BREATHING NEW LIFE INTO OLDER INSTRUMENTS

LabVIEW and Micro-Webservers as Alternative GUI Platforms

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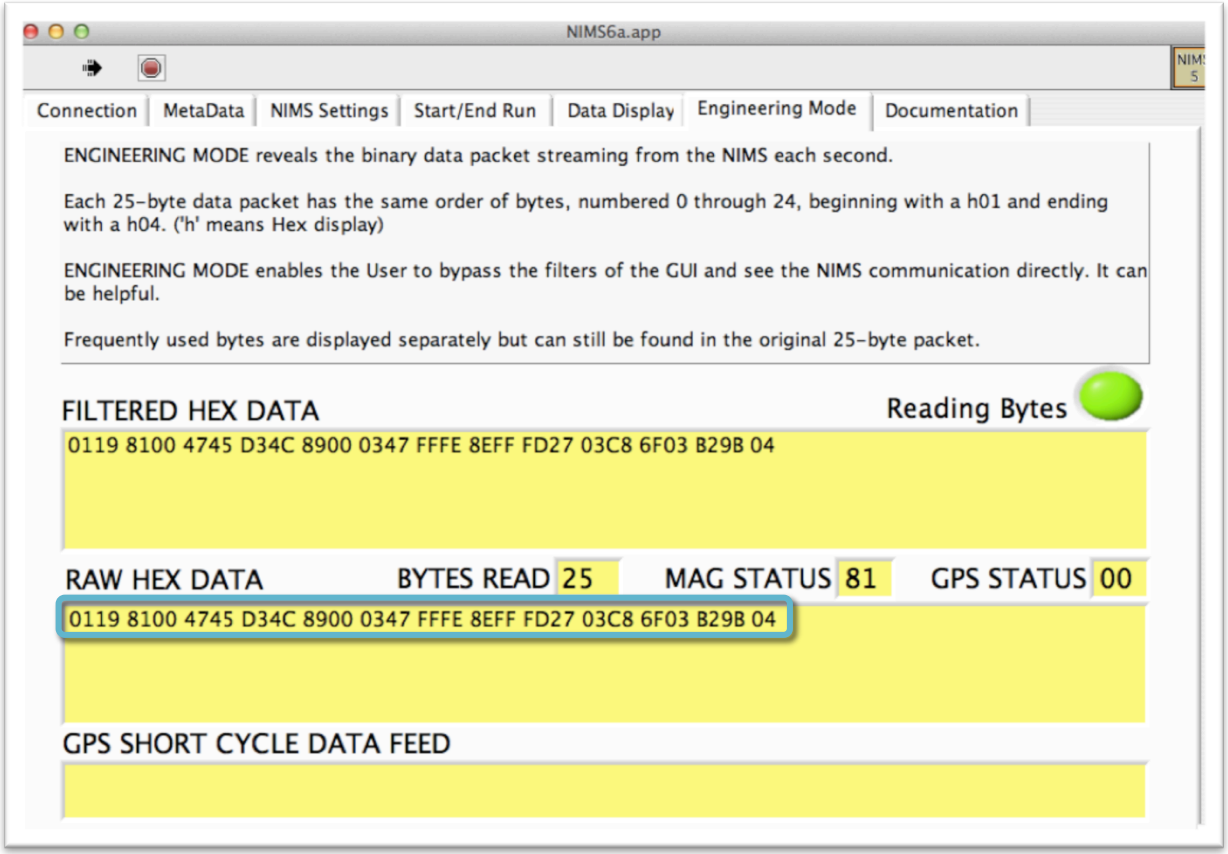
How to ensure older equipment is viable for years to come?

