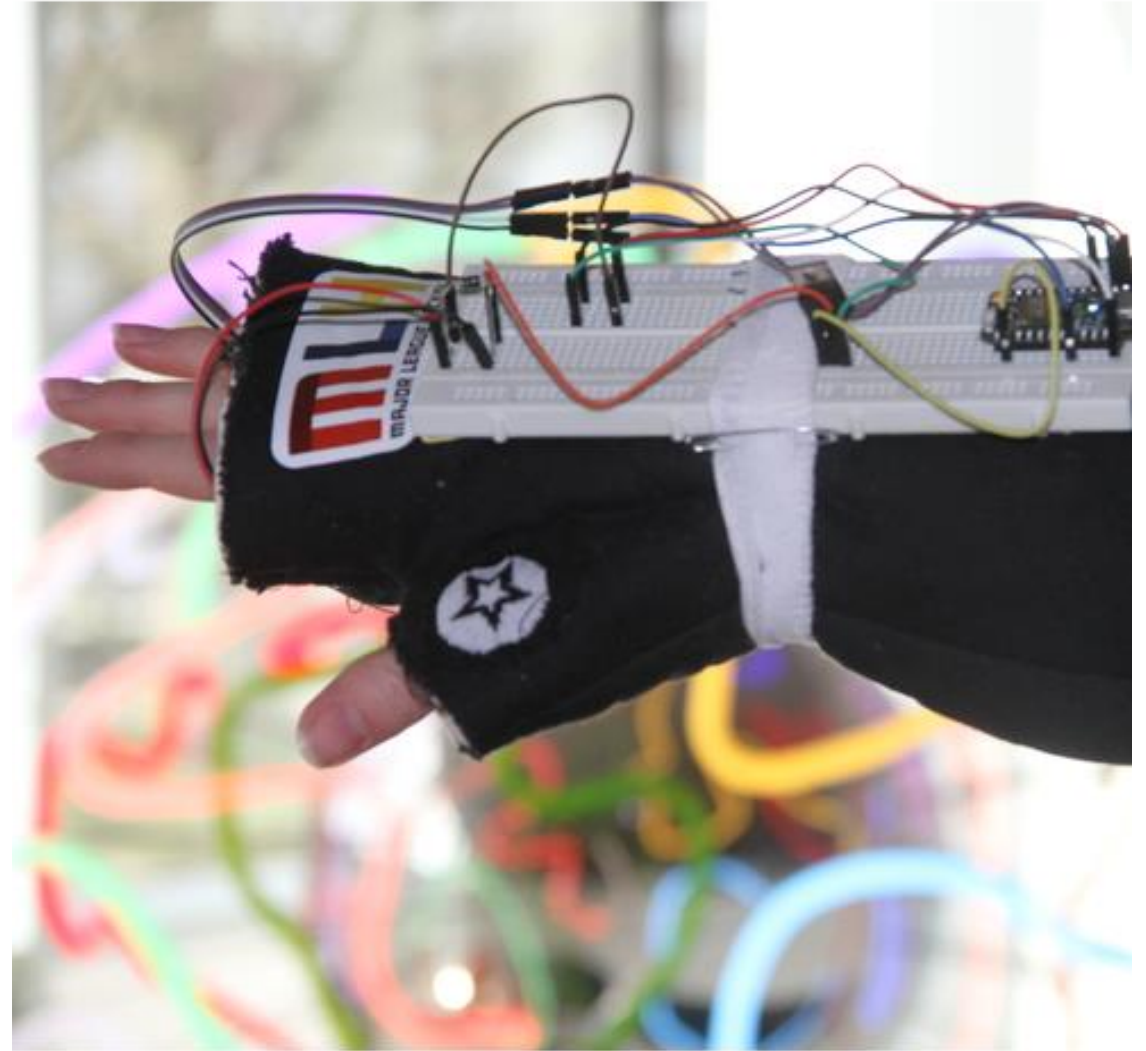


A bundle of multi-colored test leads (red, green, yellow, black, and white) with alligator clips, used for electrical testing. The leads are bundled together at one end and fan out at the other, showing the clips.

WHAT IS A HACKATHON?

- Hacking + Marathon
- NOT: Breaking into computers
- YES: Building prototypes fast
- Goal: Demonstrable > Complete
- You have until Sunday. Not until December.



