

# **LINOBYTE**

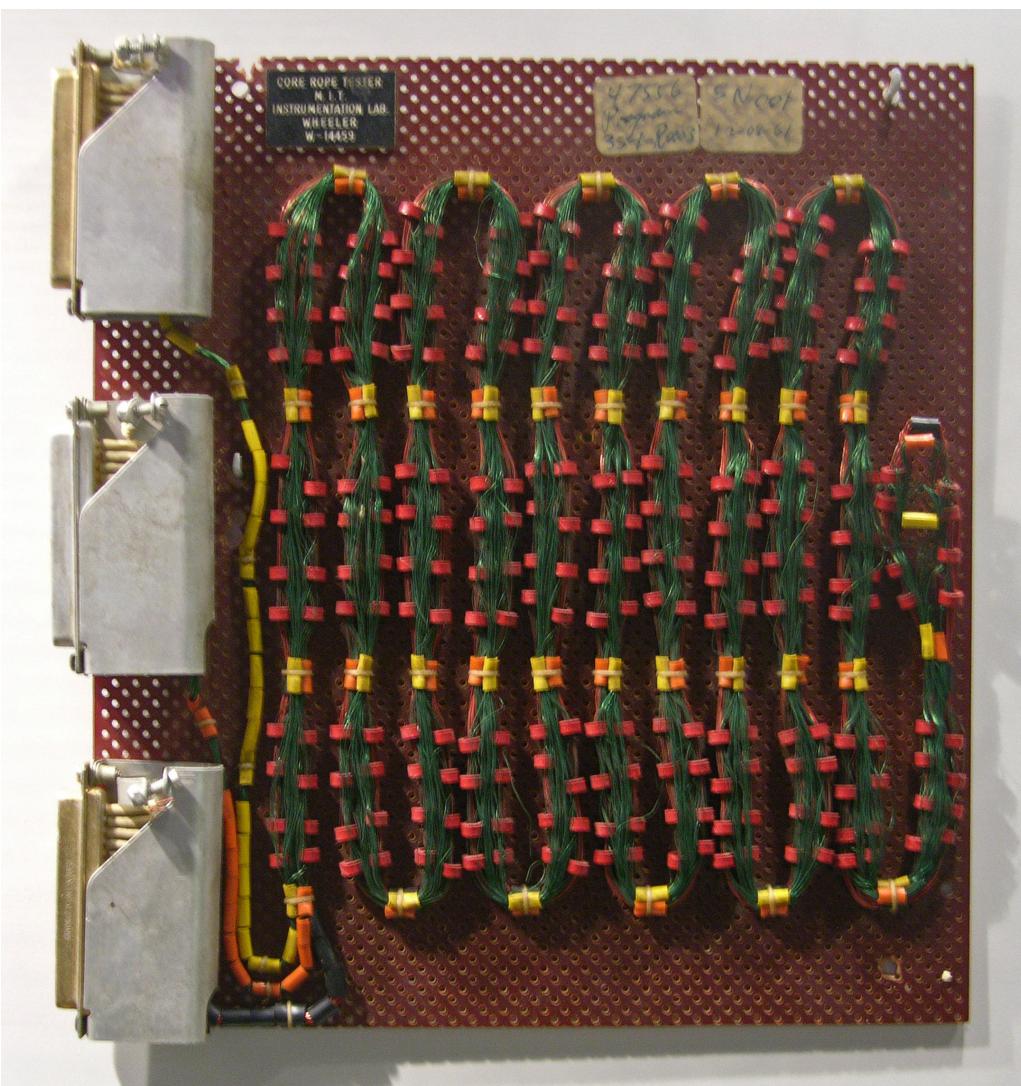
## A CORE ROM BASED EXPERIMENT

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11732685  
<http://wes.am>

**Ars Electronica Project**  
380.050

**Kunstuniversität Linz**  
Interface Culture

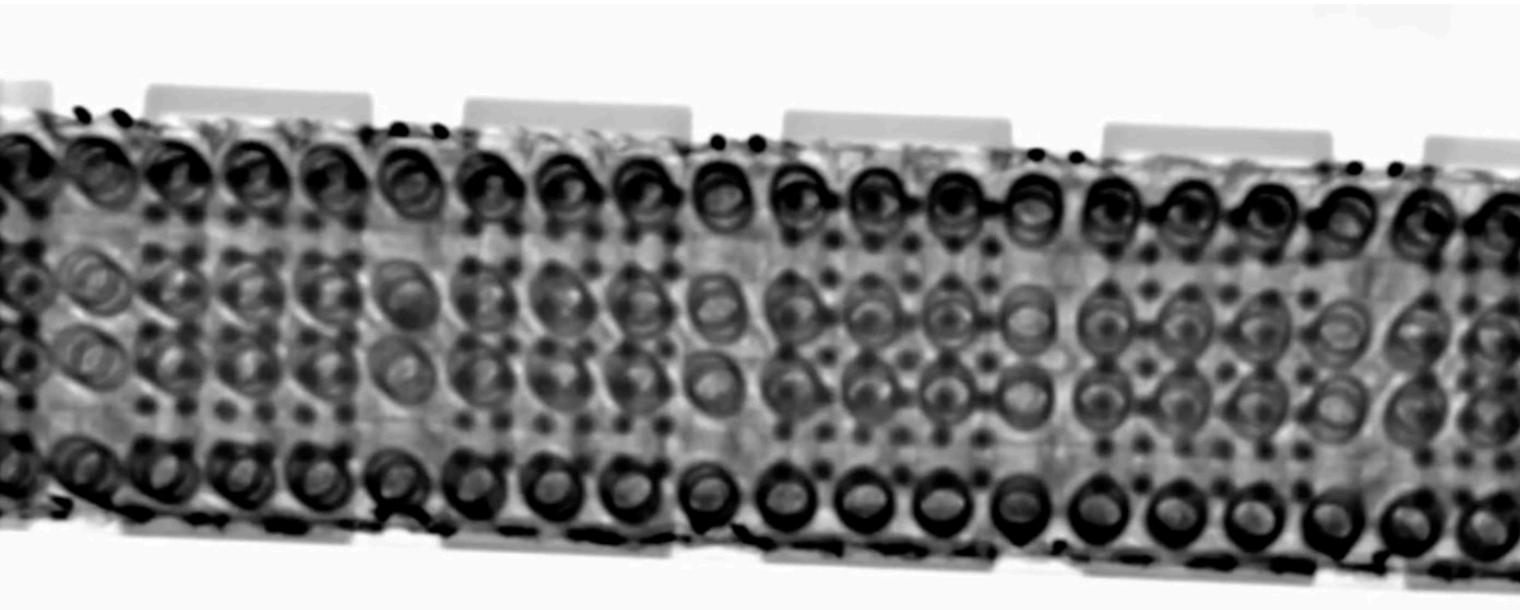
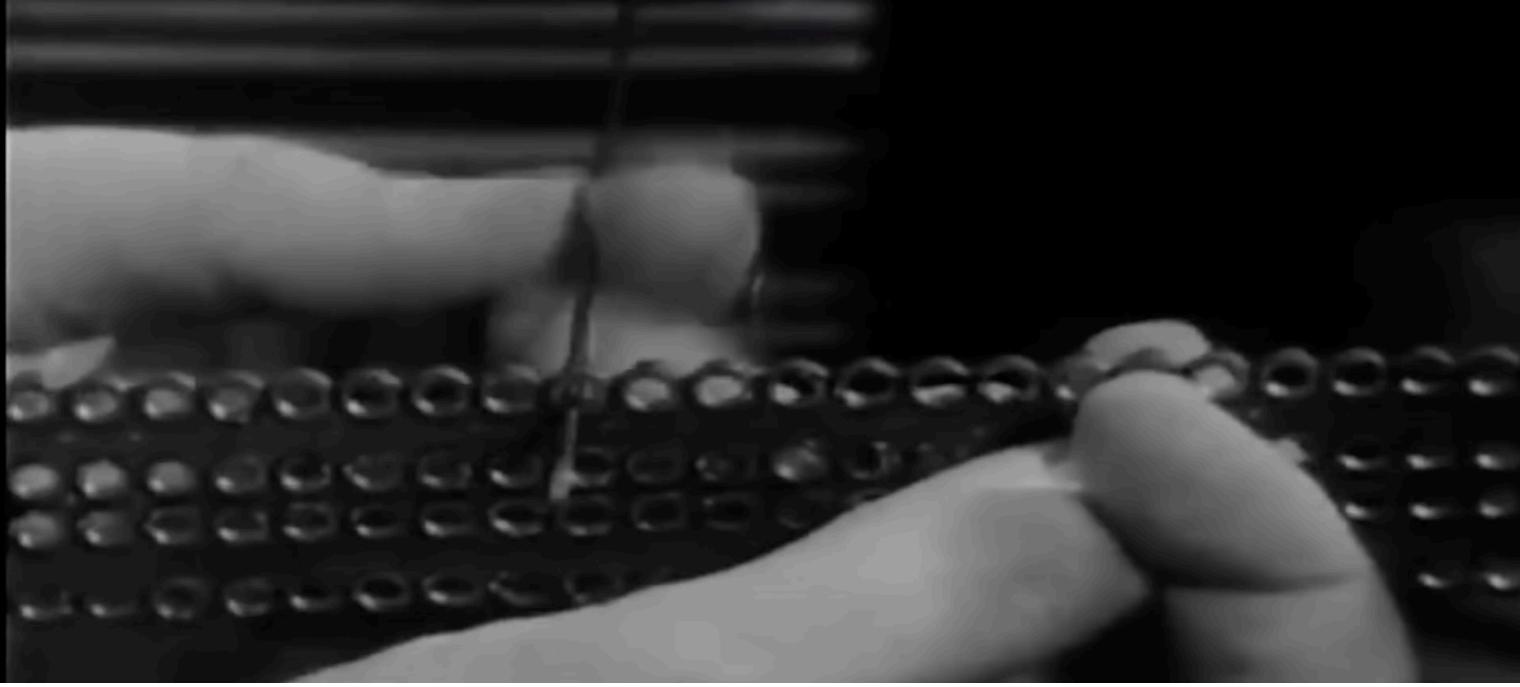
**MAIN  
INSPIRATION  
CORE ROPE  
READ ONLY MEMORIES**



