Drivers-

[MAX6954](https://www.digikey.com/en/products/base-product/maxim-integrated/175/MAX6954/20405)-web page with selection

[MAX6954AAX+](https://www.digikey.com/en/products/detail/maxim-integrated/MAX6954AAX/948164)

[MAX6954ATL+](https://www.digikey.com/en/products/detail/maxim-integrated/MAX6954ATL/1512596)

[MAX6954APL+](https://www.digikey.com/en/products/detail/maxim-integrated/MAX6954APL/950809)

[MAX6954AAX](https://www.digikey.com/en/products/detail/maxim-integrated/MAX6954AAX/520242)

[MAX6954APL](https://www.digikey.com/en/products/detail/maxim-integrated/MAX6954APL/520243)

[MAX6954AAX+T](https://www.digikey.com/en/products/detail/maxim-integrated/MAX6954AAX-T/1514512)

[MAX6954ATL+T](https://www.digikey.com/en/products/detail/maxim-integrated/MAX6954ATL-T/1519372)

[MAX6955](https://www.digikey.com/en/products/filter/pmic-display-drivers/729?s=N4IgTCBcDaILIEEAaA2AnAVgyAugXyA)-web page with selection

[MAX6955AAX+T](https://www.digikey.com/en/products/detail/maxim-integrated/MAX6955AAX-T/1514500)

[MAX6955ATL+](https://www.digikey.com/en/products/detail/maxim-integrated/MAX6955ATL/1512763)

[MAX6955AAX+](https://www.digikey.com/en/products/detail/maxim-integrated/MAX6955AAX/948165)

[MAX6955ATL+T](https://www.digikey.com/en/products/detail/maxim-integrated/MAX6955ATL-T/1519380)

[MAX6955APL+](https://www.digikey.com/en/products/detail/maxim-integrated/MAX6955APL/948166)

Note- im not entirely sure on the difference between the different models of the same type-different models should be very similar, from what i understand the MAX6955 is easier to control with arduino but i could be wrong-the included models are not all of them, there are more that aren't sold in digikey-mouser might have more options-There are also other models that are very similar that could work-some are considered “2 wire” while the ones above are “4 wire”

The drivers are both capable of driving 128 leds individually each meaning we could use 6 of them to control all the led outlines on the memory if we want to have each led outline be RGB leds- if only 1 color led outlines then we would only need 2

16 segment .8” display-

[Knightbright #1](https://www.mouser.com/ProductDetail/Kingbright/PSC08-11SRWA/?qs=VdjlWU%2FzoOF0UxFWhg4KfA%3D%3D)

[**Knightbrigth #2**](https://www.mouser.com/ProductDetail/Kingbright/PSC08-11EWA/?qs=VdjlWU%2FzoOEz%2FbczQXSyhQ%3D%3D)**- min 180 order quantity- one we bought**

[**Lumex #1**](https://www.mouser.com/ProductDetail/Lumex/LDS-F8006RI/?qs=9HInCHf8eFgP8F2Ggu2ERQ%3D%3D)

[**Lumex #2**](https://www.mouser.com/ProductDetail/Lumex/LDS-F8004RI/?qs=z5hCOXTvo54k0DJYgI%252B1zQ%3D%3D)

Drivers are only designed to drive common cathode LED displays-Only red, we could choose a different color-LEDs need to be single digit for it to work with the drivers

IC2 bus pin expander

[MCP23017](https://www.mouser.com/_/?Keyword=MCP23017&bws=1)