- Changes in OS
- Changes in Hardware

NIMS Serial Data Packet

- 26 Bytes/Every Second
- Packet Contains:
  - Status Flags
  - 5 Components
  - GPS Bytes
  - Gain Status
  - Etc



NIMS Serial Interface

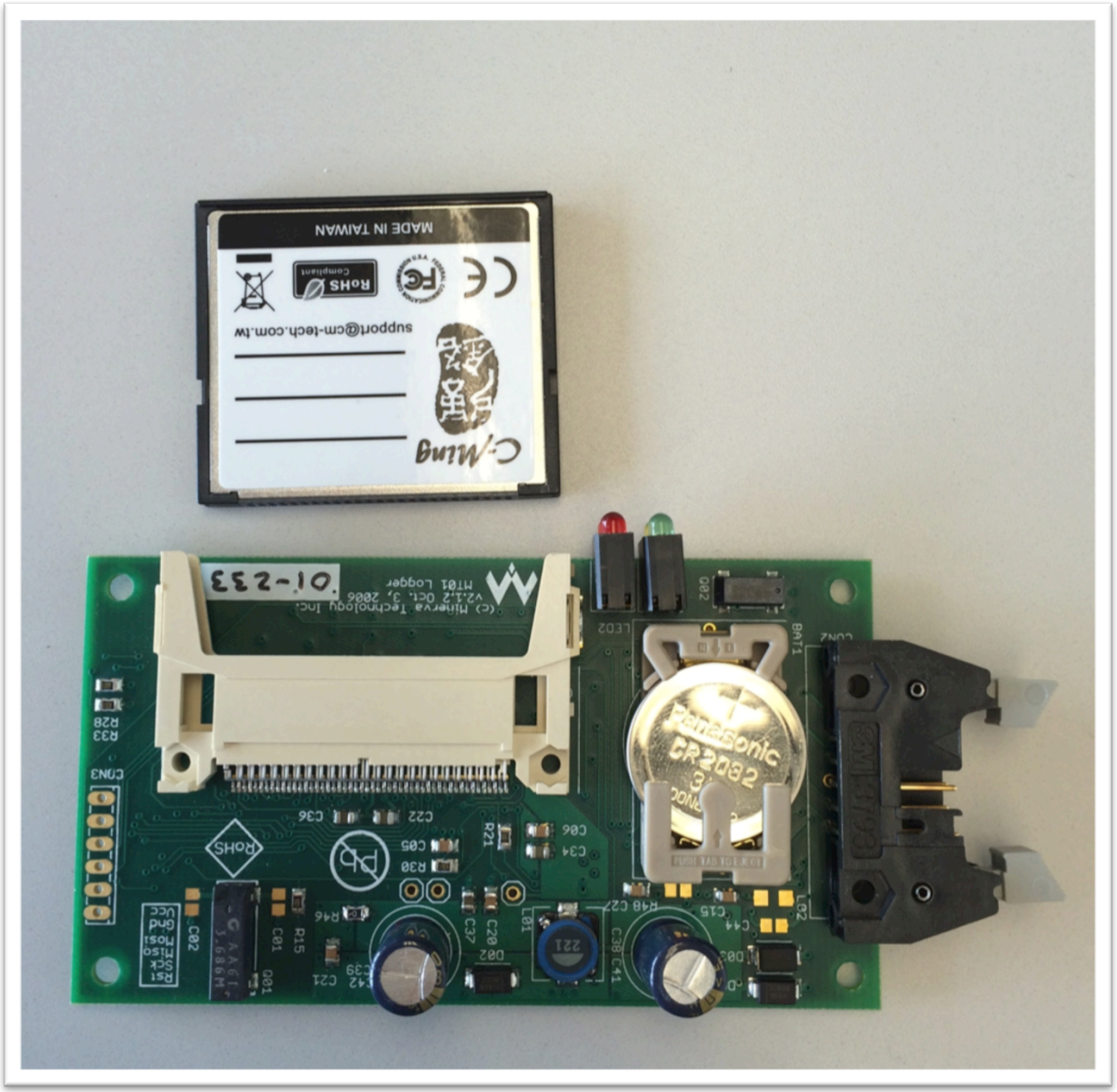
HP Plamtop PC

Commands:

- Z – change gains of e-field amplifier
- Ctrl-U – start header mode
- D – start logging data
- E – end logging data
- Etc.