# CORE ROPE ROMS

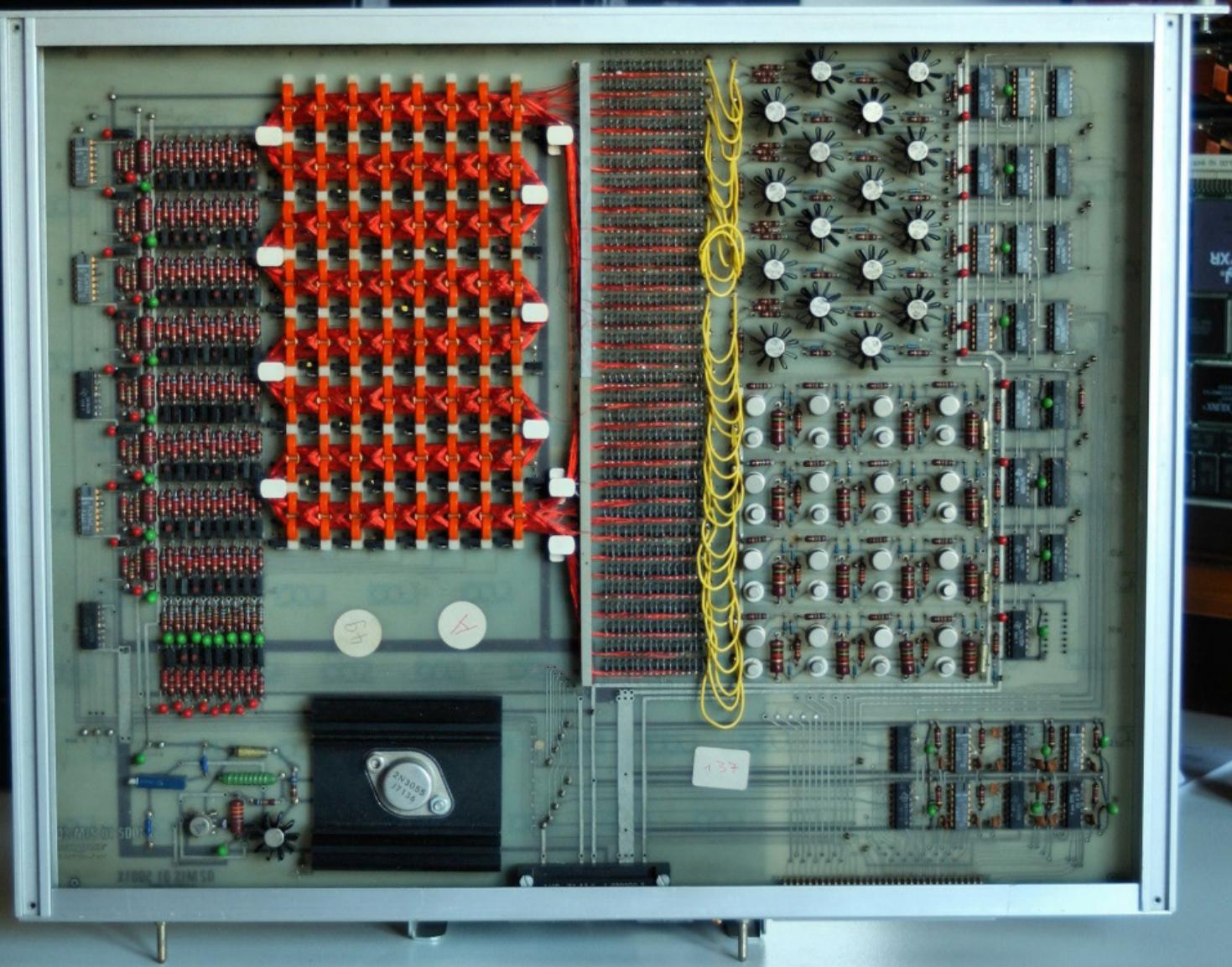
## HISTORY AND RELEVANCE

<https://hackaday.com/2016/09/02/decoding-rediscovered-rope-memory-from-the-apollo-guidance-computer/>  
[https://en.wikipedia.org/wiki/Core\\_rope\\_memory](https://en.wikipedia.org/wiki/Core_rope_memory)

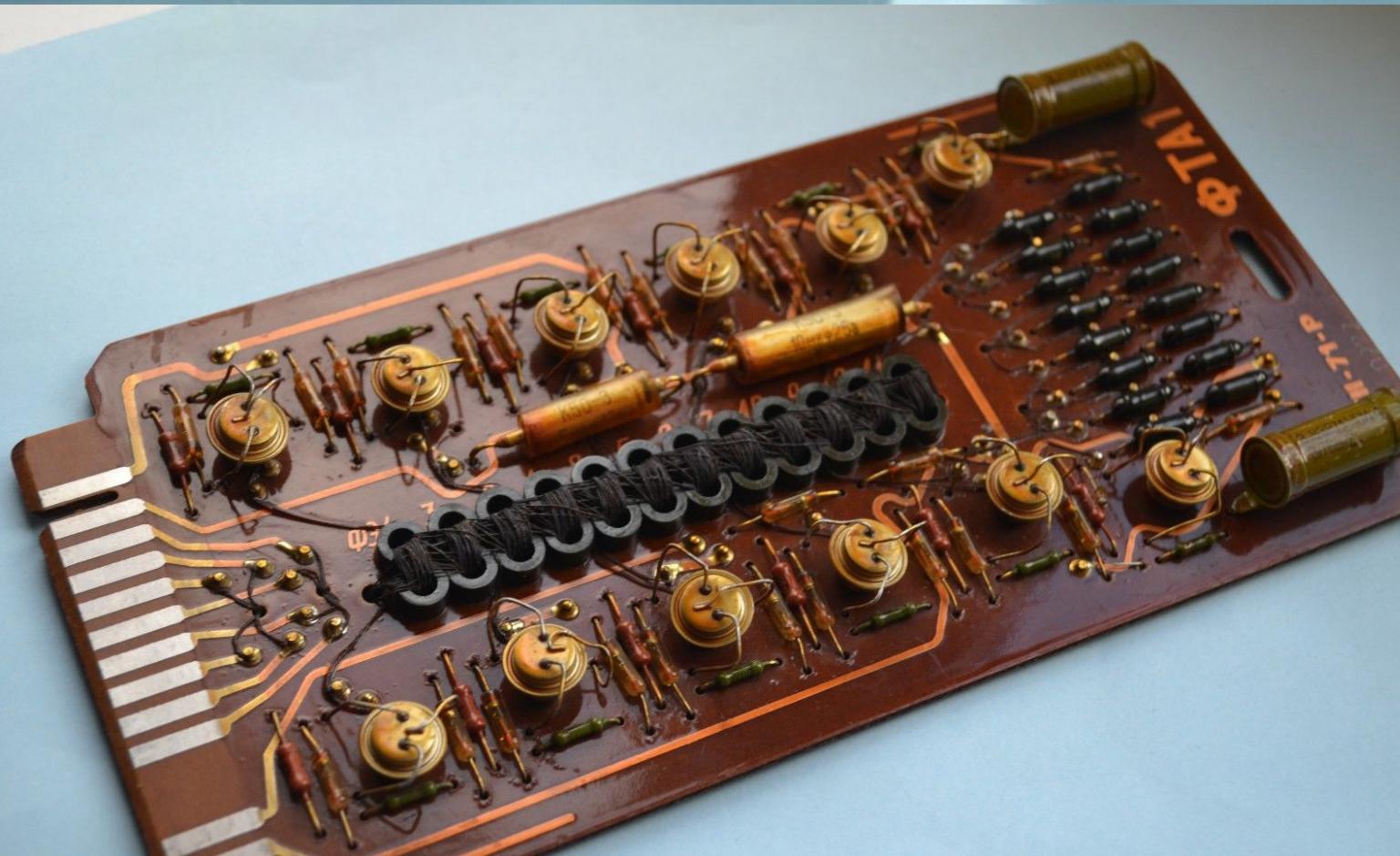


# CORE ROPE ROMS EXAMPLES

MIT Science Reporter—"Computer for Apollo" (1965)  
<https://www.youtube.com/watch?v=ndvmFlg1WmE>  
"Apollo Rope Memory Modules (Part 2 - Construction)"  
<https://www.youtube.com/watch?v=-BlivdwXRZU>



# CORE ROPE ROMS EXAMPLES



[http://ummr.altervista.org/core\\_memories.htm](http://ummr.altervista.org/core_memories.htm)  
eBay

## CORE ROPE ROMS TRIVIAS

| <b>Data units per cubic meter</b> |             |
|-----------------------------------|-------------|
| <b>Bytes</b>                      | <b>Bits</b> |
| ~2.5 MB                           | ~20 Mbit    |

[https://en.wikipedia.org/wiki/Core\\_rope\\_memory](https://en.wikipedia.org/wiki/Core_rope_memory)

# **CORE ROPE ROMS TRIVIAS**

*Some programmers nicknamed the finished product LOL memory, for Little Old Lady memory.*

[https://en.wikipedia.org/wiki/Core\\_rope\\_memory](https://en.wikipedia.org/wiki/Core_rope_memory)