THIS WEEKEND'S MISSION

- Museum Experiences × Bluetooth Tech
 - The venue: Kongernes Jelling (Harald Bluetooth's home)
 - The materials: Arduinos, nRF54L15 kits, 3D printers, VR headsets, sensors... **THE WORKS**
 - The inspiration: 1,000 years of Viking history
 - The celebration: Bluetooth's 30th birthday
-

COMPETITION CATEGORIES

- Best Museum Experience - Compelling visitor interaction
 - Best Use of Bluetooth - Technical excellence with BT tech
 - Best User Experience – An awesome smooth experience
 - Best Technical Execution – Most technically impressive effort

 - Pick your lane. Or don't. Just build something you care about.
-

THE PROCESS

- Phase 1: Inventory
 - Phase 2: Ideate
 - Phase 3: Refine
 - Phase 4: Build
-
- ---- ITERATE
-

PHASE 1 - TAKE INVENTORY

- Know what you're working with:
 - Who's on your team? What skills?
 - What materials are available? (Check the equipment table)
 - What did you see on the museum tour?
 - How much time do you have? (Not enough)
 - This determines what's possible.
-

PHASE 2 - GENERATE IDEAS

- No critique during generation
 - Quantity > Quality
 - Technique: Crazy 8s (8 ideas in 8 minutes)
 - Write everything down
 - DON'T:
 - "Can we do holograms here?"
 - DO:
 - "Harald hologram appears when you tap your phone"
-



PHASE 3 - REFINE & CHOOSE

- Pick one idea (or merge favorites)
 - Vote if you can't agree
 - Check against your inventory: Is this possible?
 - Adjust scope: Hologram → Video projection
 - Ask: What's the coolest part we can actually demo?
-

SCOPE CALIBRATION EXAMPLES

- 4× Computer Science students
 - ✖ Perfect C++ real-time rendering engine
 - ✔ Arduino sensor + visualizations with language you know
 - 2× Designers + 2× Developers:
 - ✖ Fully functional museum app with backend
 - ✔ High-fidelity prototype with fake data
-

PHASE 4 - BUILD (THE FUN PART)

Start with highest value ×
highest risk

Uncertain about Bluetooth
range? Test that first

Confident about web servers?
Save for later



PROTOTYPING = FAKING IT

It's okay to:

Use JPEGs instead of database calls

Hard-code responses

Fake sensor data with button presses

Skip the "proper" backend

Demo the experience, not the infrastructure

PIVOT PROTOCOL

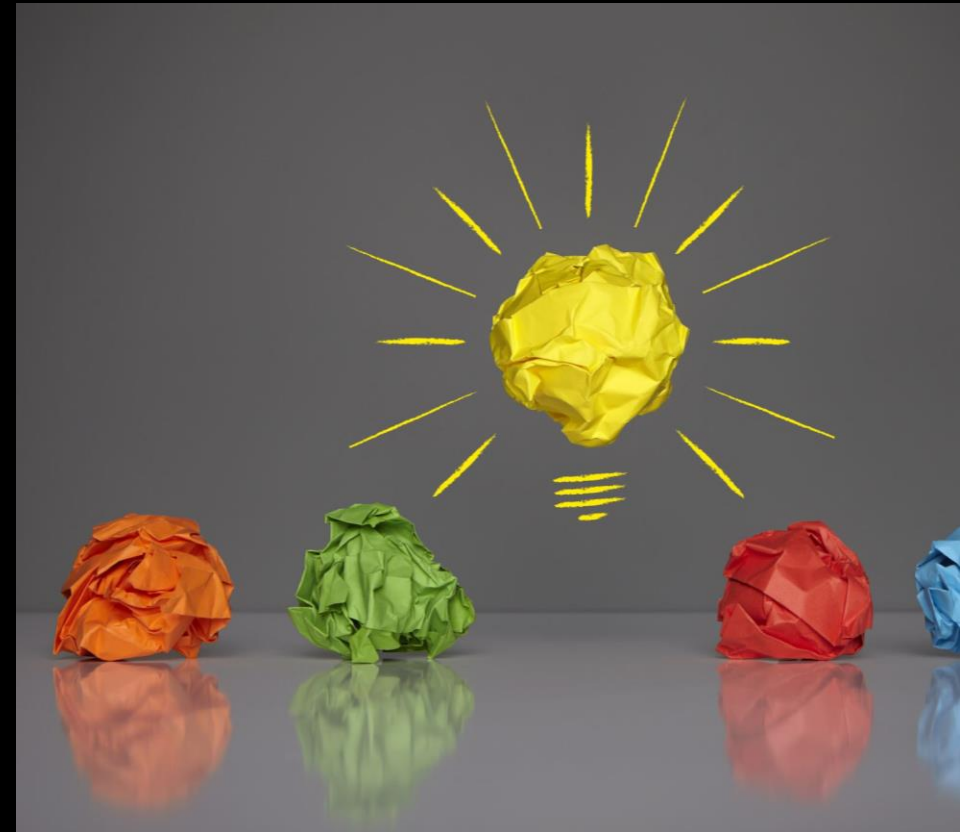
If your core idea fails:

Strip it down

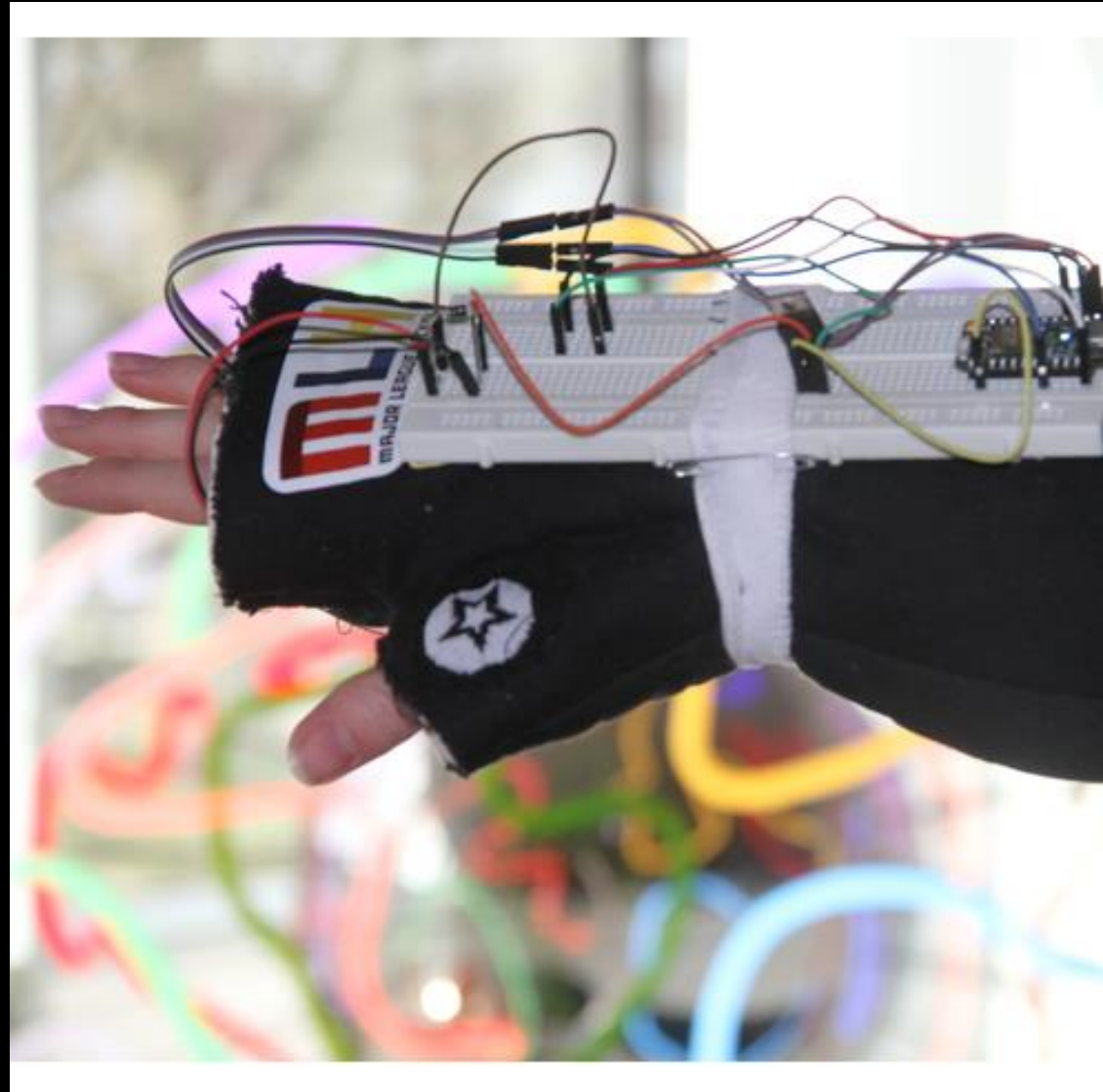
Reverse and try in another way

Use Wizard of Oz techniques

A great concept demo beats broken code



**"PERFECT IS THE
ENEMY OF GOOD"**



RESOURCES & HELP

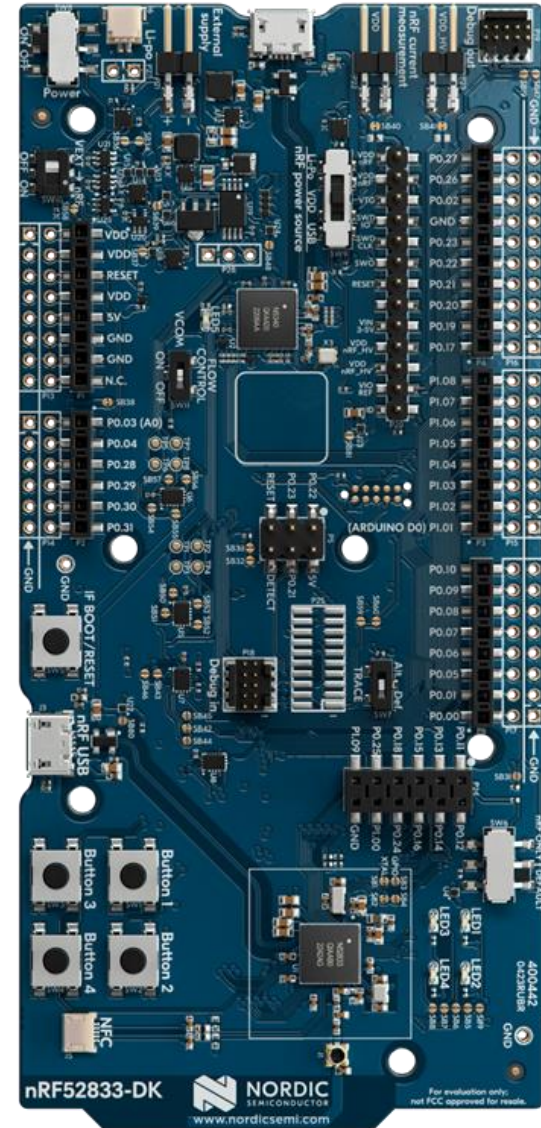
- **Get stuck? Ask for help:**
 - **Mentors (Bluetooth, design, software, museum experience)**
 - **Equipment: Everything at the table is yours to use**
 - **It's okay if stuff breaks - that's why we brought backups**
 - **Bluetooth founders will be here - ask them anything**
-

