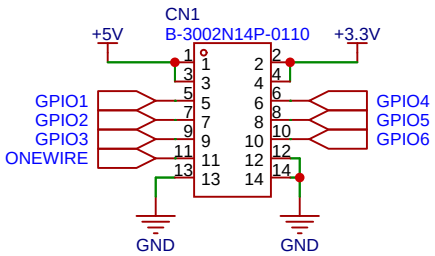
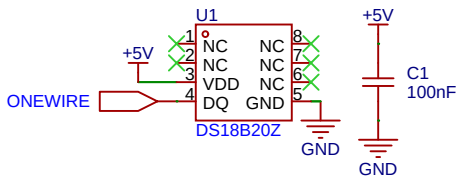
Access Control Core - RGB Screen
Screen daughterboard based on NHD 128x64 RGB COG Screen
NHD-C12864DA-FSRGB-FBW-3V3
NHD-C12864DA-FSW-FBW-3V3
Standard wire interface for other screens
Exposes 6 raw GPIO, no designated assignments
Allows for SPI, i2C, or UART based on what's needed
5v, 3.3v rails
Onewire connection for EEPROM
Tells Core how to treat the IO, what kind of screen, etc.

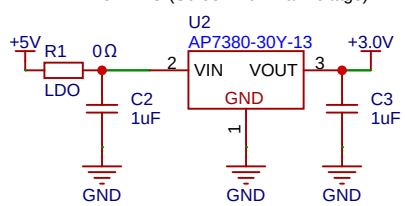
Screen Interface



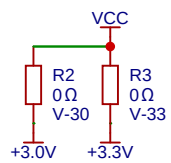
OneWire EEPROM/Temp Sensor



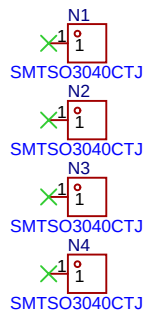
3V LDO (Screen Nominal Voltage)



Bypass LDO



Mounting



Schematic Page	Interfaces	Page Number	1
Source Link	https://github.com/rit-construct-makerspace/access-control-hardware	Total Pages	3
Version	3.0.0		

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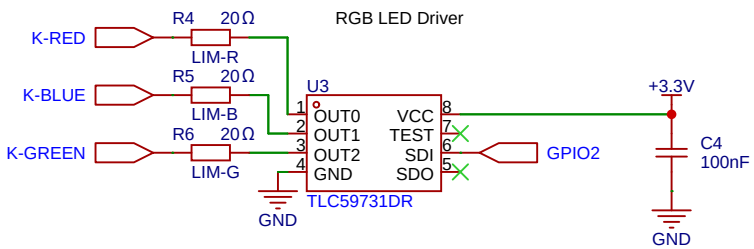
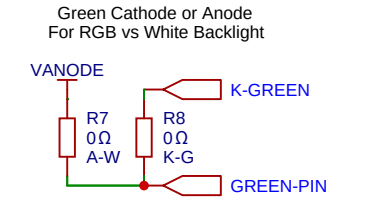
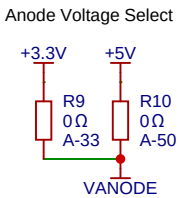
Access Control Core
RGB Screen Add-On





When running a screen with white backlight,
RED Cathode becomes the backlight cathode.



Schematic Page	Backlighting	Page Number	2
Source Link	https://github.com/rit-construct-makerspace/access-control-hardware	Total Pages	3
Version	3.0.0		

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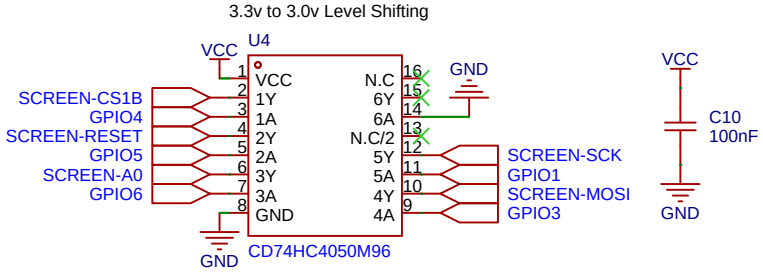
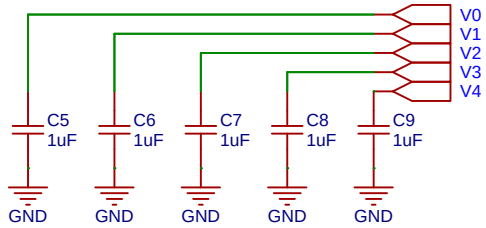
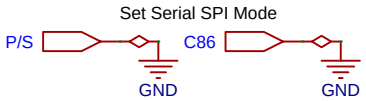
Access Control Core
RGB Screen Add-On

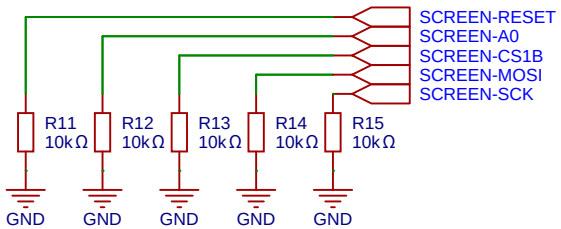


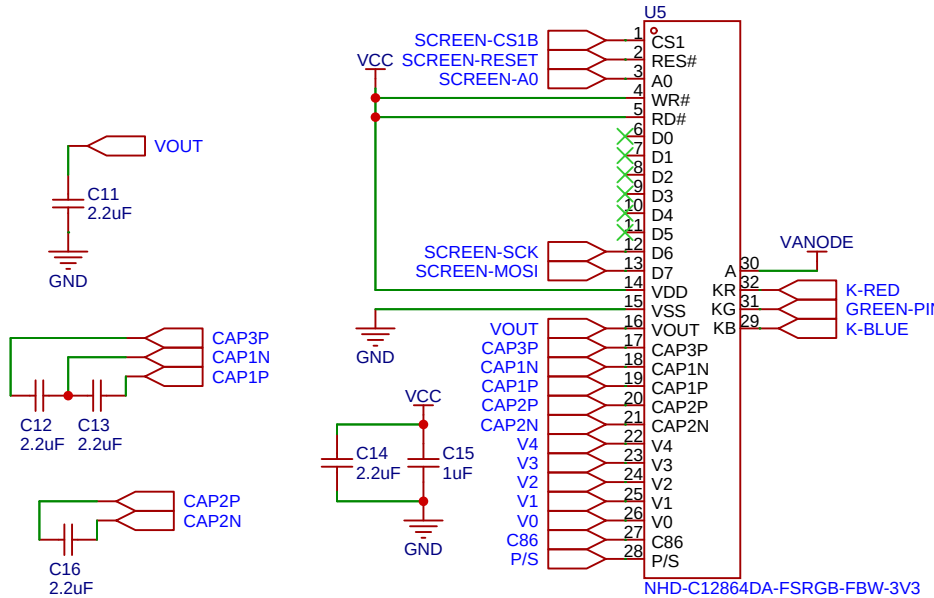




Note:

- Some MPU will set the interface to be Hi-Z (high impedance) mode when power saving mode or after hardware reset. This is not allowed when the VDD of ST7565R is turned ON. Because the floating input (especially for those control pins such as CS1B, CS2, RSTB, RWR or ERD…) maybe cause abnormal latch and cause abnormal display.





Schematic Page	Screen	Page Number	3
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Version	3.0.0		

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Access Control Core
RGB Screen Add-On