**CORE ROPE  
ROMS**  
OK, NOW WHAT?

**WEAVING /  
ENCODING  
WEAVING /  
WRITING**

*A <==> 01000001*

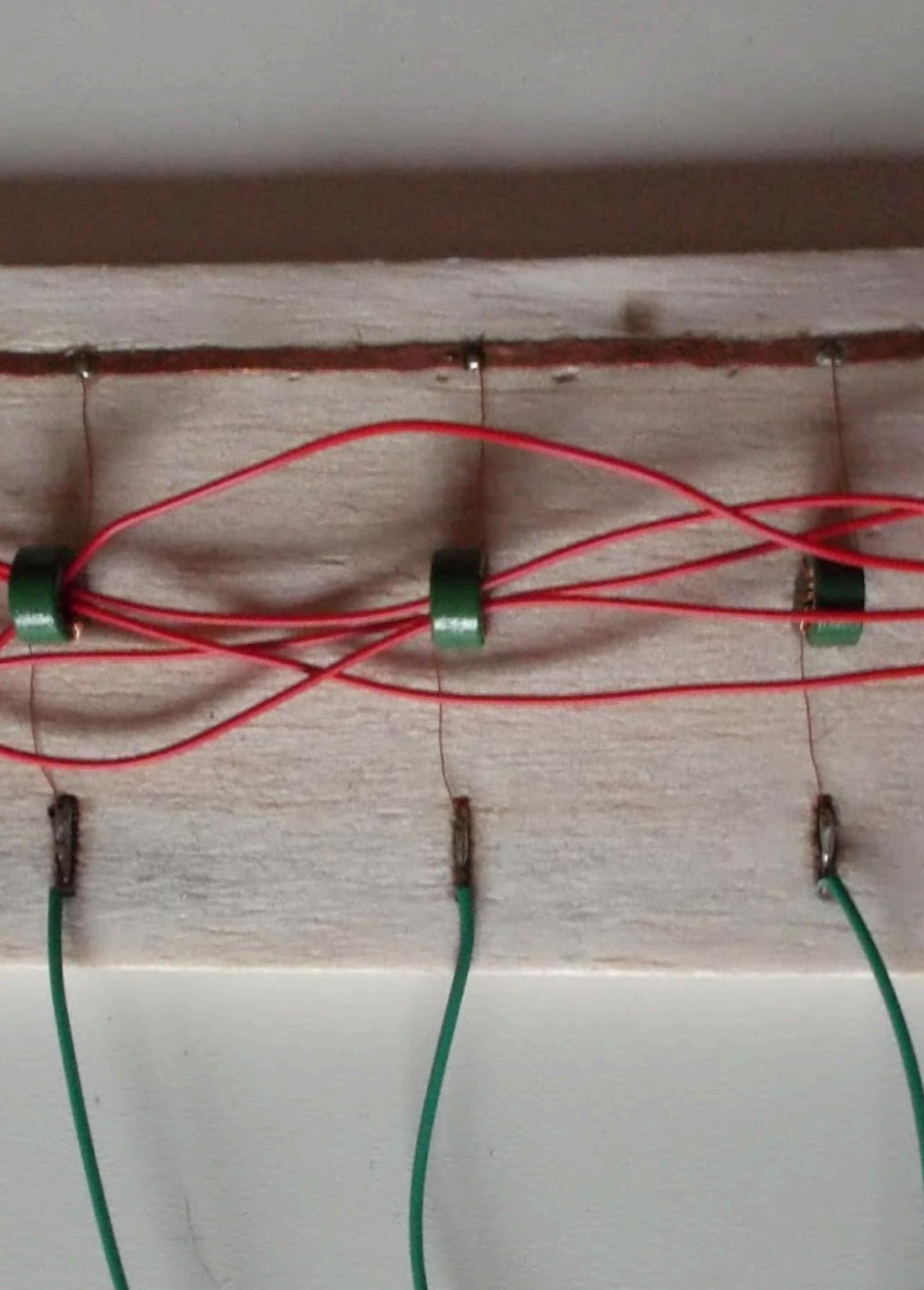
*B <==> 01000010*

*C <==> 01000011*

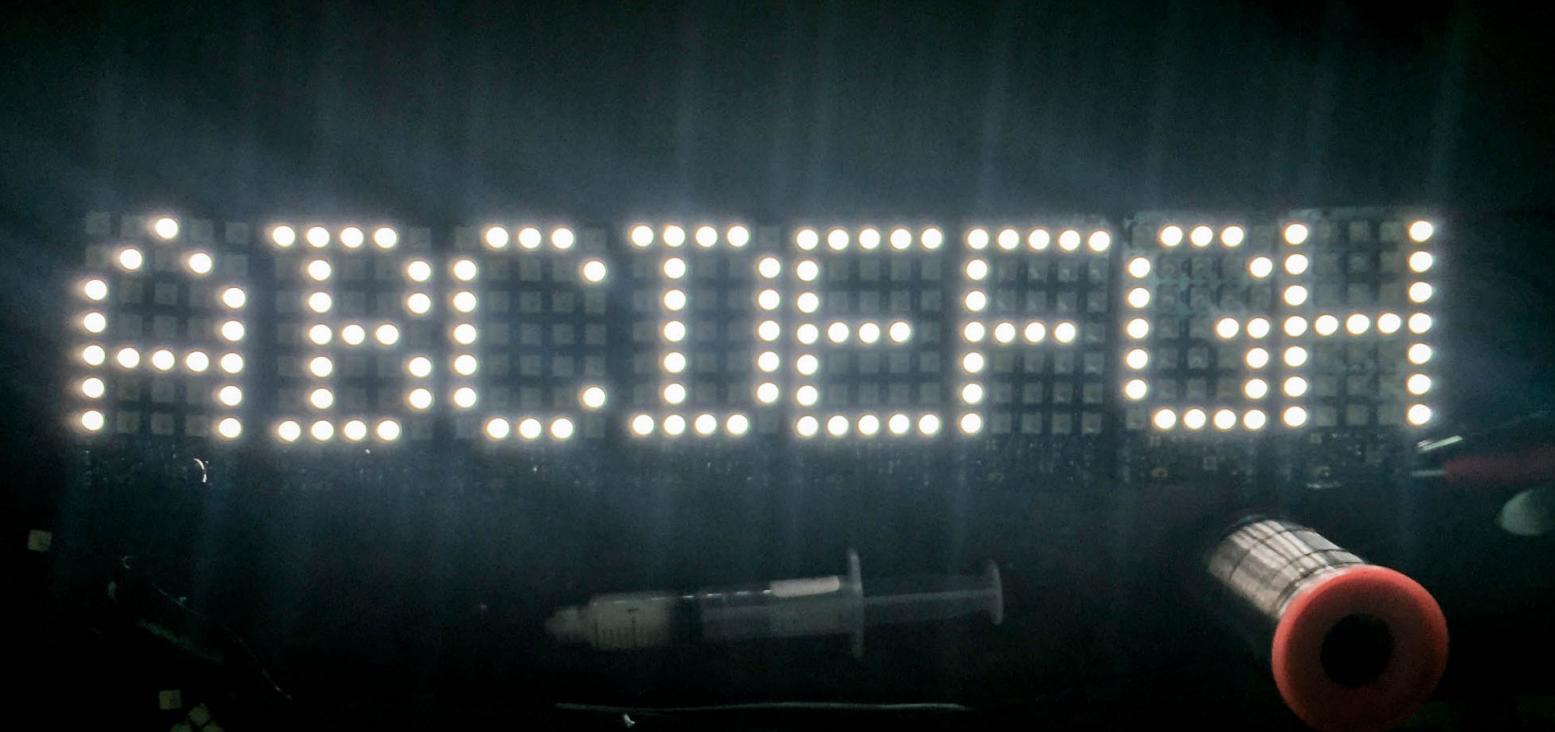
*etc...*

## **BITS INTO CHARACTERS SPECIFICALLY, ASCII CHARACTERS**

**American  
Standard  
Code for  
Information  
Interchange**

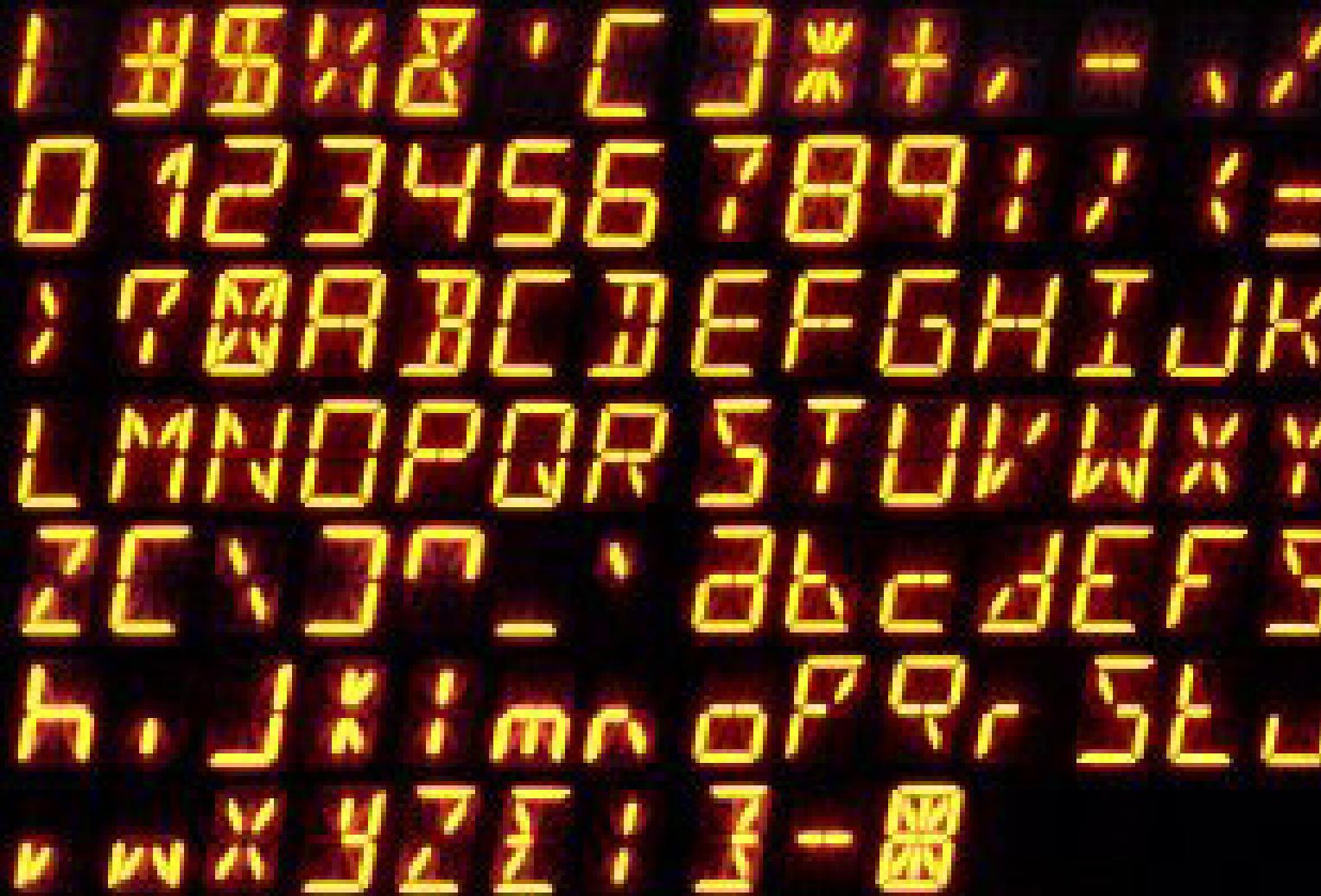