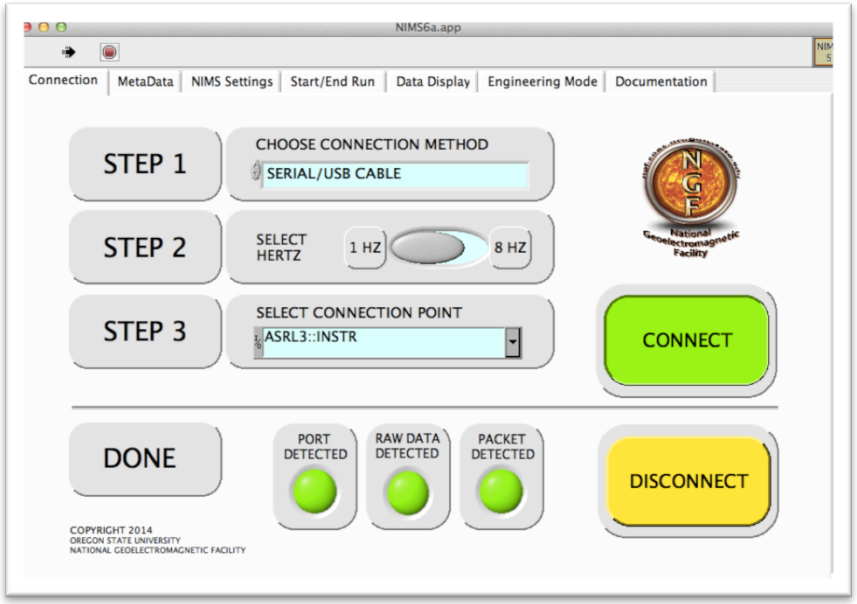
Minerva Board

- CF Card Recording Medium
- Serial Front End

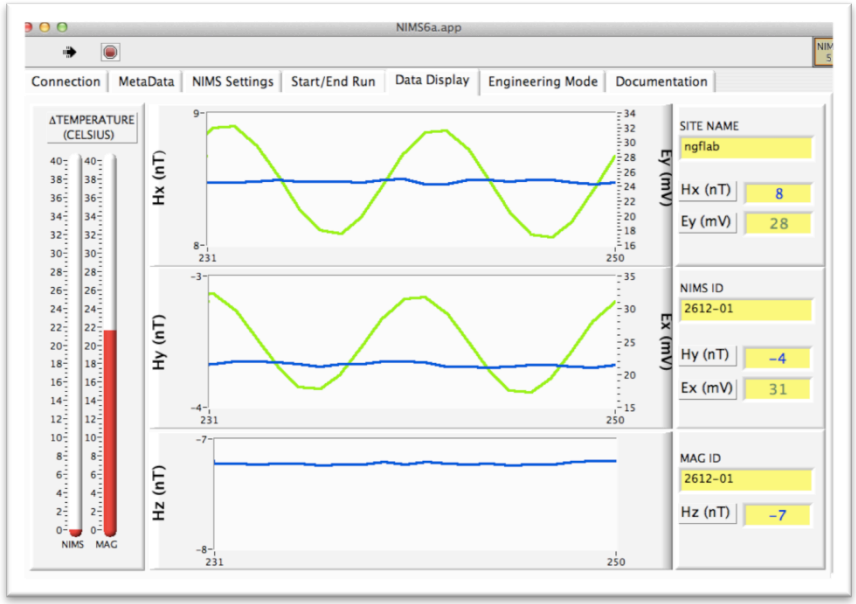


