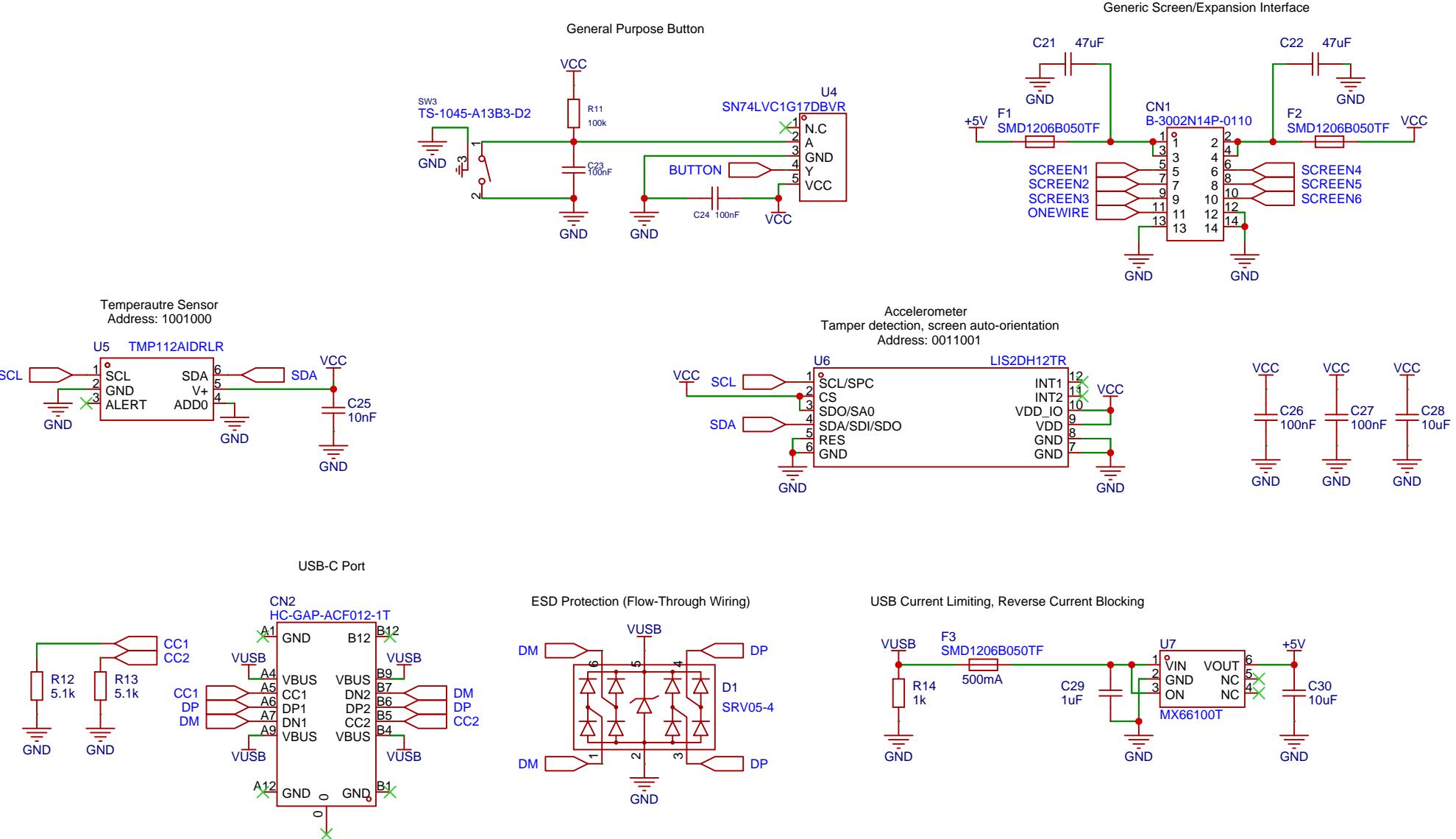