**WIRE THROUGH == 1  
NO WIRE == 0**



# VISUAL FEEDBACK DISPLAYING THE CHARACTERS?

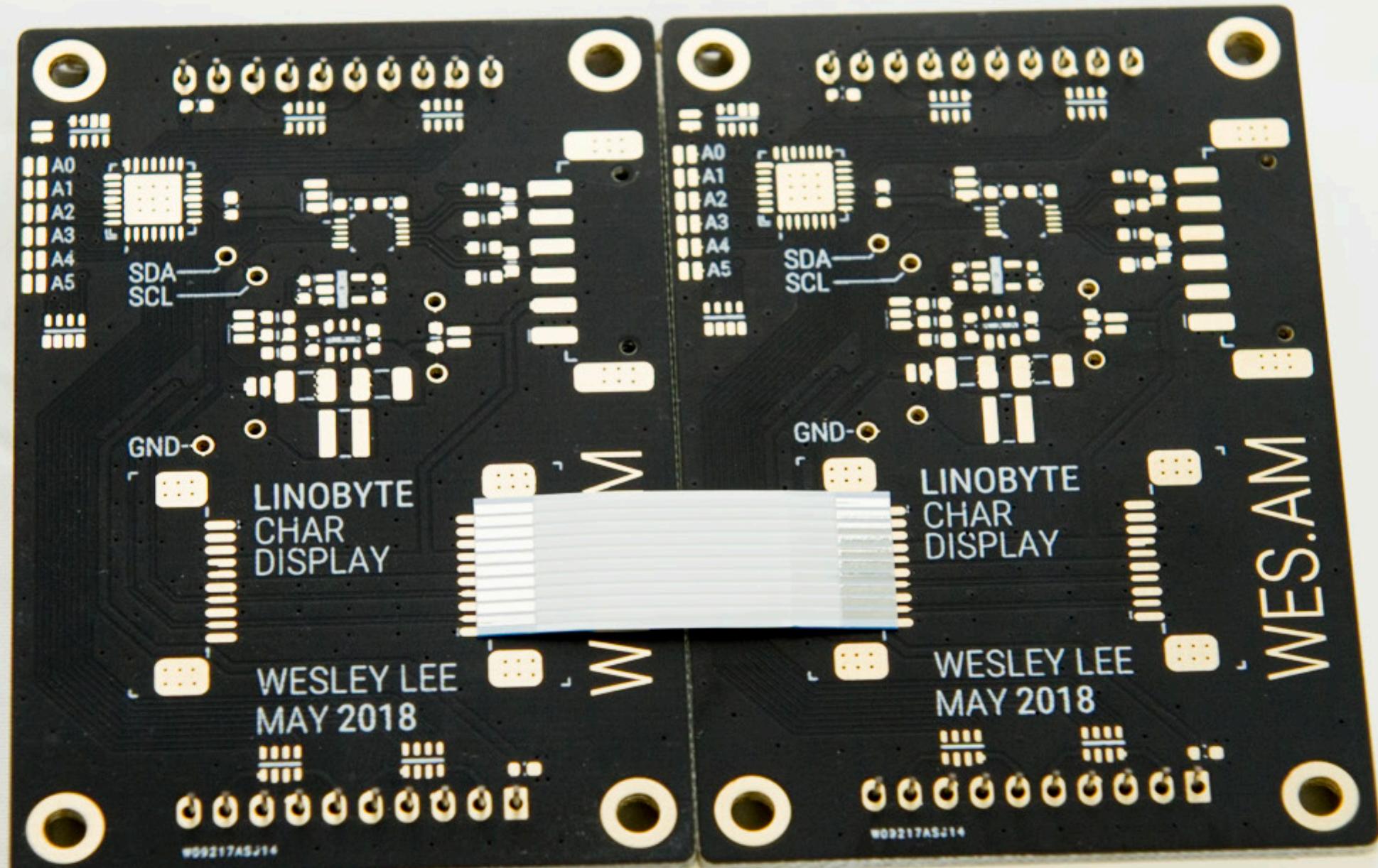
[engadget.com](http://engadget.com)  
[wes.am](http://wes.am)

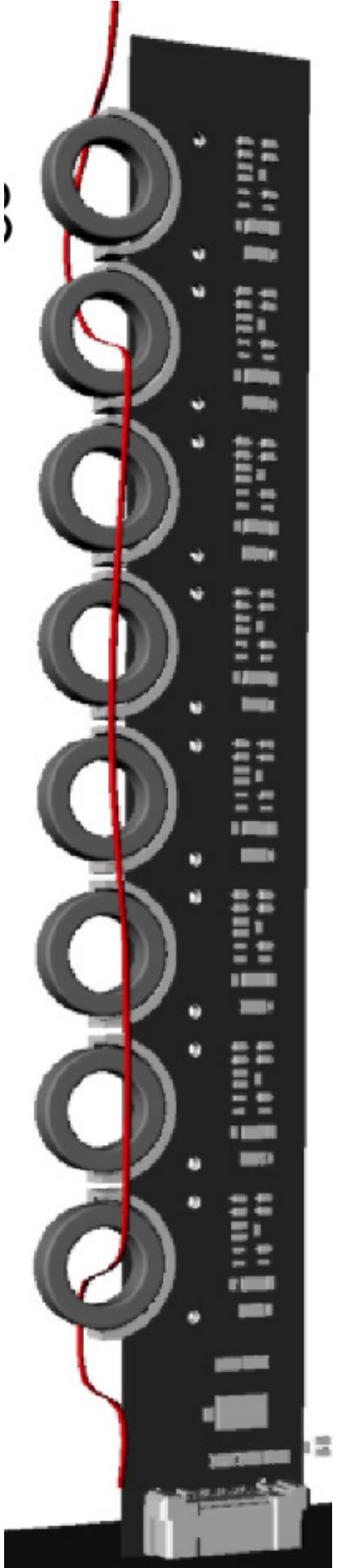


## SPEAKING OF OBSOLETE: 14 SEGMENT DISPLAYS



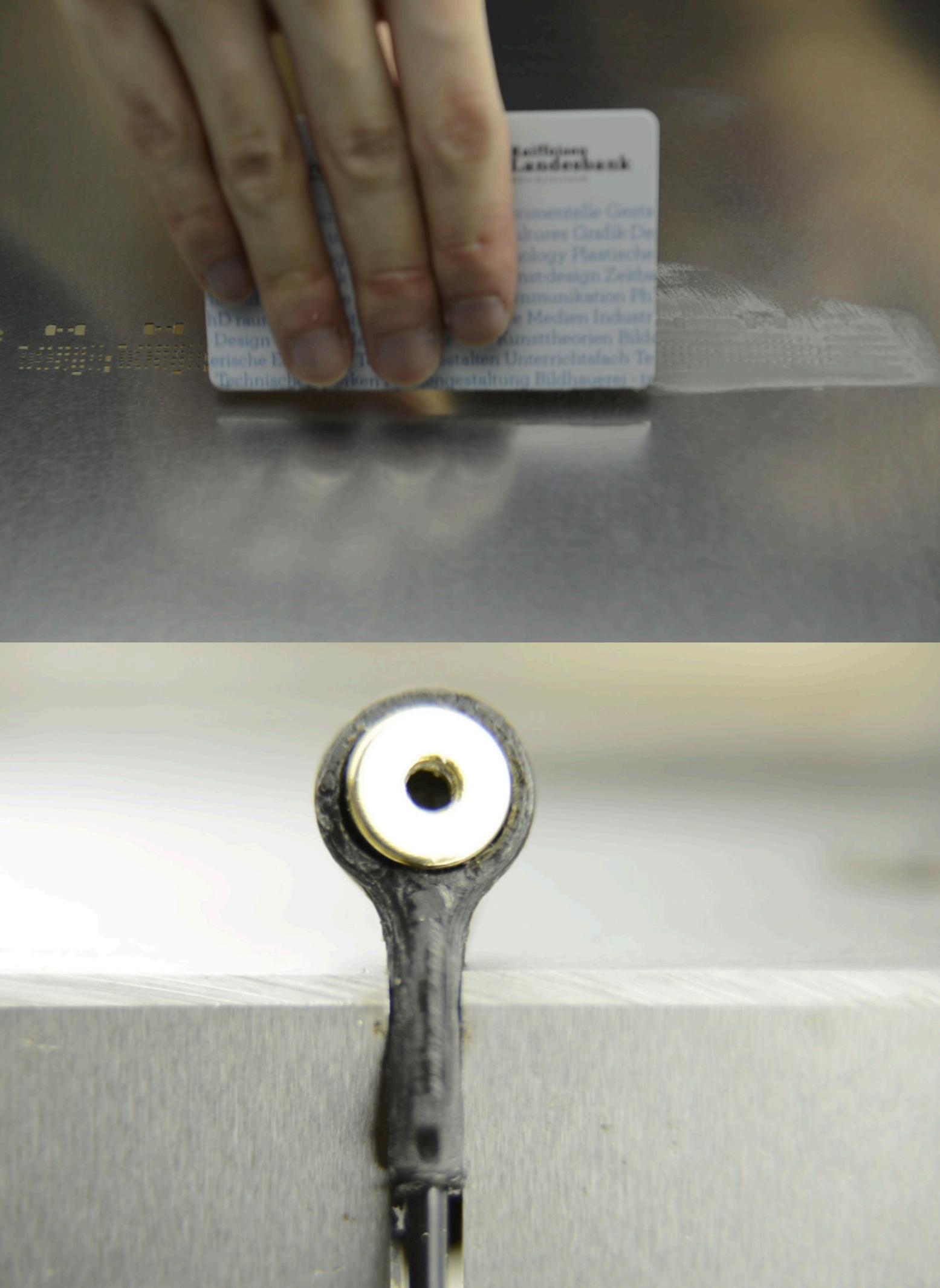
[https://en.wikipedia.org/wiki/Fourteen-segment\\_display](https://en.wikipedia.org/wiki/Fourteen-segment_display)