FINAL ADVICE

- Remember:
 - Demonstrable > Complete
 - Prototype > Product
 - Learning > Winning
 - Weird ideas > Safe ideas
 - ~~You have 48 hours. Go build something cool.~~
-

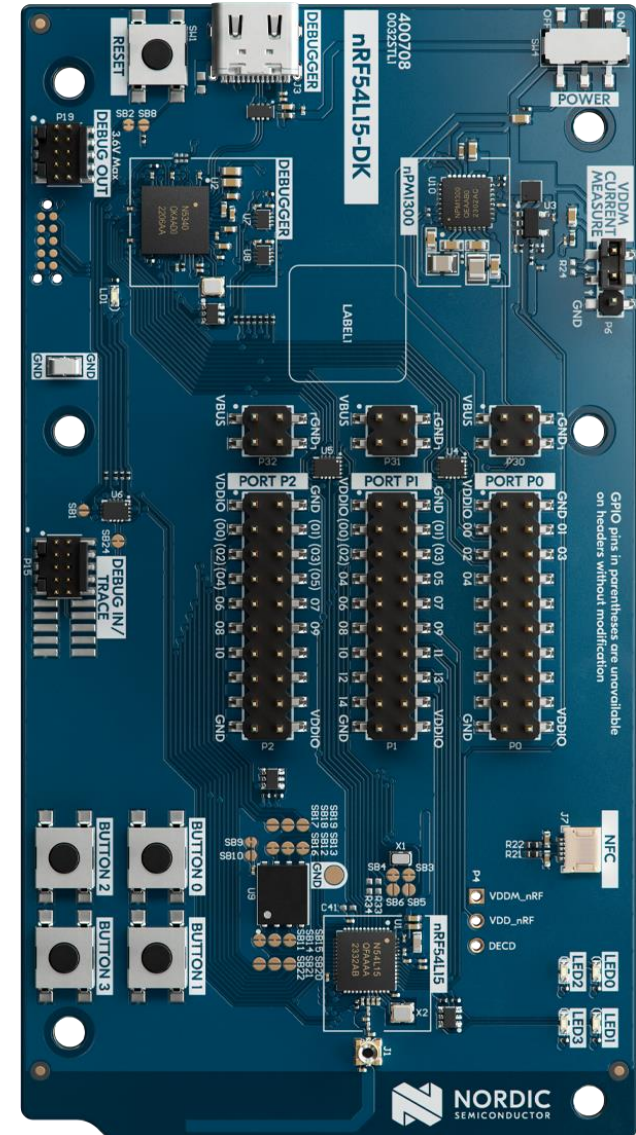
NRF52833 DK

- Bluetooth Low Energy
- Bluetooth mesh
- NFC
- Thread and Zigbee development kit for the nRF52833 SoC