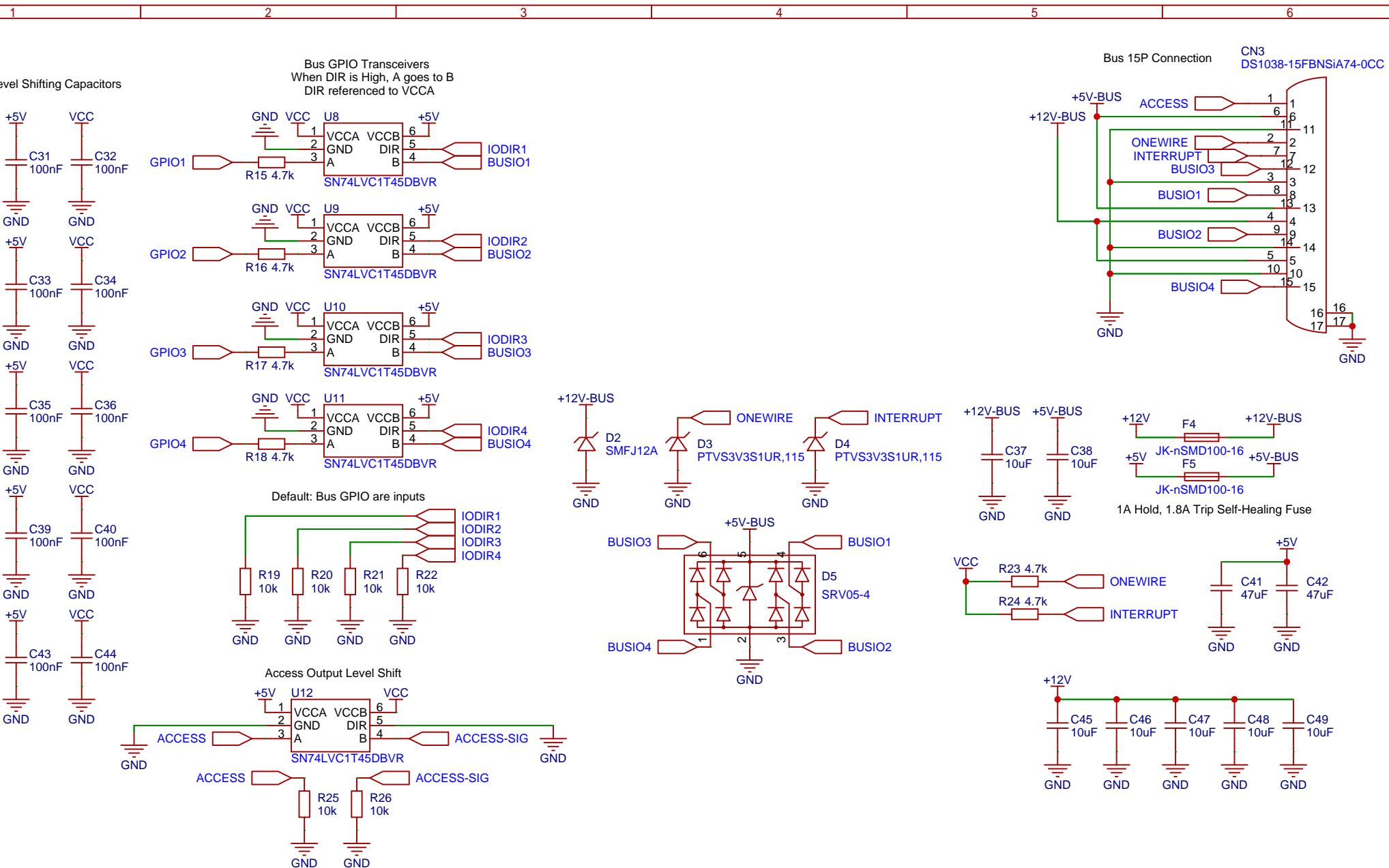