LabVIEW

Connection

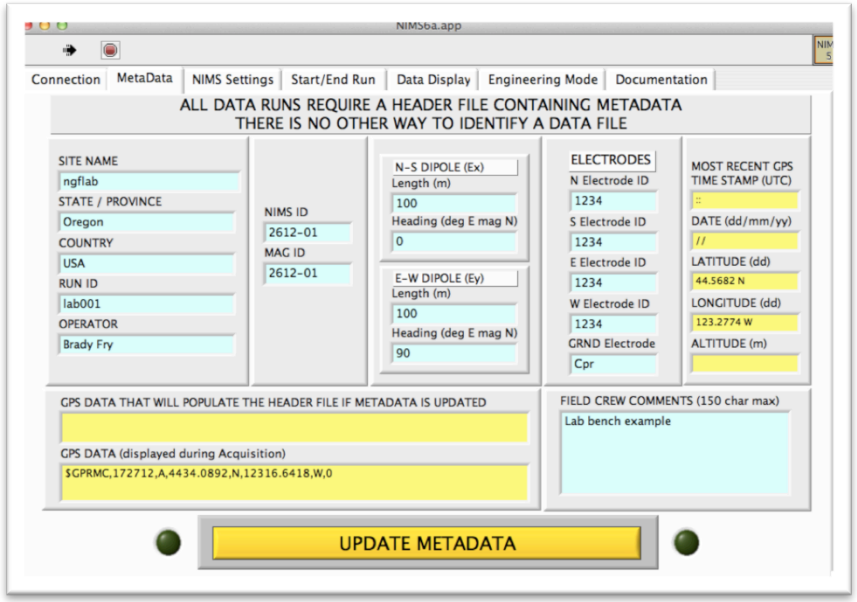


Graphing inputs

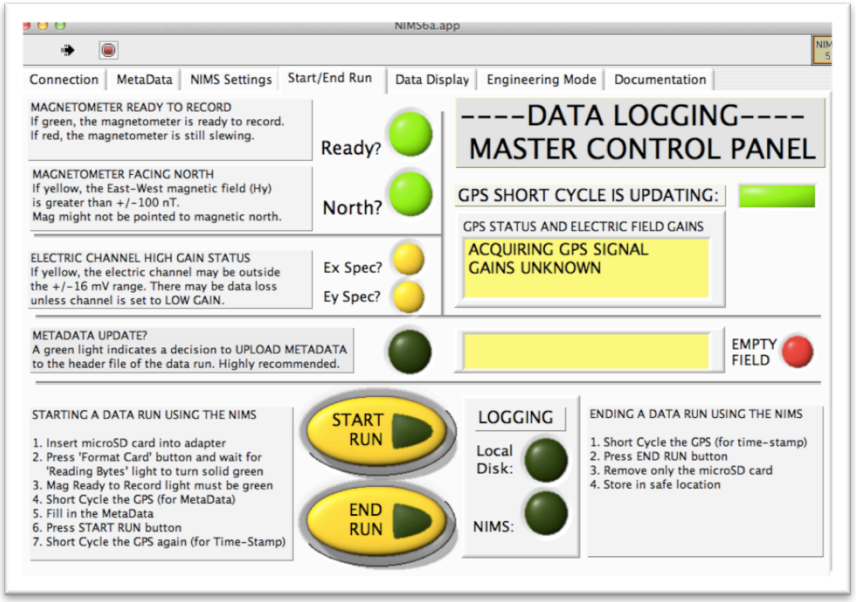


LabVIEW cont.