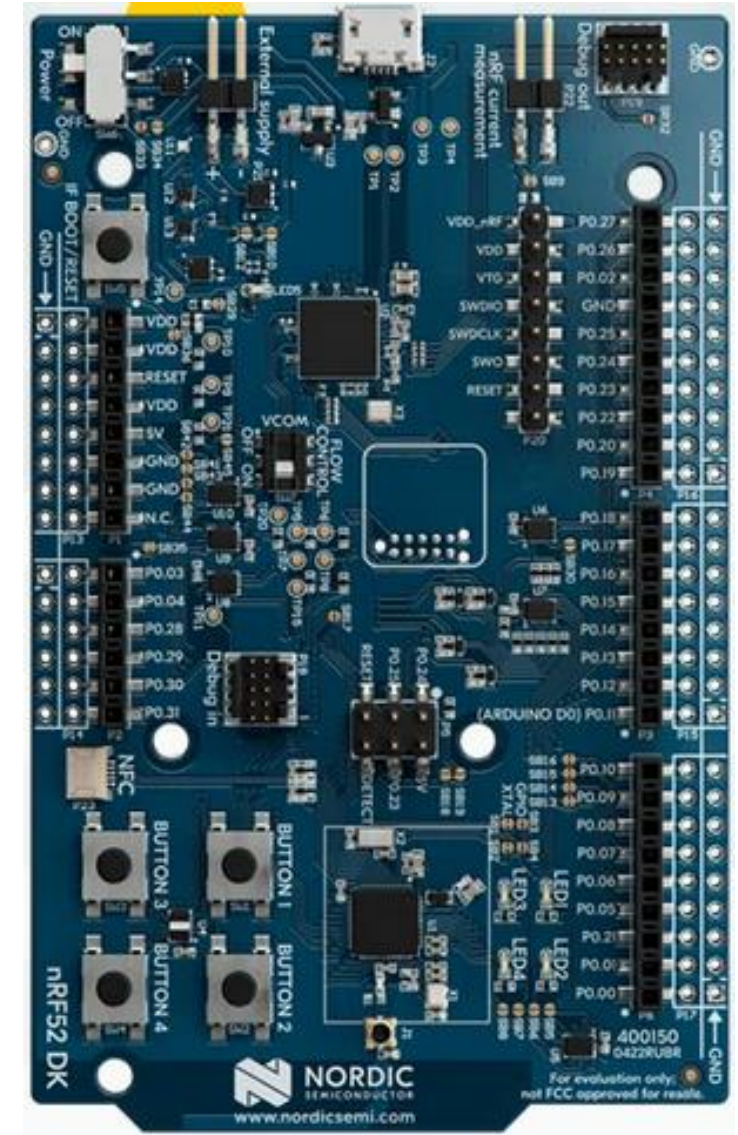
NRF54L15 DK

Development kit for the nRF54L15, nRF54L10, and nRF54L05 wireless SoCs



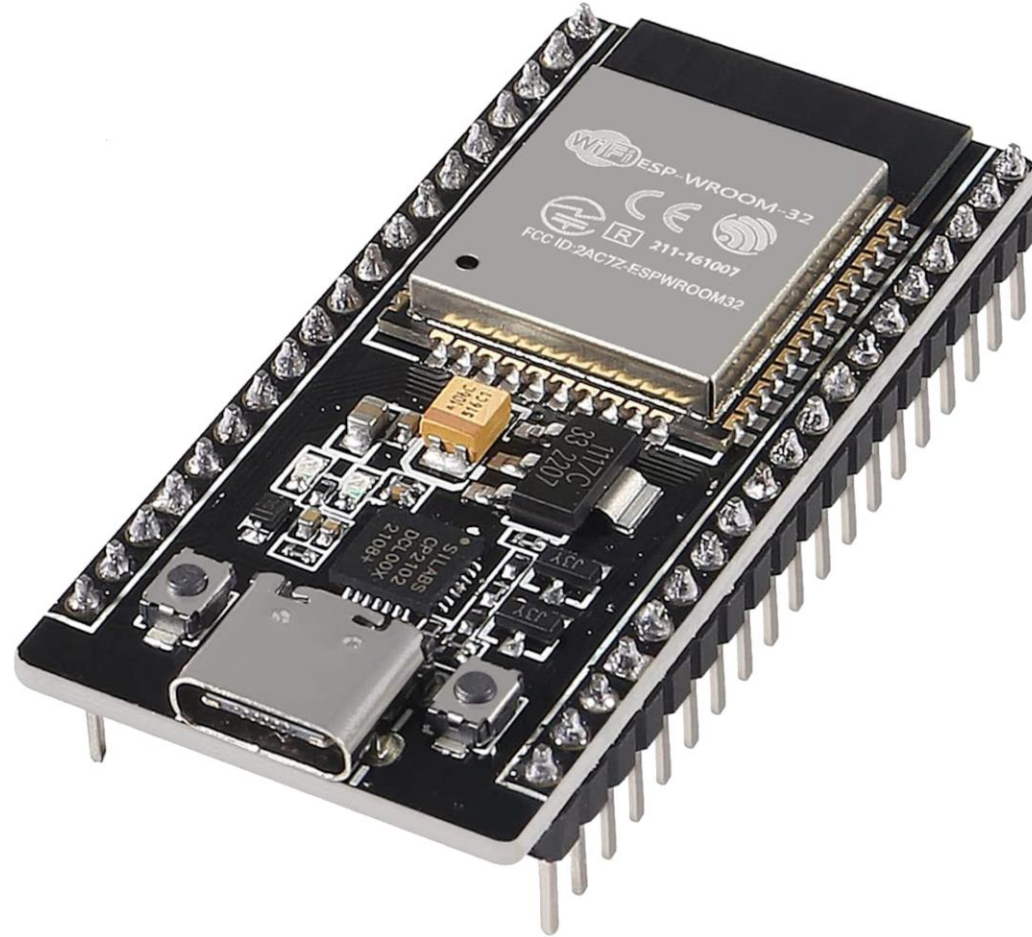
NRF52 DK

Bluetooth Low Energy and Bluetooth mesh development kit
for the nRF52810 and nRF52832 SoCs