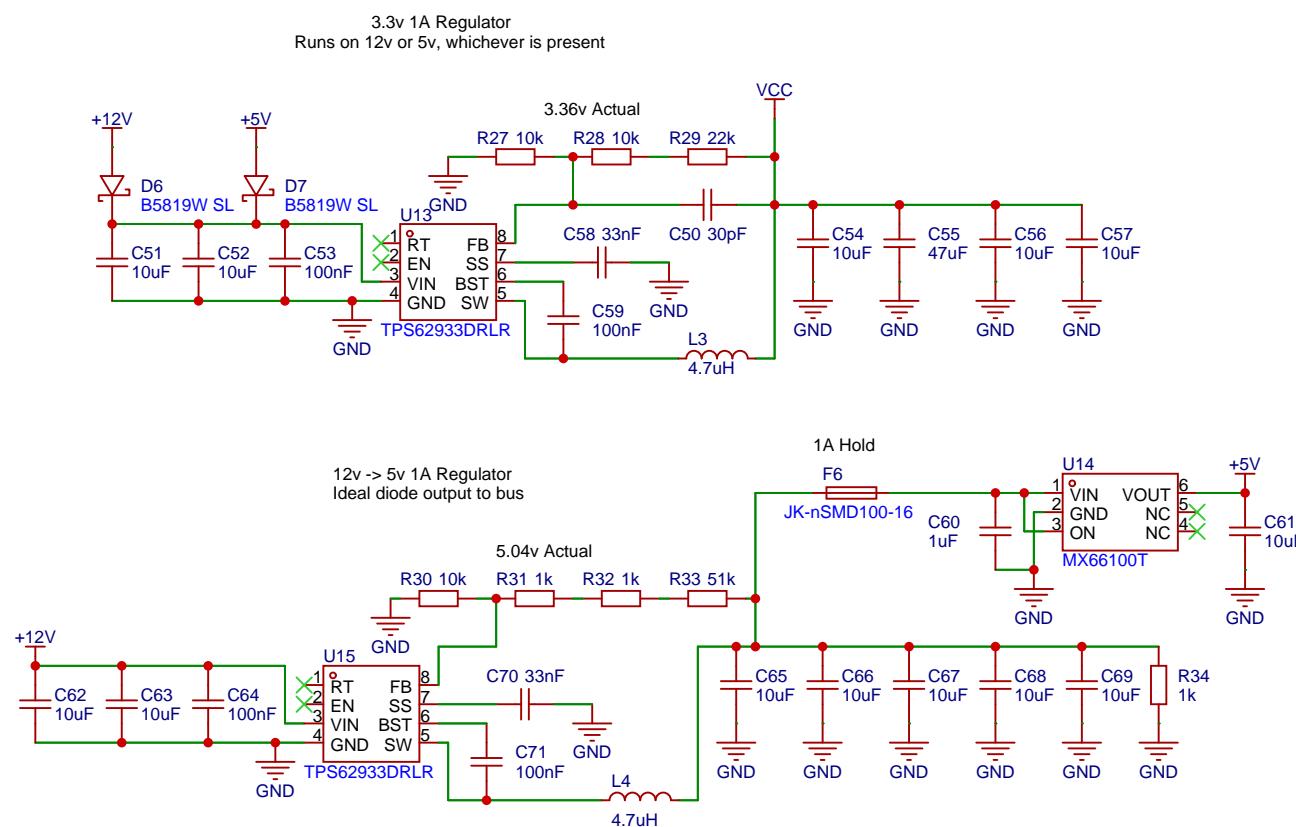
Schematic Page	NFC Reader	Page Number
Source Link	https://github.com/rit-construct-makerspace/access-control-hardware	Total Pages
Version	3.0.0	7
RIT SHED	Access Control Core NFC Card Reader	
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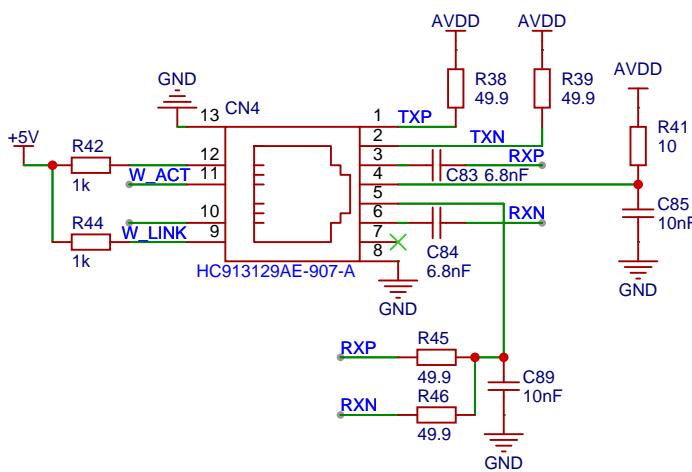