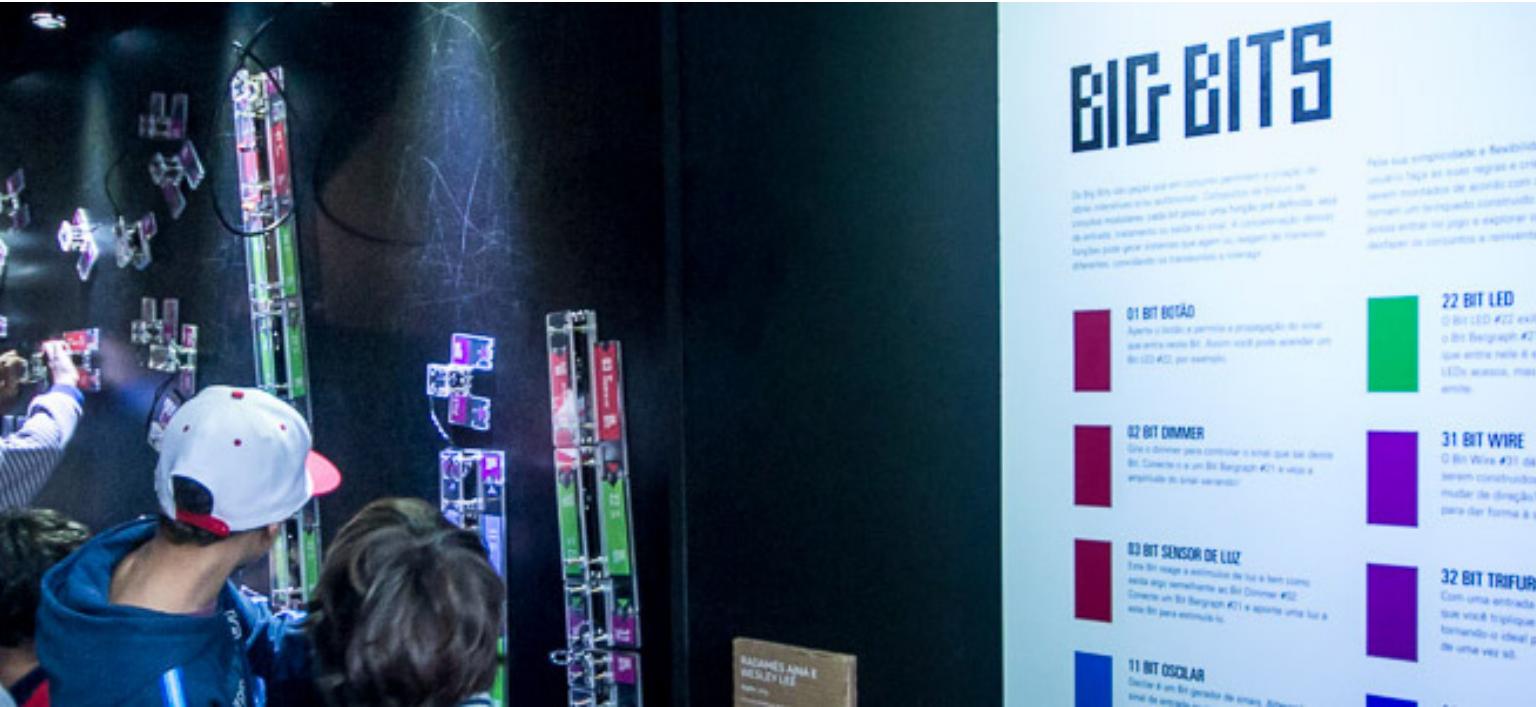
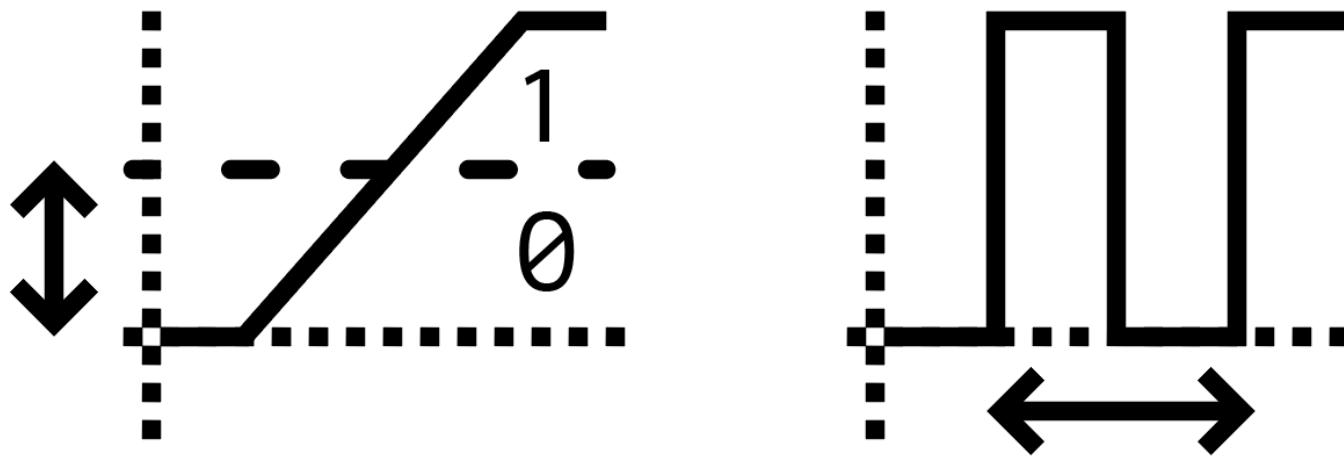
**SO,  
BASICALLY:**  
8 CHAR (8 COILS EA)  
1 WORD  
8 CHAR DISPLAY

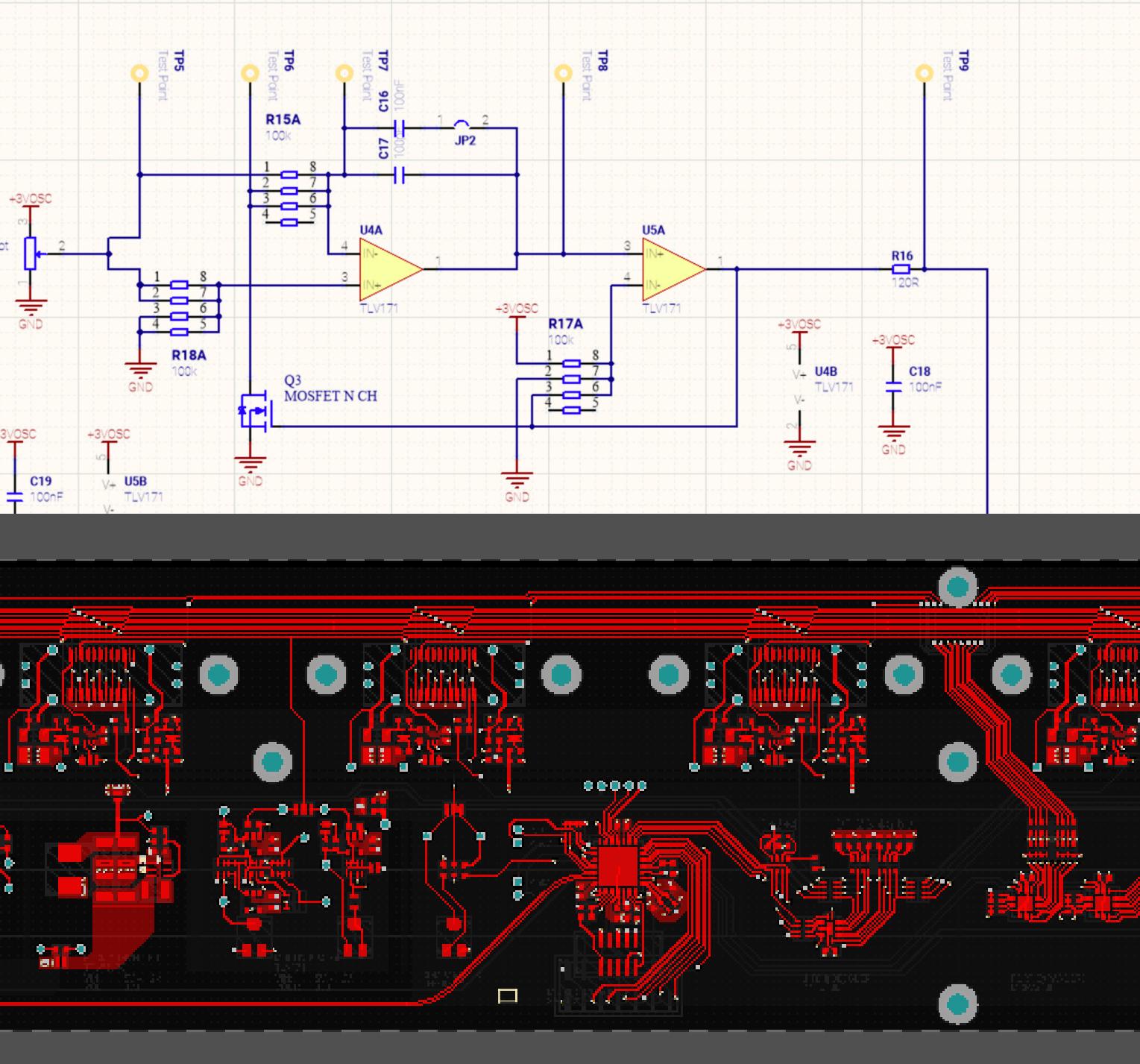
**DOCUMENTATION**  
VIDEO, BASIC  
USAGE, LOW LEVEL