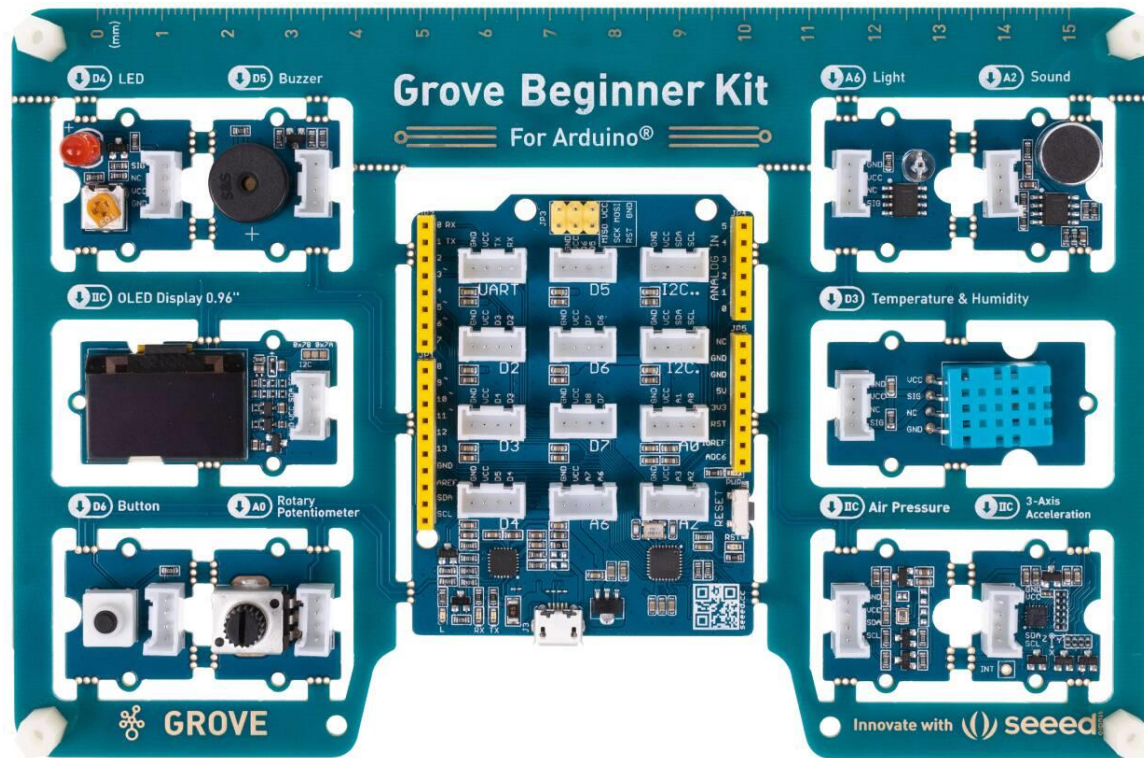


ESP32 USB-C IOT MOTHERBOARD DEVKITC CP2102 38PIN

Microcontroller: ESP-WROOM-32
Watch speed: 160MHz
USB converter: CP2102
USB connector: Micro USB
Flash Memory: 4 MB
RAM: 512Kb
Bluetooth: 4.2 and BLE (Bluetooth Low Energy)
WiFi: Built-in 802.11 b/g/n 2.4GHz
Programming: Compatible with Arduino IDE



