

# **Thread Low-Power Wireless IPv6 Mesh**

**IETF 120 Vancouver Hackathon**

**Stuart Cheshire, Saturday 20<sup>th</sup> / Sunday 21<sup>st</sup> July 2024**

# Thread

## Low-power wireless IPv6 mesh

Designed and maintained by the Thread Group <<https://www.threadgroup.org/>>

IEEE 802.15.4 wireless

250 kb/sec

Low power (years on a single battery)

IPv6 mesh

OpenThread Open Source software project <<https://openthread.io/>>

# Thread Hacking Team

Nine people on-site, one remote

Stuart Cheshire

Apple

François Michel

Apple

Ted Lemon

Apple

Esko Dijk

IoTconsultancy.nl

Zhaohui (Jeffrey) Zhang

Juniper

Aaron Zhang

Westford Academy

Hermin Anggawijaya

Allied Telesis Labs

Marvin Wißfeld

Josh Cohen

Konrad Derda (remote)

Nordic Semiconductor

# Thread Hardware Contributions

Generous support from silicon vendors

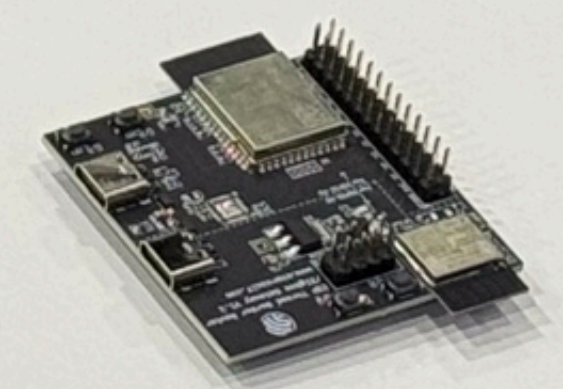
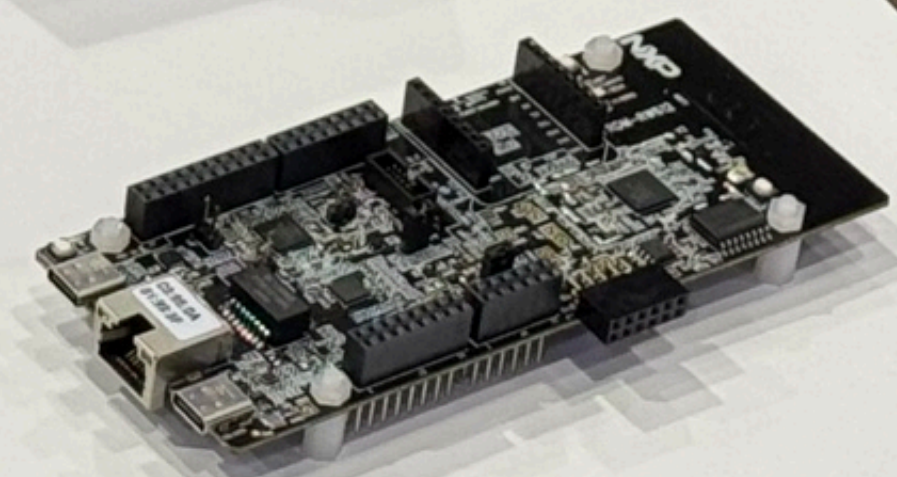
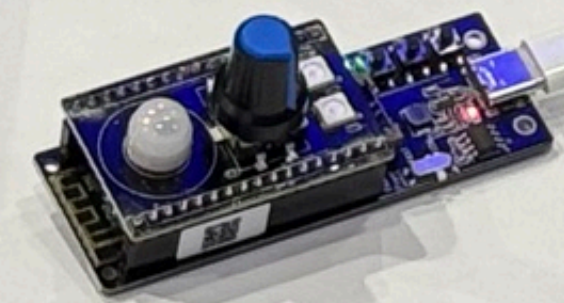
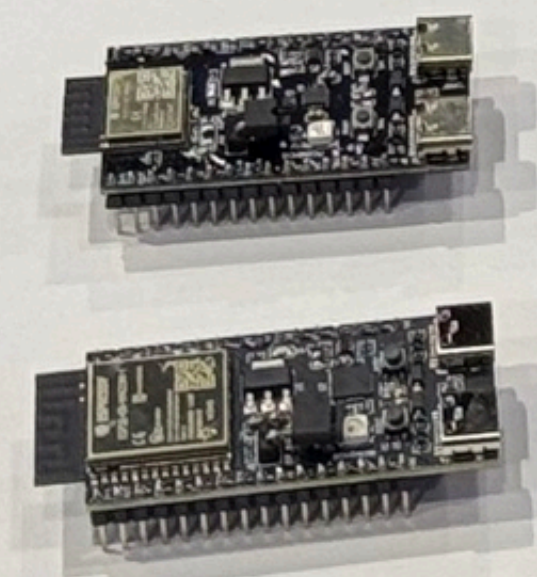
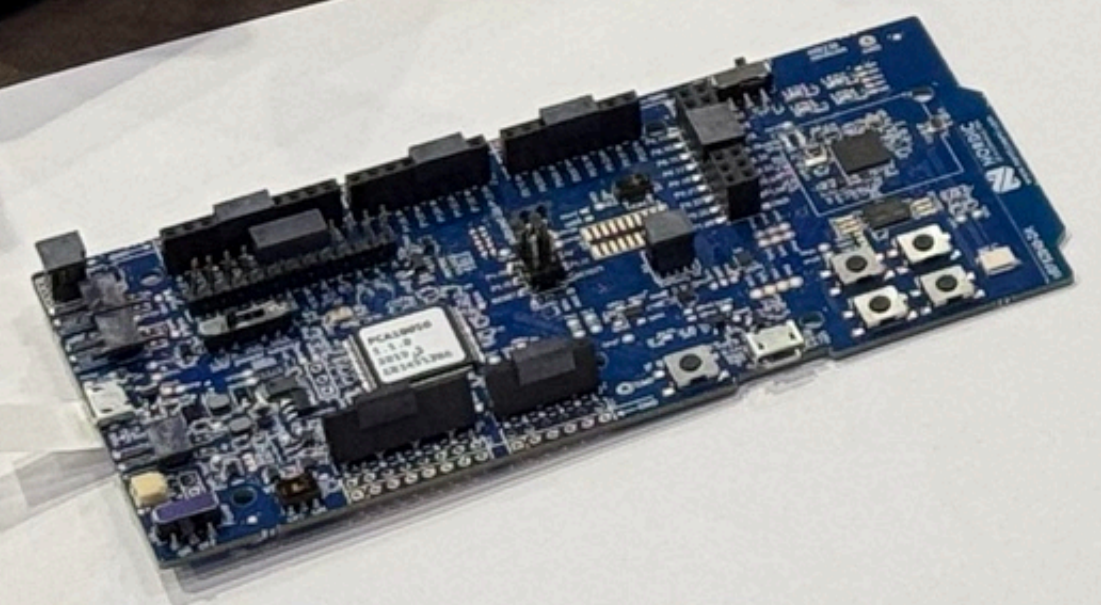
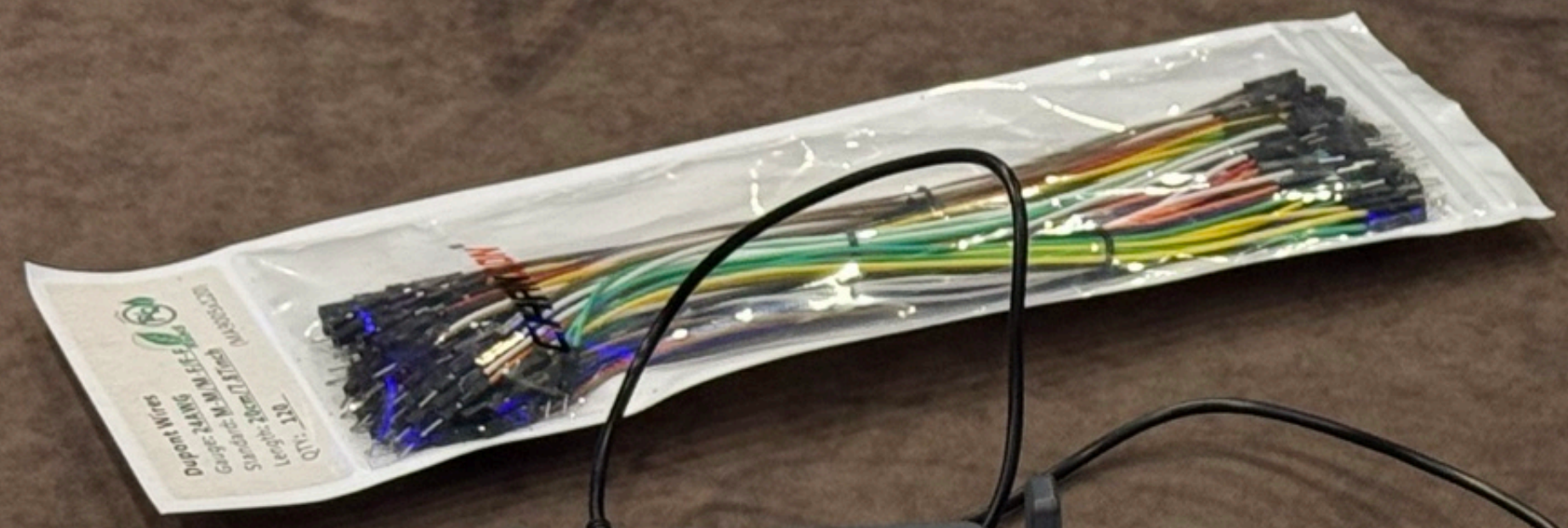
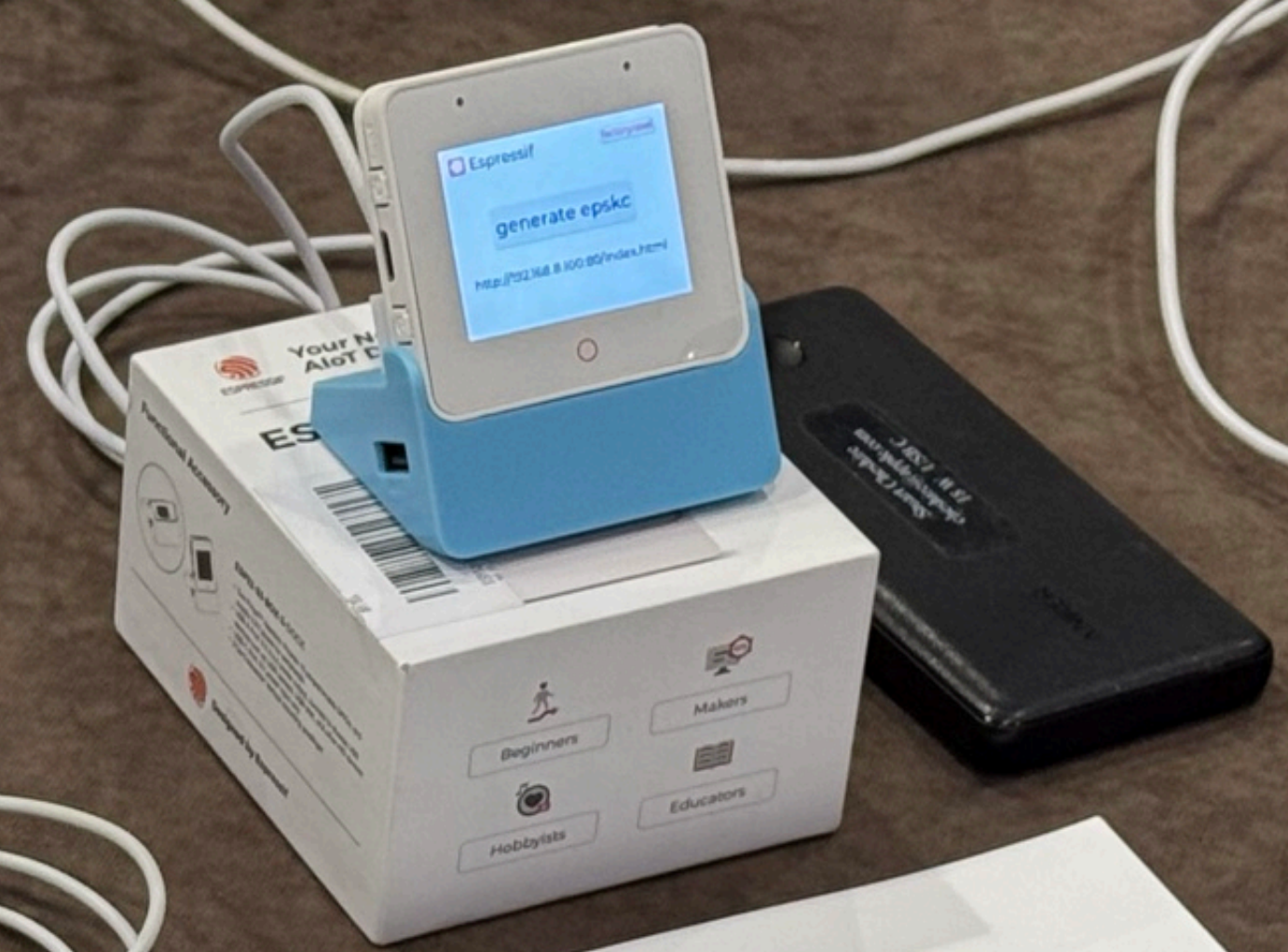
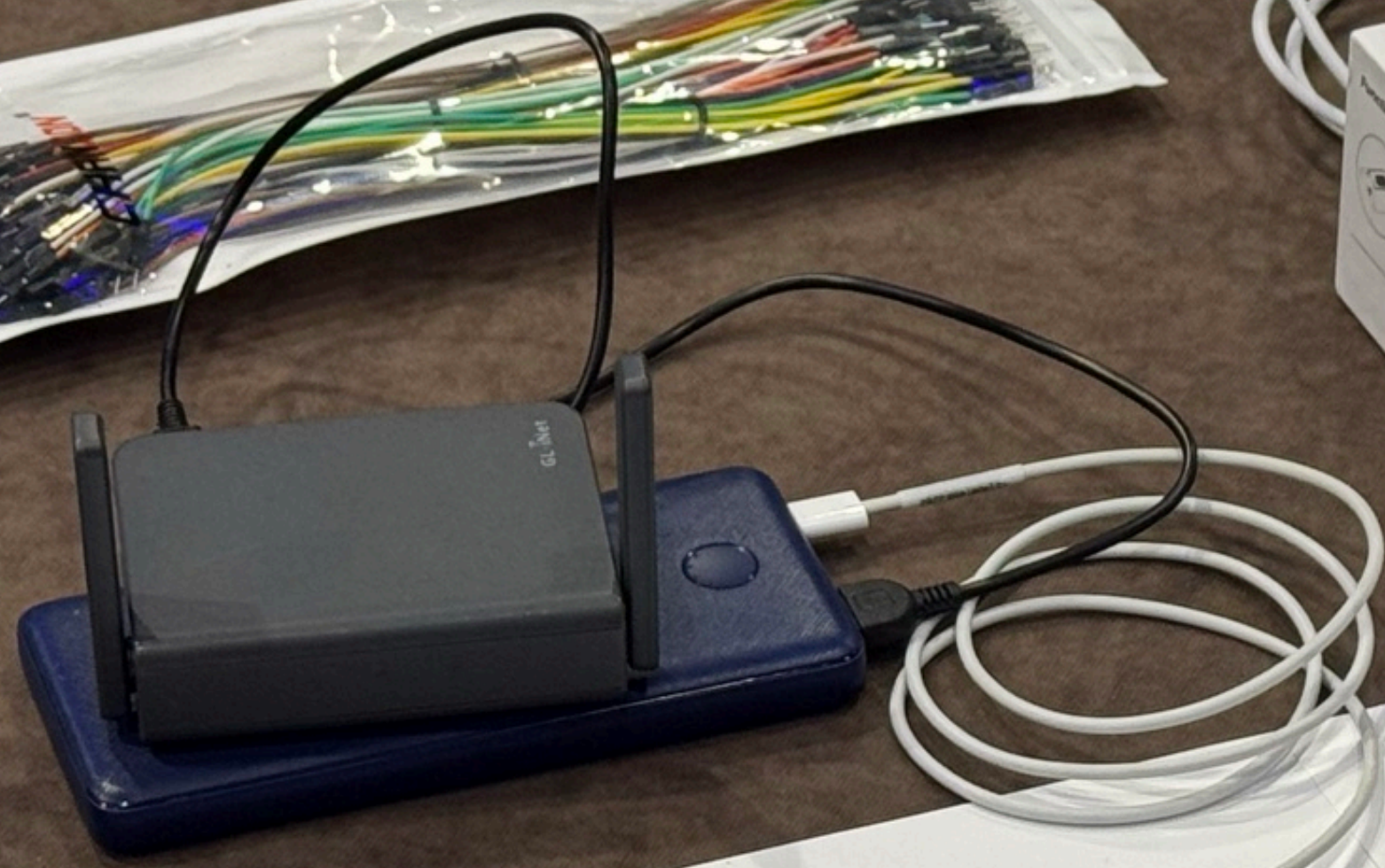
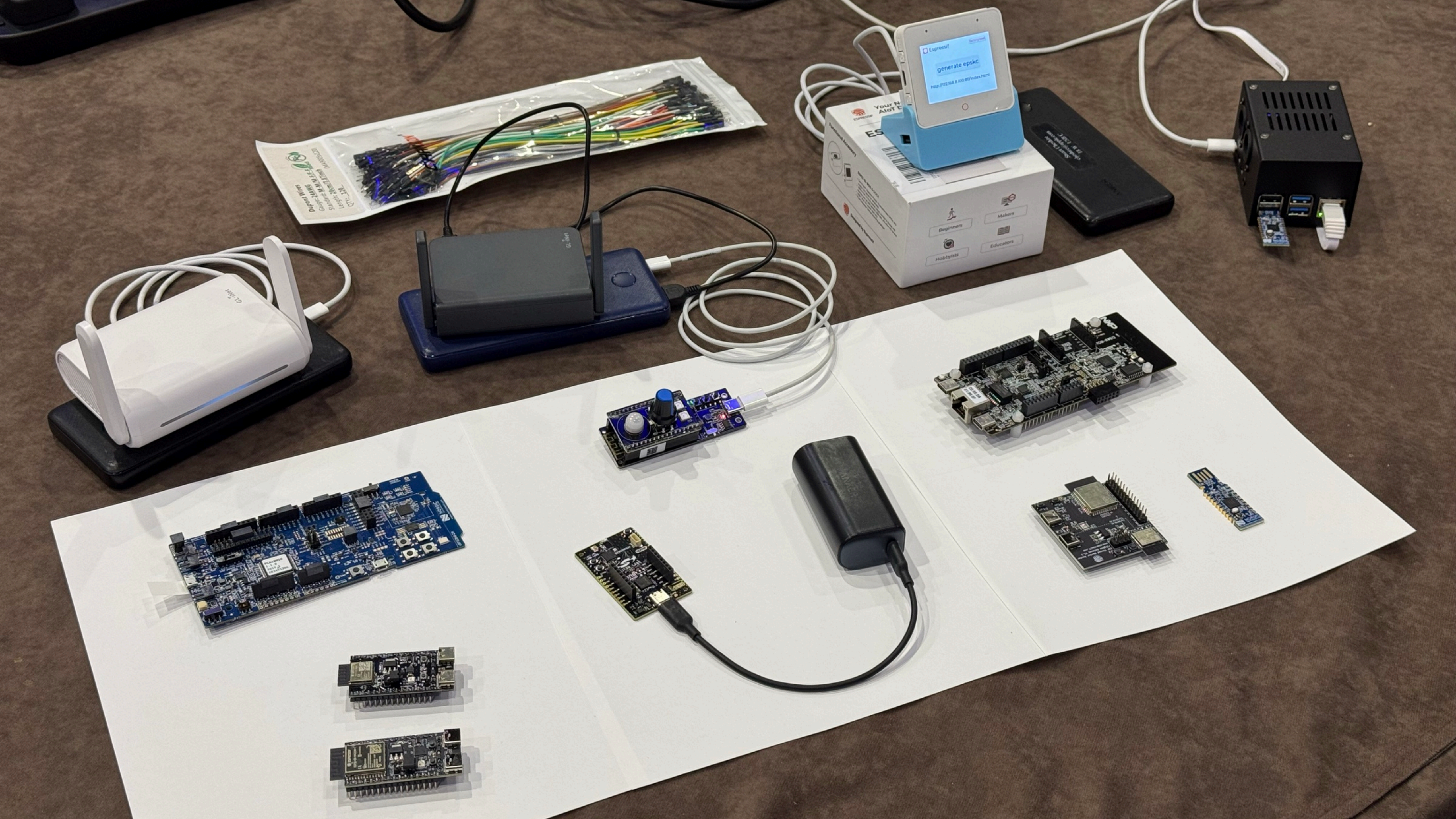
Espressif

GL.iNet

Nordic Semiconductor

NXP Semiconductors

Silicon Labs





# Thread Hackathon Highlights

<https://wiki.ietf.org/meeting/121/hackathon/thread-projects>

Evaluated variety of developer boards

Evaluated variety of development tools (VS Code, PlatformIO, Arduino IDE, etc.)

Thread range testing in crowded 2.4GHz radio environment (Hackathon room!)

Work with OTNS2 Thread simulator — made improvements to automated setup experience

Achievements for cBRSKI implementation: “autostart” feature for onboarding

Conversations with university professors about hands-on Thread programming assignments for students — contact us if you’d like to do something similar

Work on code exercising OpenThread TCP APIs

Work on code exercising OpenThread Service Discovery / Registration APIs

Join us next time at IETF 122 in Bangkok