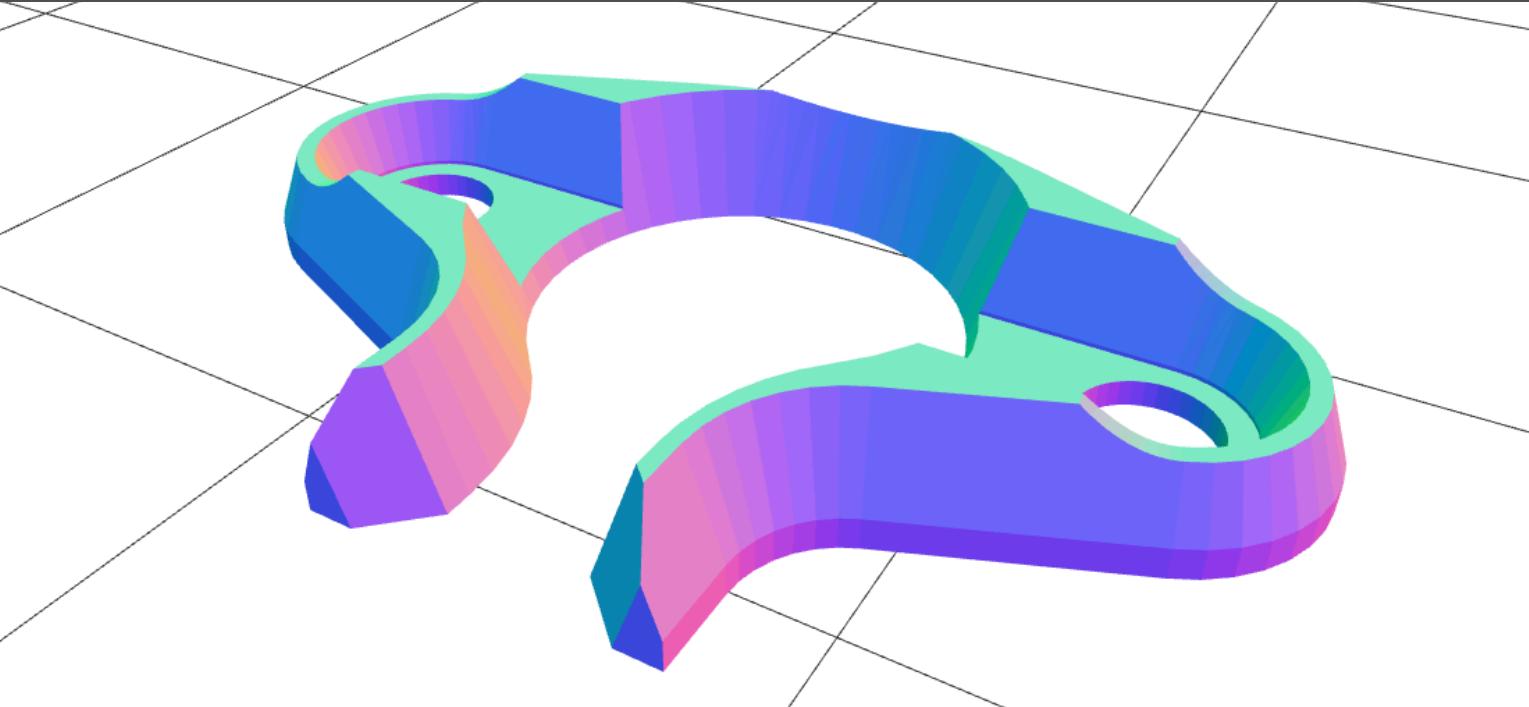
## VIDEO MAKING OF, USAGE

# BASIC USAGE INSTRUCTIONS, LEGO-ish

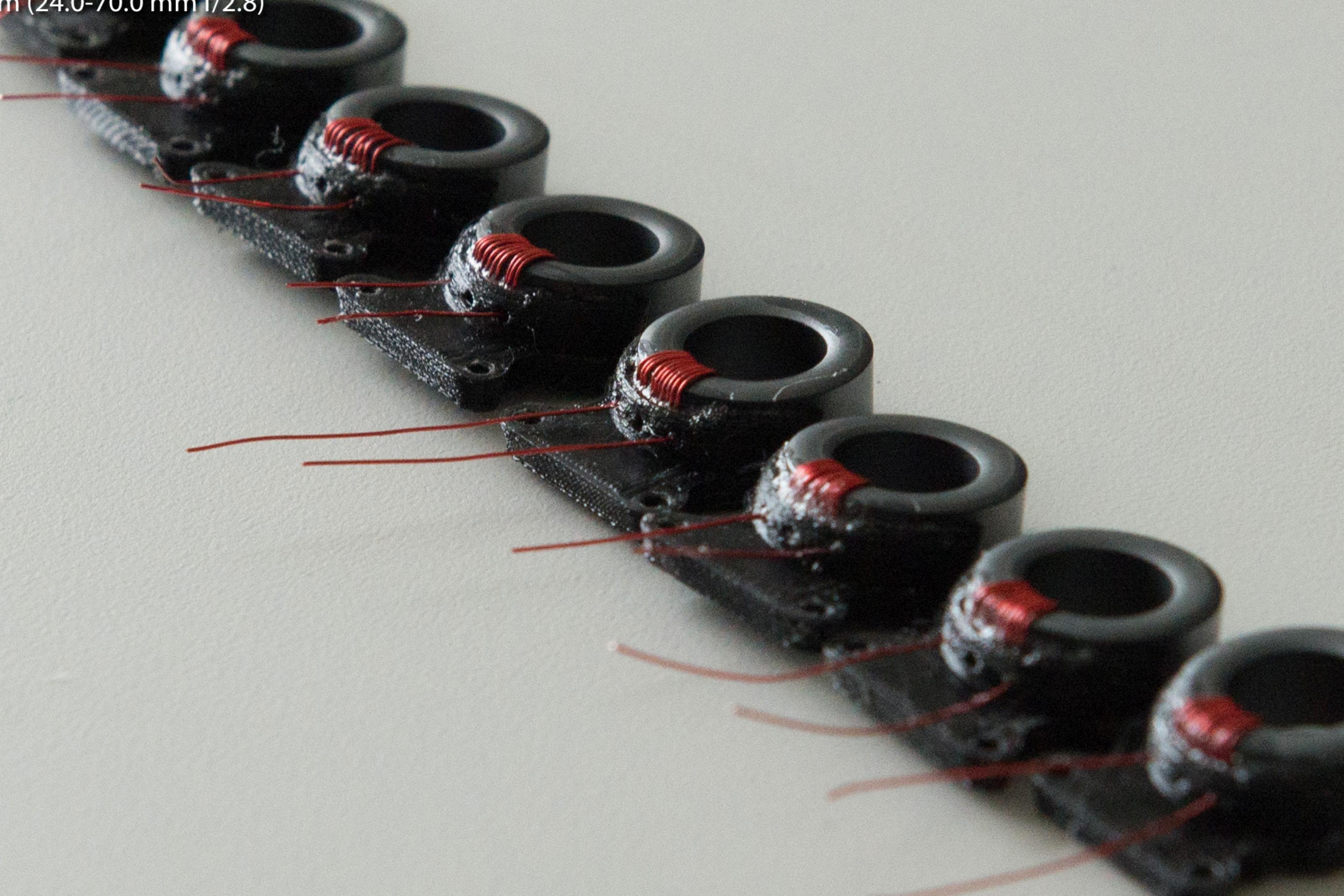


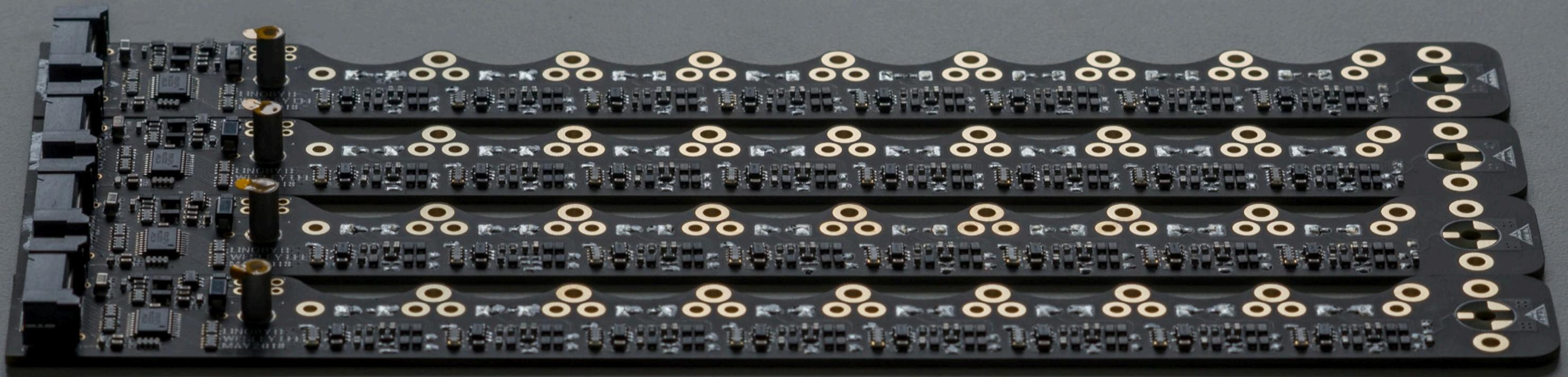


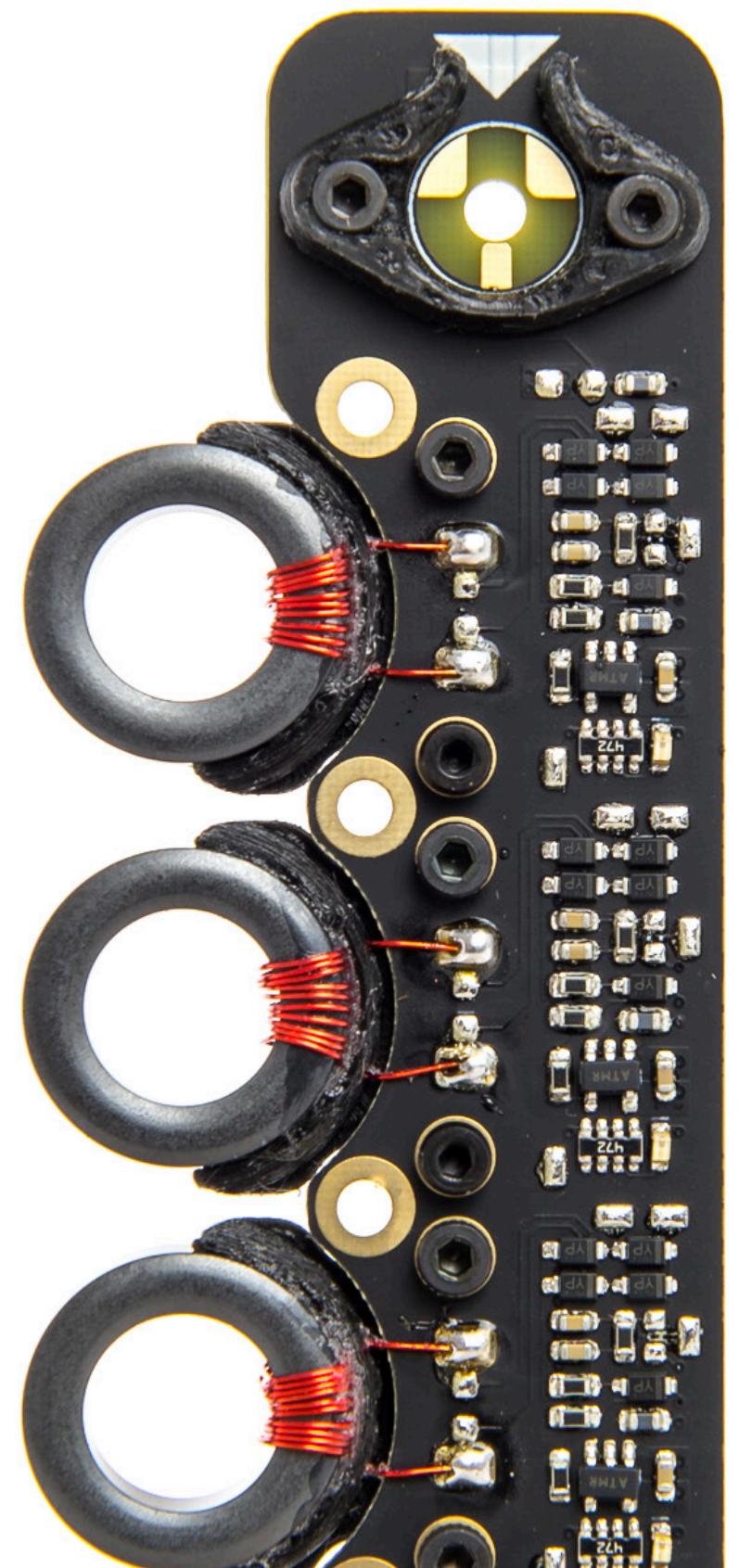
**LOW LEVEL  
SCHEMATICS,  
FIRMWARE, 3D  
MODELS, ETC**