Entering Metadata



Start/Stop Run



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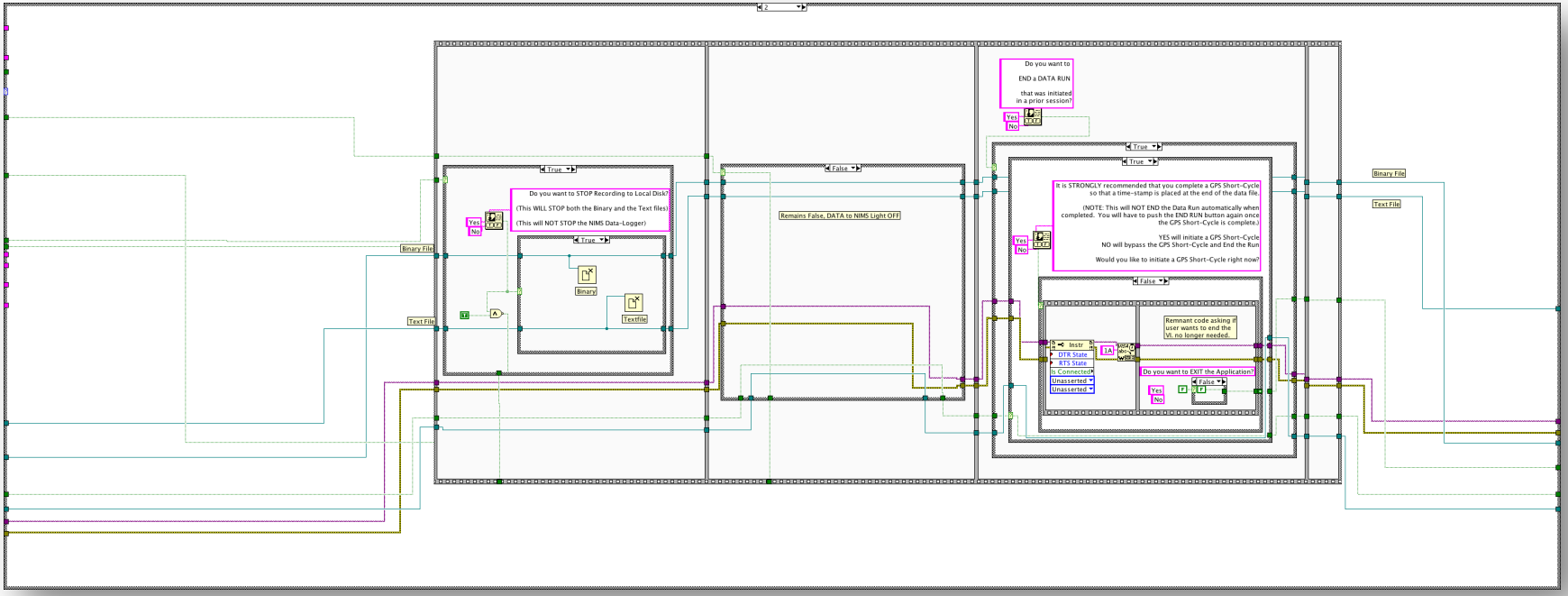
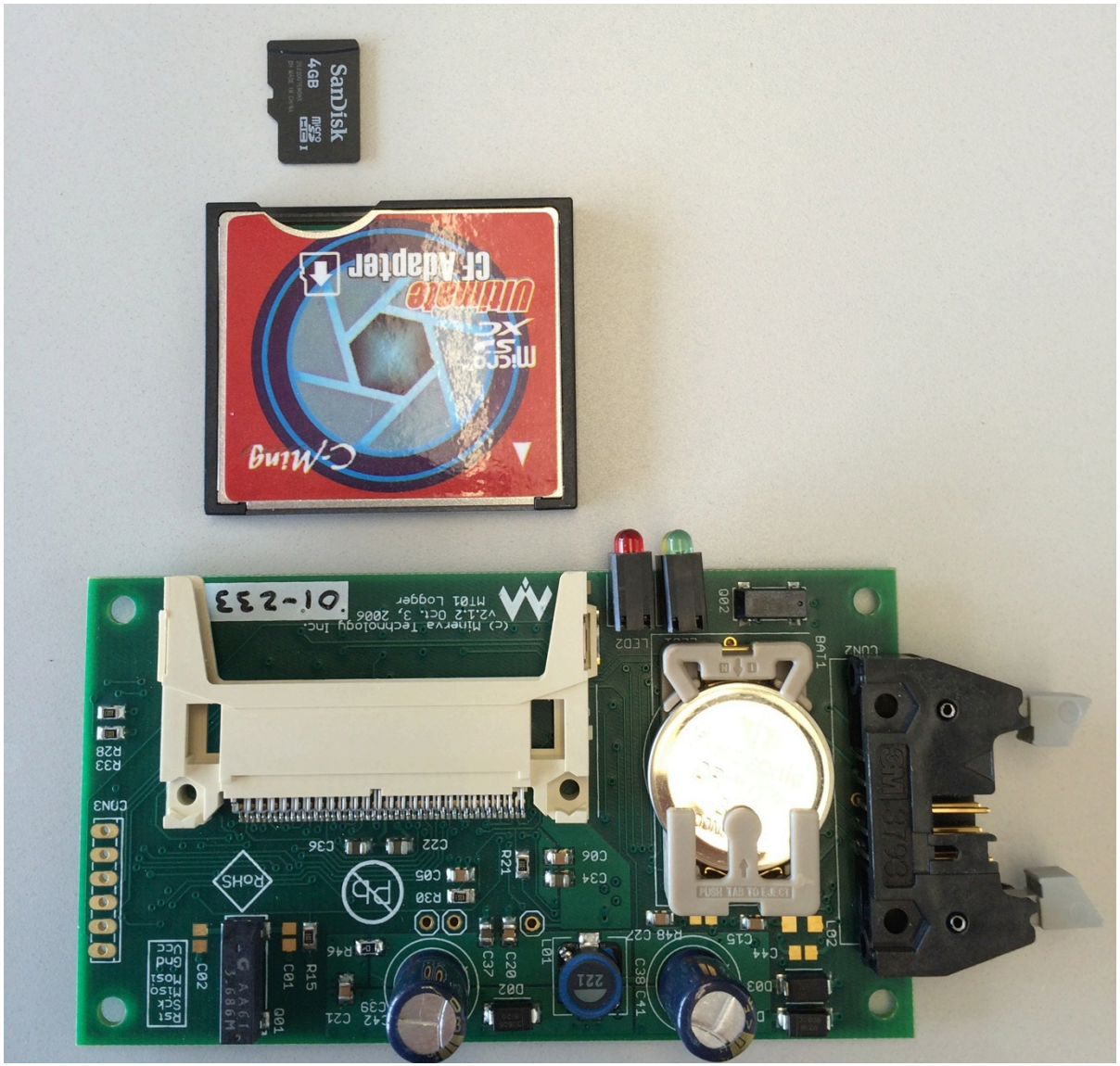
LabVIEW cont.

- Difficult to maintain
- Dependent on LabVIEW



CF to microSD Card Adapter

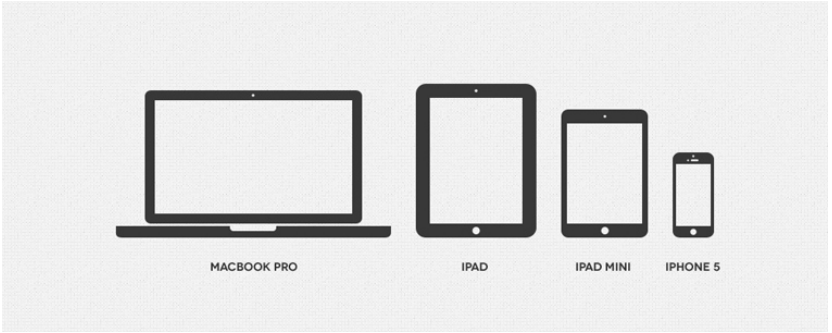
- Quality of adapters is questionable
- Firmware updates
  - Antiquated hardware components
  - Card removal recognition
  - Dated compiler/ software



Development of Webserver

Front End Webserver

Device Independent



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Prototype

Atmel SAMD21 Xplained

TI CC3200 Launchpad

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