GROVE STARTER KIT FOR ARDUINO

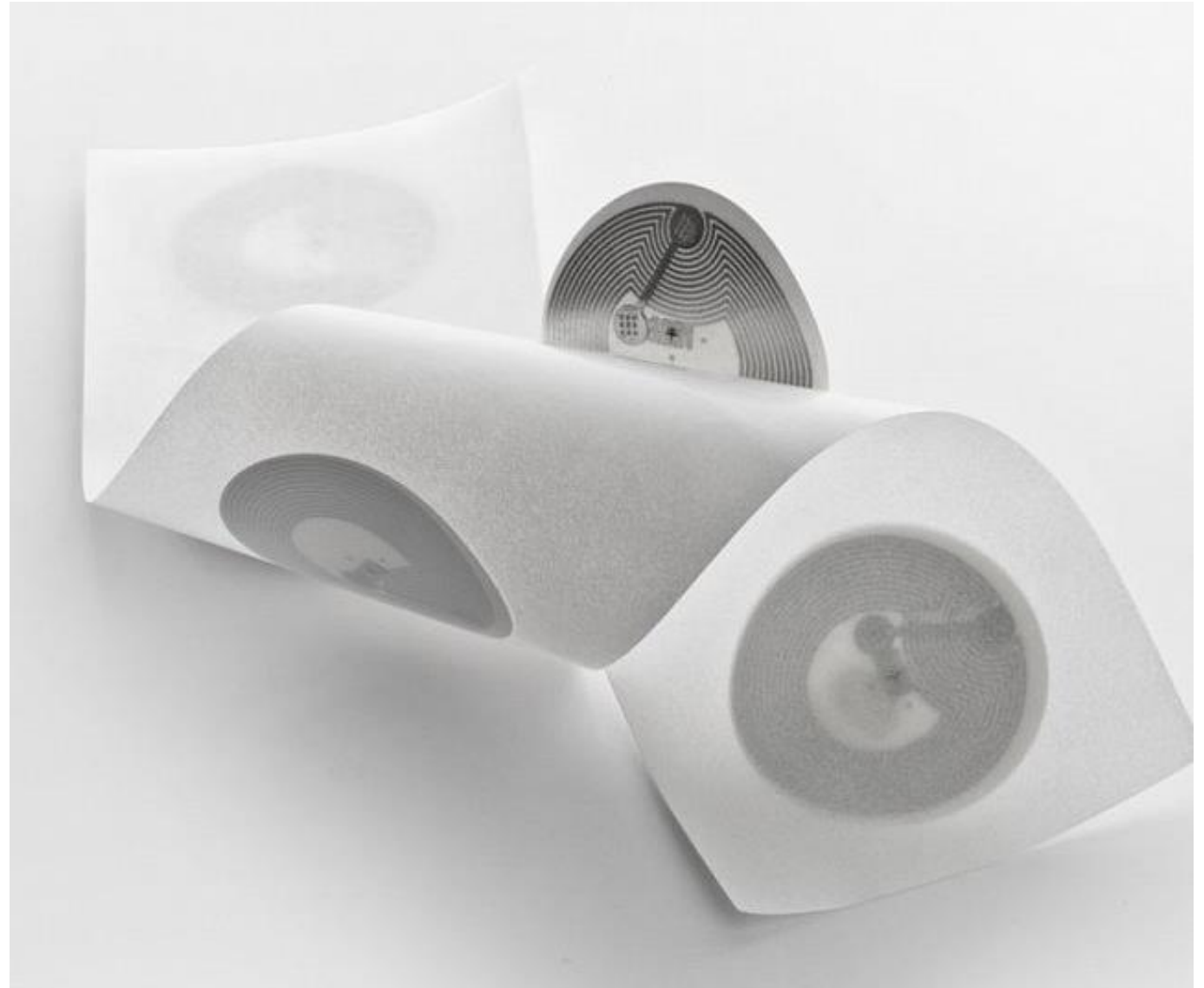


The Grove Beginner Kit for Arduino® is powered by an **Arduino UNO-compatible board** (ATmega328p-based Seeeduino Lotus) along with **10 additional Grove Arduino sensors all in one piece of the board**. **All modules are pre-coupled, no breadboard and starter cables required.**

NTAG RFID NFC

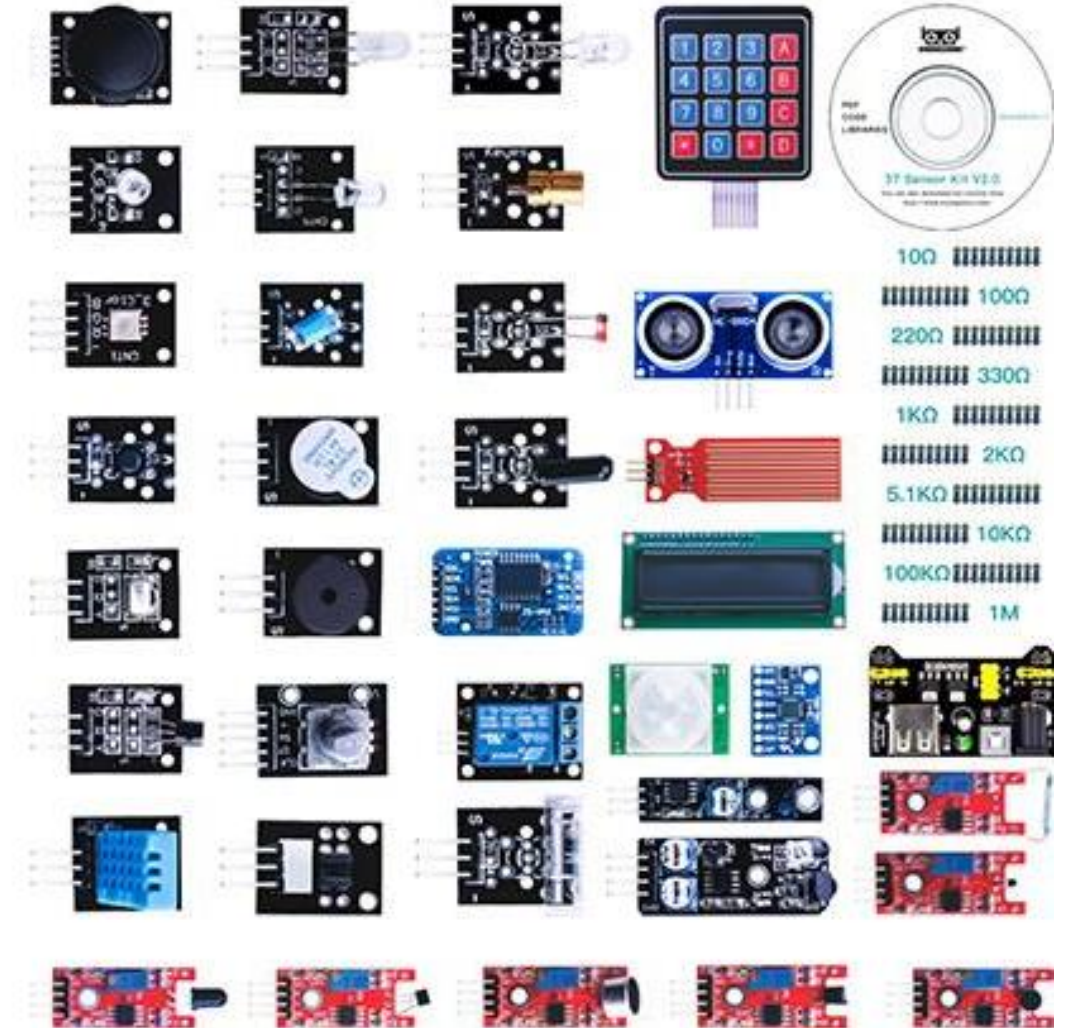
Supports 13,56mhz RFID and NFC
IC reader/writer, for
example: Acr122u reader/writer