m (24.0-70.0 mm) 1/2.8

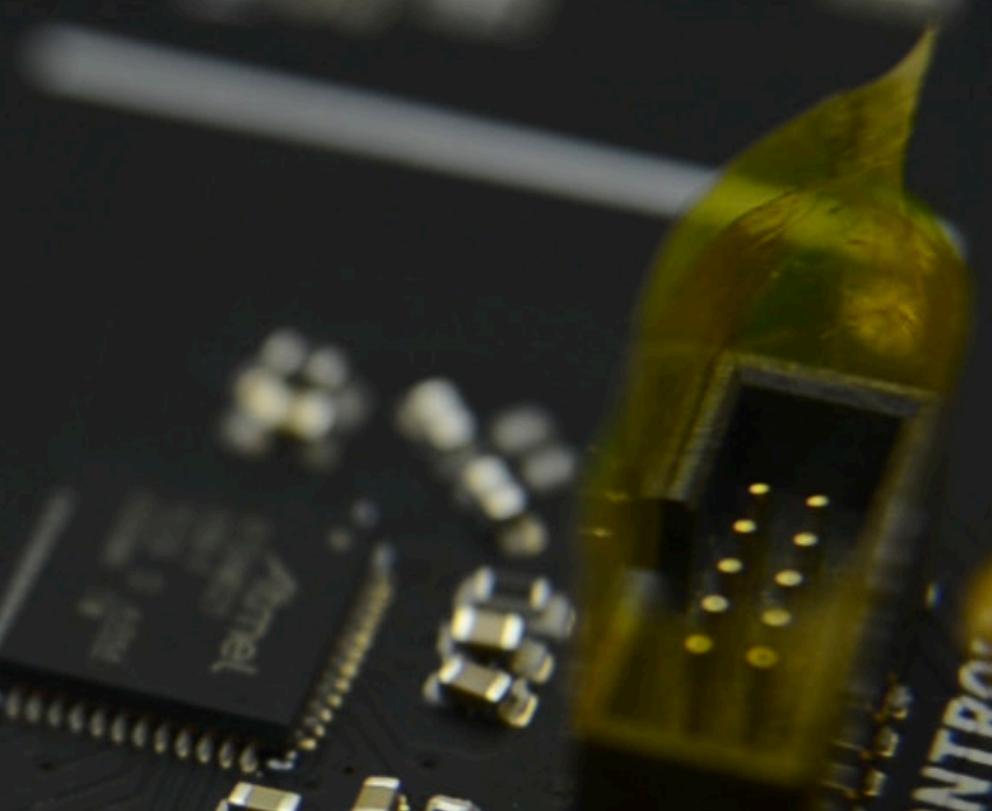




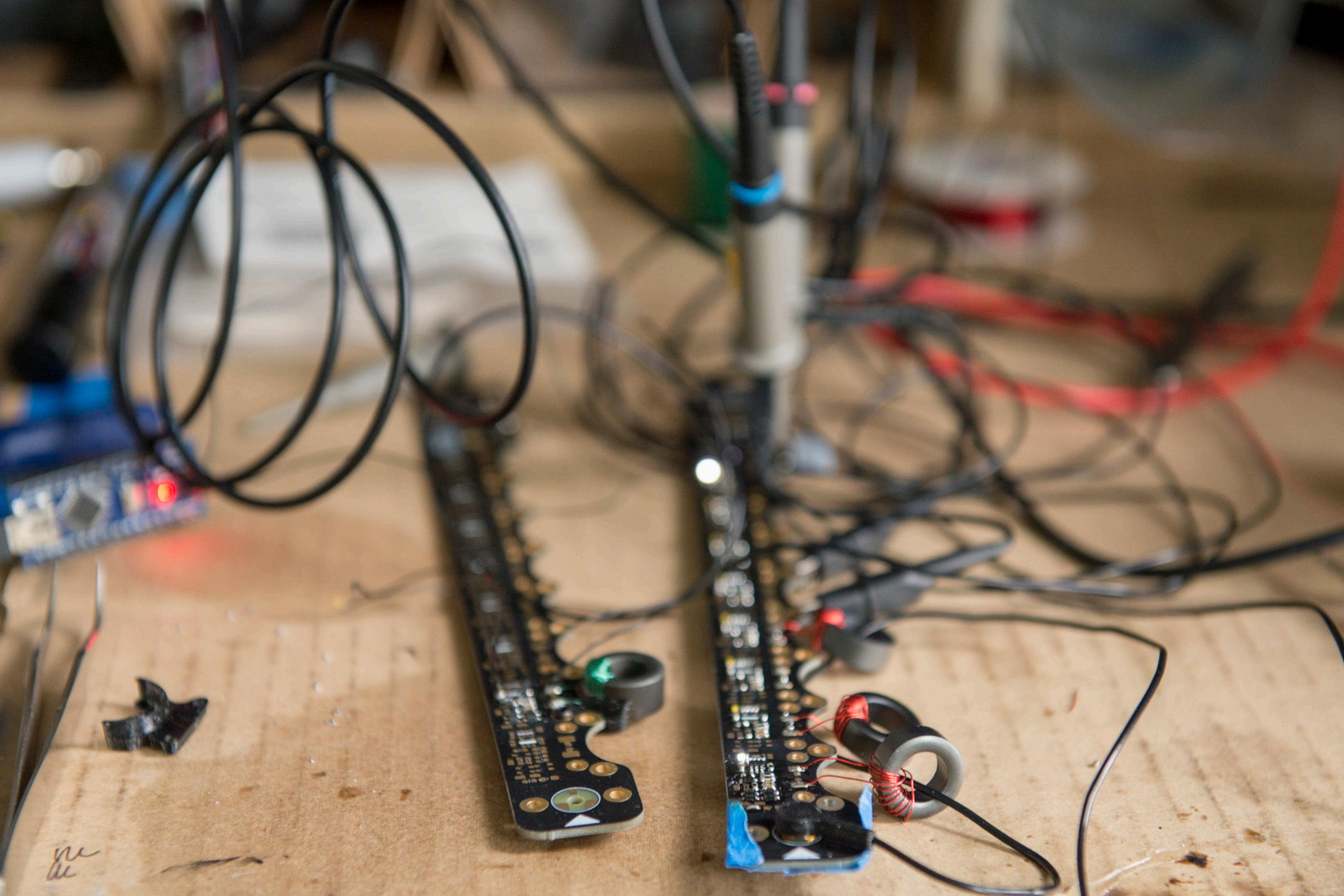


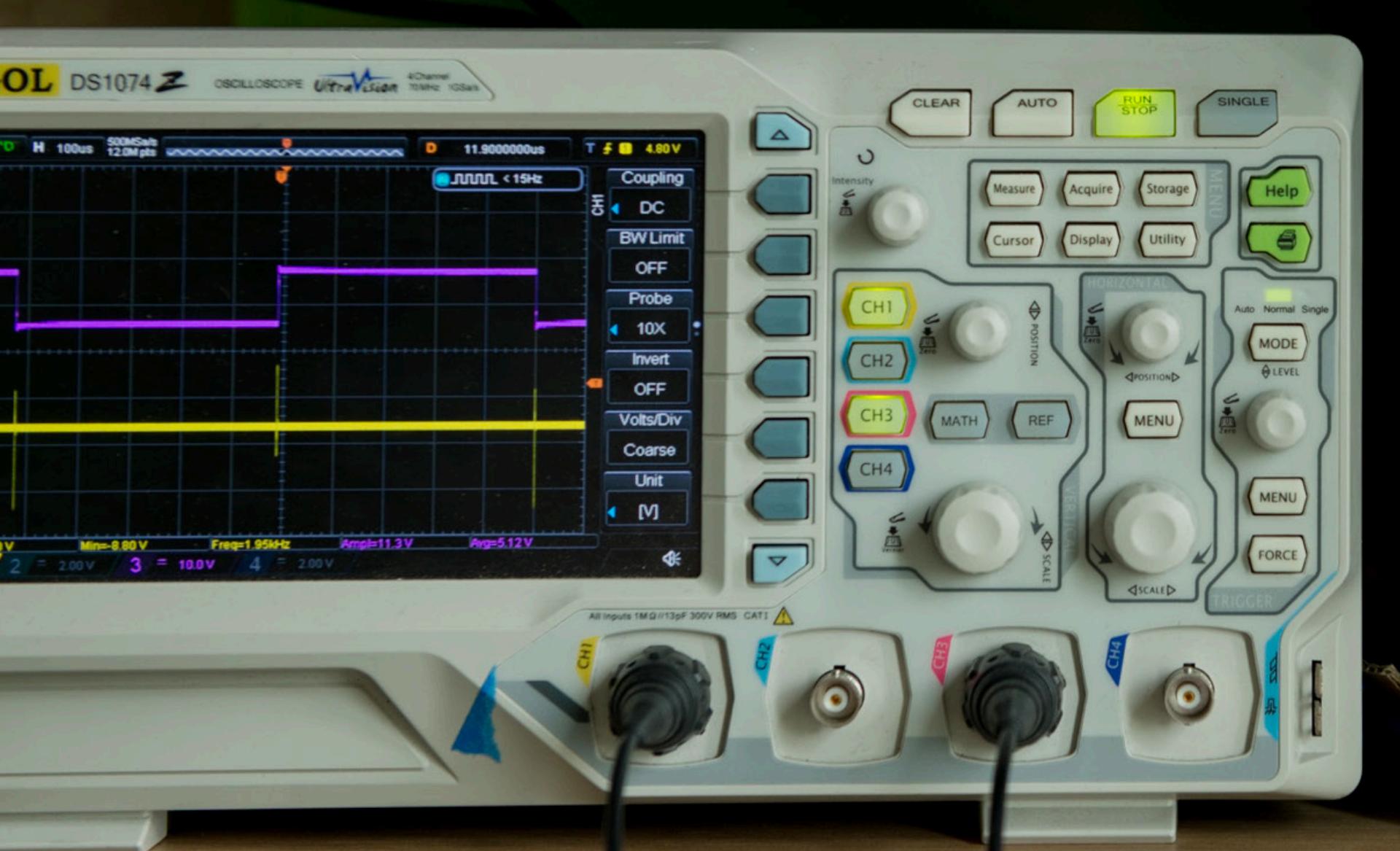


**MICROCONTROL**  
ASAMD21