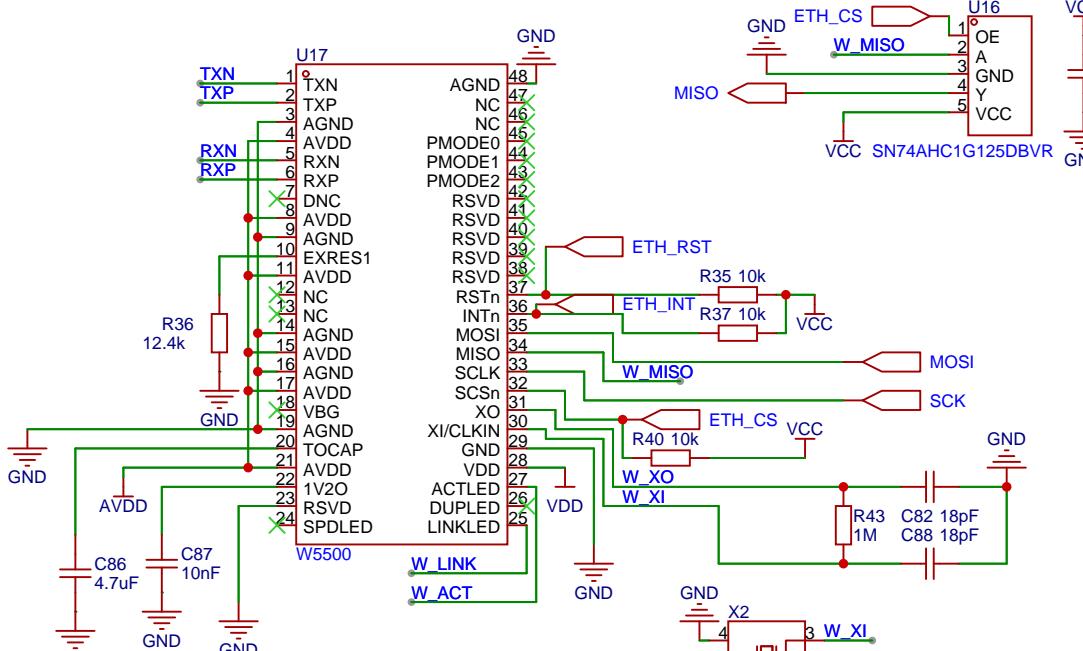
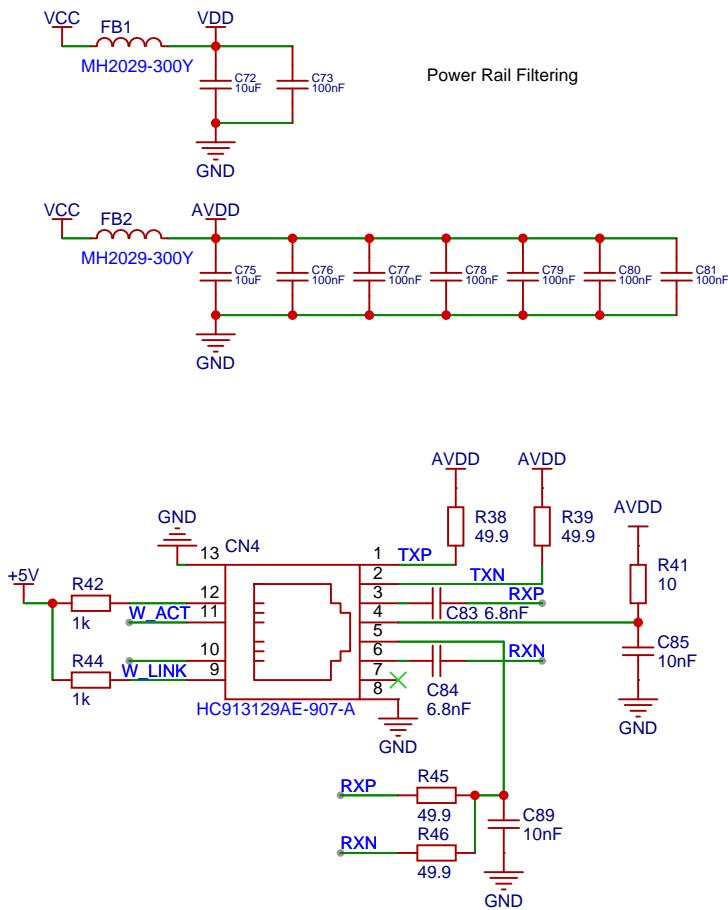
Schematic Page	Interfaces	Page Number	2
Source Link	https://github.com/rit-construct-makerspace/access-control-hardware	Total Pages	7
Version	3.0.0	Access Control Core NFC Card Reader	
RIT SHED		Licensed Under CERN-OHL-S 2.0	