Supports smart mobile phones with
NFC function.

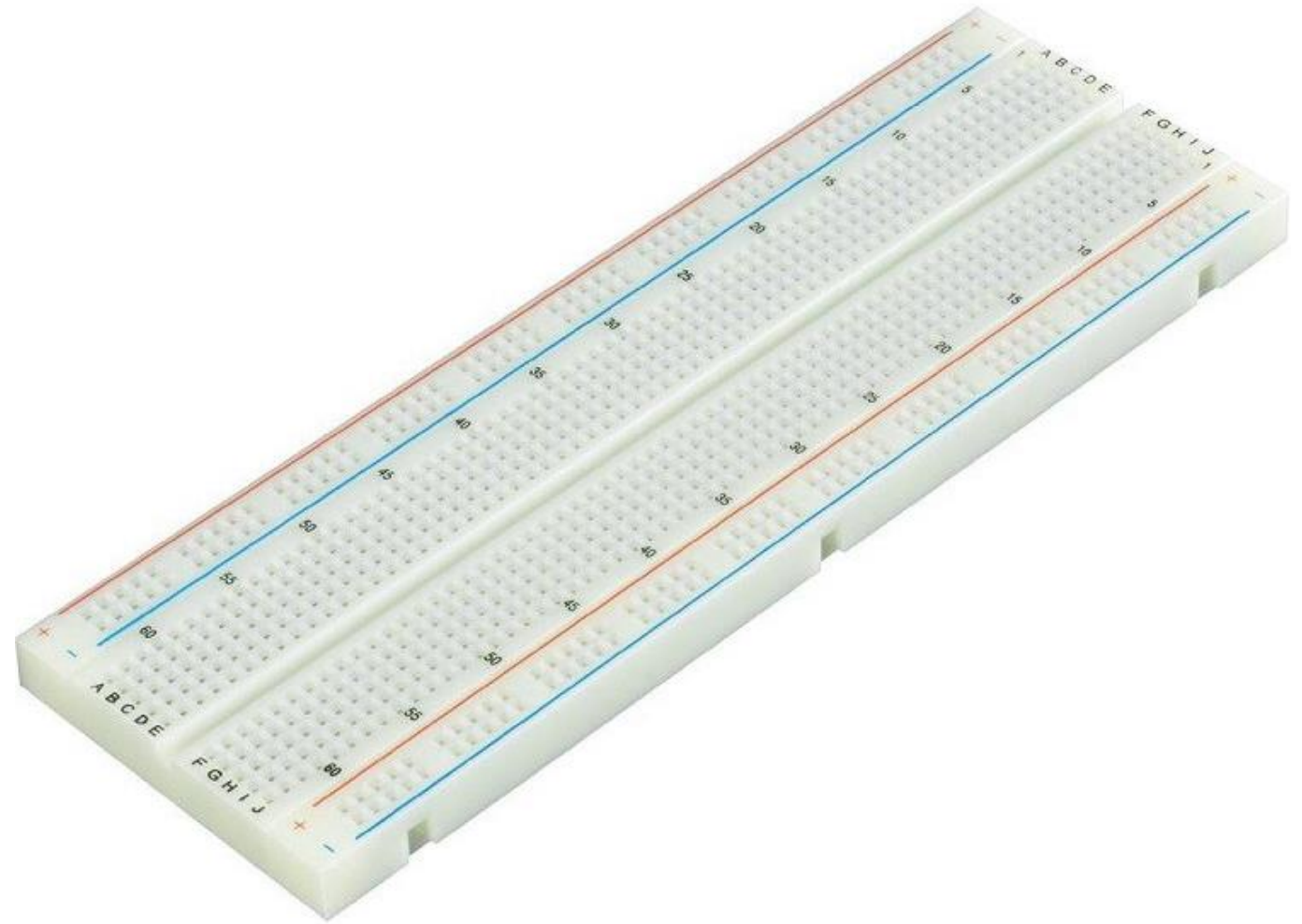


37 SENSORS STARTER KIT

The sensor set includes a selection of the most common and useful electronic components and sensors.



830 POINT BREADBOARD





DUPONT WIRE
30CM



10MM LEDS

3V DC MOTOR



CROCODILE WIRES



POWERBANK