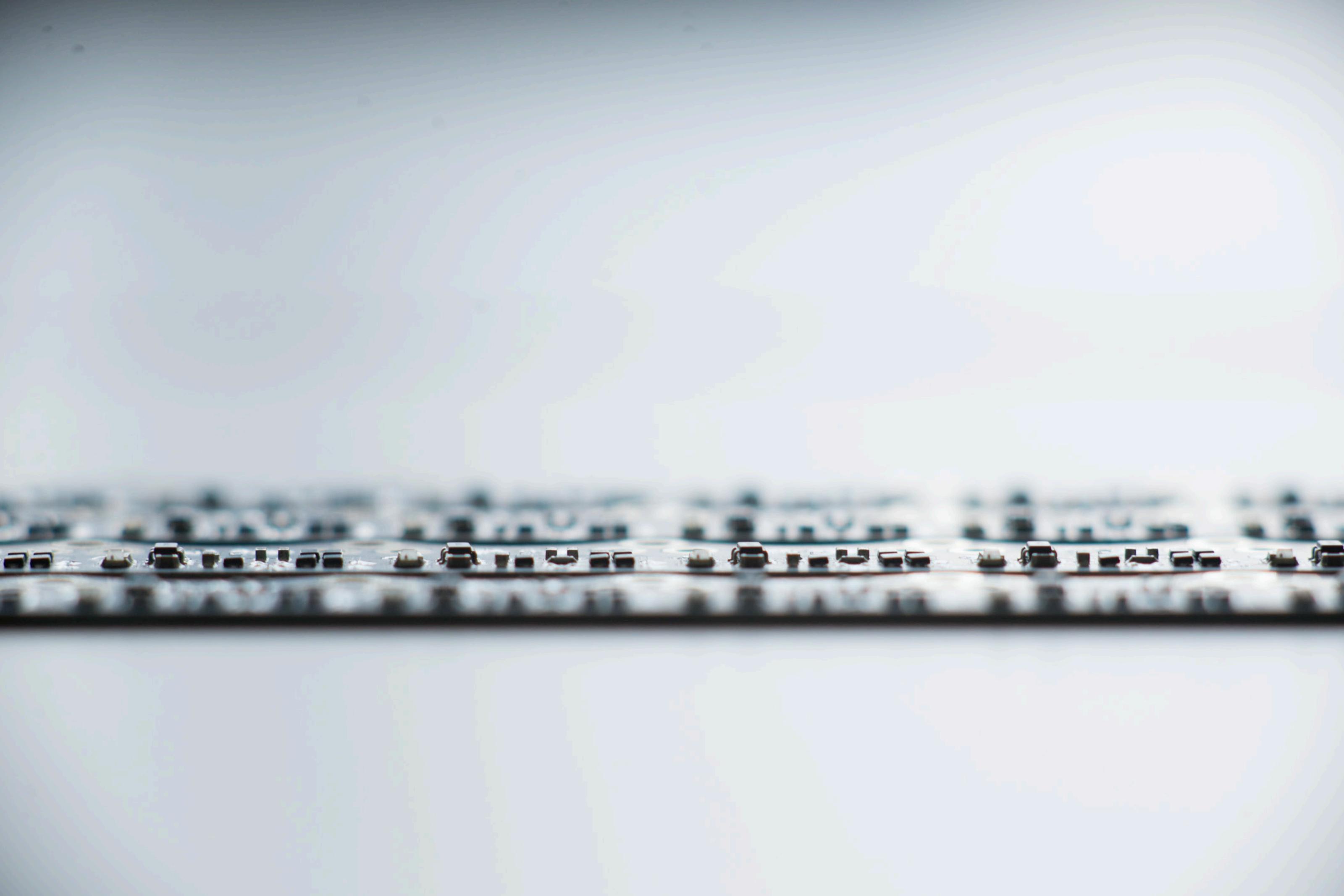


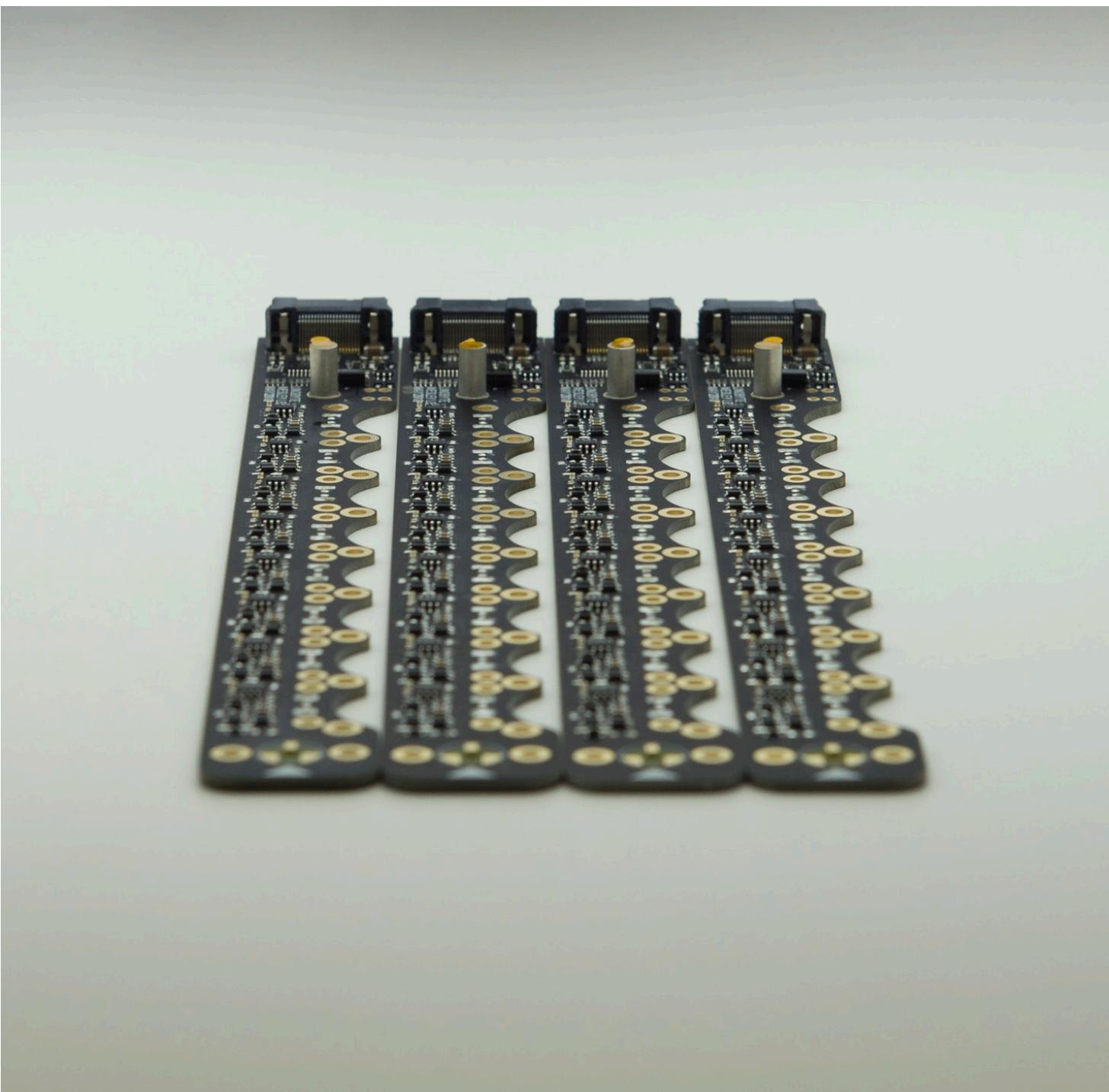
TP\_SCL<sub>Y</sub>  
TP\_SCL<sub>X</sub>











**THAT'S IT!  
THANKS!**

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