Schematic Page	Bus Connection	Page Number
Source Link	https://github.com/rit-construct-makerspace/access-control-hardware	Total Pages
Version	3.0.0	7
RIT SHED	Access Control Core NFC Card Reader	Licensed Under CERN-OHL-S 2.0

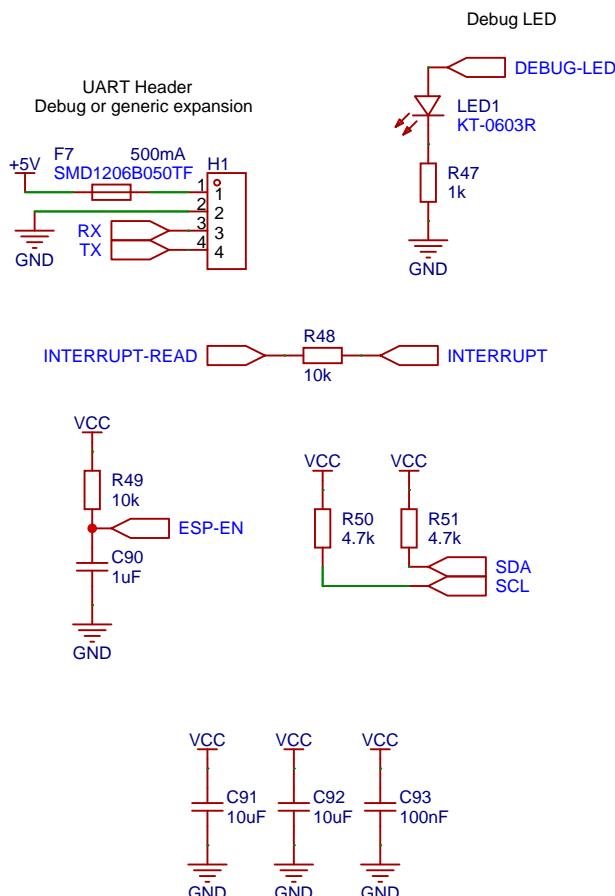
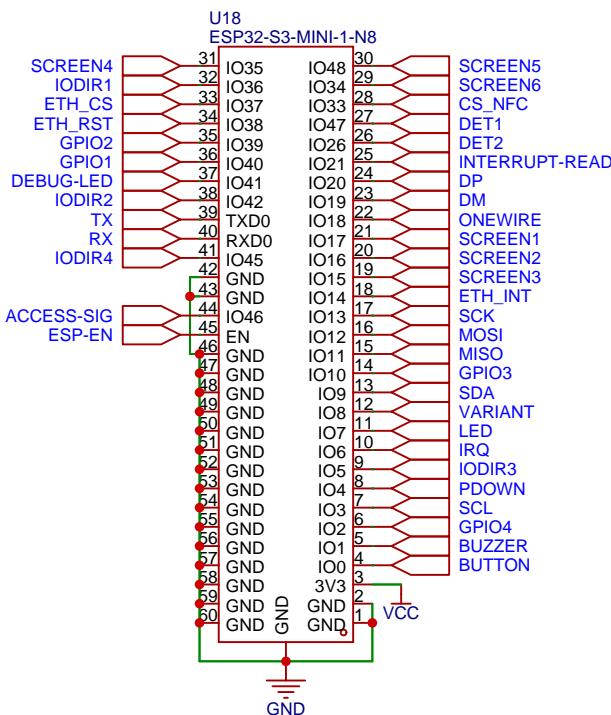


Schematic Page	Regulators	Page Number	4
Source Link	https://github.com/rit-construct-makerspace/access-control-hardware	Total Pages	7
Version	3.0.0	Access Control Core NFC Card Reader	
RIT SHED		Licensed Under CERN-OHL-S 2.0	



Schematic Page	Ethernet	Page Number	5
Source Link	https://github.com/rit-construct-makerspace/access-control-hardware	Total Pages	7
Version	3.0.0	Access Control Core NFC Card Reader	
RIT SHED		Licensed Under CERN-OHL-S 2.0	

GPIO0 HIGH sets SPI boot
GPIO0 and GPIO46 LOW sets firmware update mode
GPIO45 must be LOW on boot - flash voltage level
GPIO3 HIGH on boot - JTAG via USB



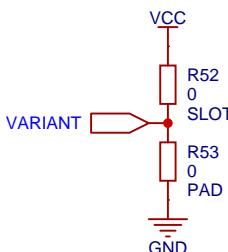
Schematic Page	Microcontroller		Page Number	6
Source Link	https://github.com/rit-construct-makerspace/access-control-hardware		Total Pages	7
Version	3.0.0	Access Control Core NFC Card Reader		
RIT	SHED	Licensed Under CERN-OHL-S 2.0		
3	4	5	6	

The Card Slot hardware can be easily repurposed as hardware for a Tap Pad.

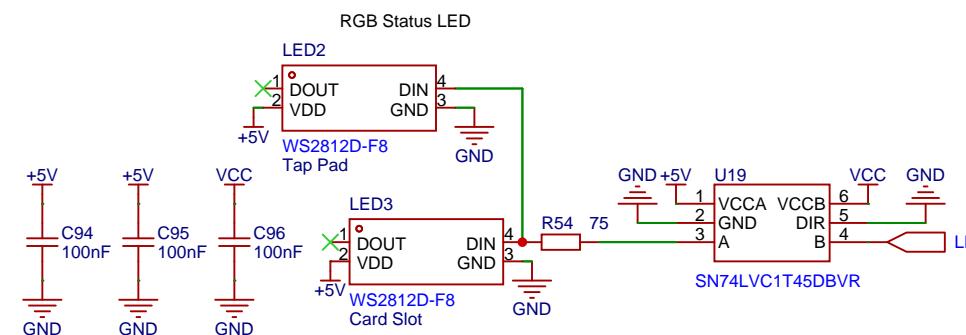
To convert from a card s

Move jumper resistors

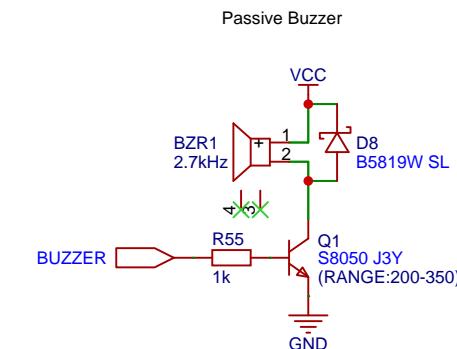
Move RGB LED to LED2 position
Replace side fire button with top fire



This is how the MCU knows to act as a tap pad
HIGH: Card slot
LOW: Tap pad



This improves visibility, with the light facing towards the user.



Side Firing: MLT-8540 (C95300)
Top Firing: MLT-8540H (C95298)

This improves sound perception, since it will fire directly towards the user.

Schematic Page	Tap Variant	Page Number	7
Source Link	https://github.com/rit-construct-makerspace/access-control-hardware	Total Pages	7
Version	3.0.0	Access Control Core NFC Card Reader	
RIT SHED		Licensed Under CERN-OHL-S 2.0	