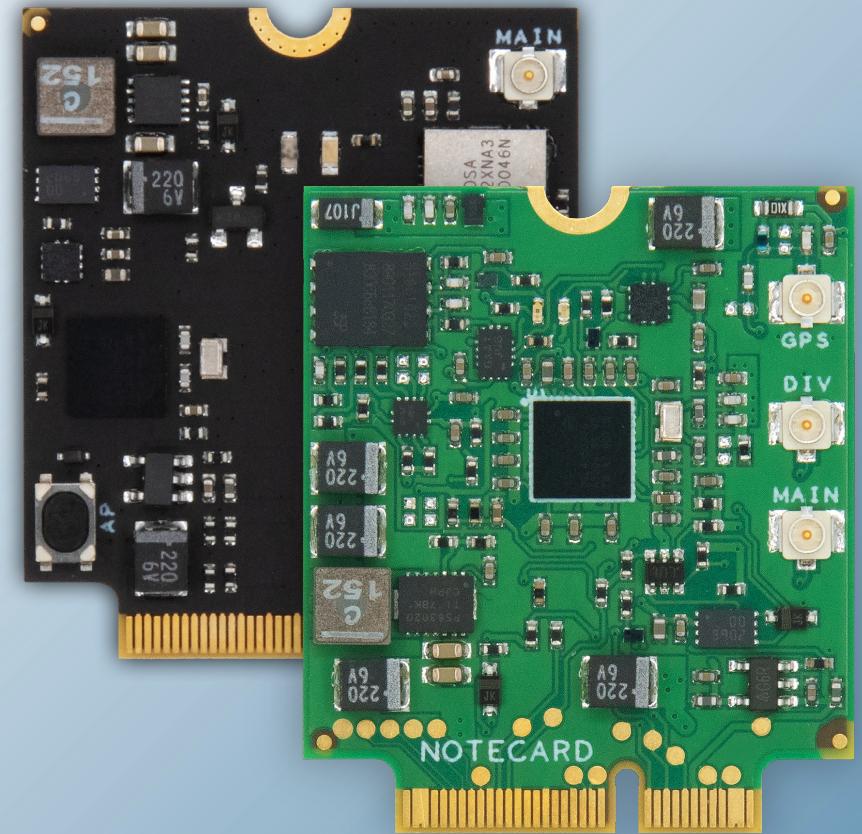


Introducing Dev-Friendly Wireless IoT with the Notecard

Rob Lauer

Director of Developer Relations



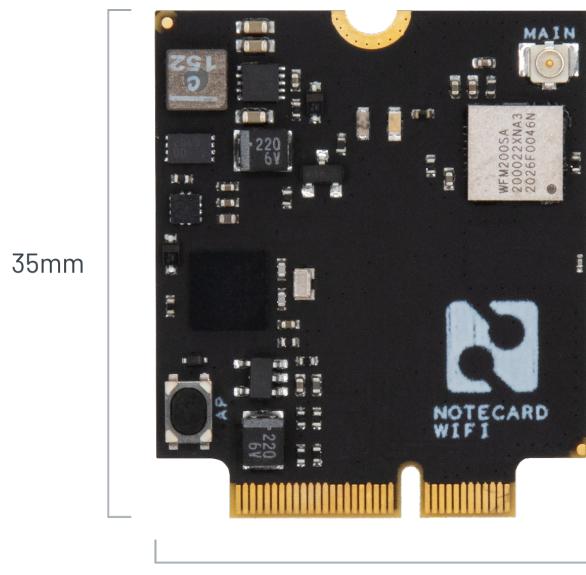
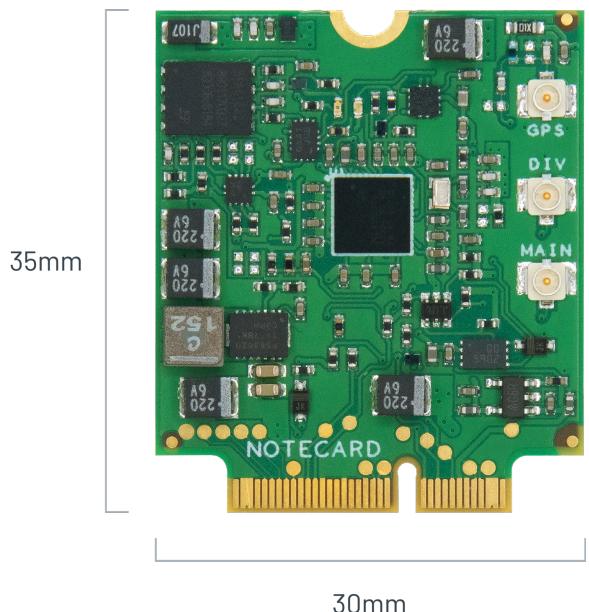
“

Complexity kills. It sucks the life out of developers, it makes products difficult to plan, build, and test.

Ray Ozzie - CEO of Blues Wireless

Section Agenda

- Intro to the Notecard and Blues Wireless
- Lab: Hands-on Wireless IoT
- Lab: Collect Sensor Data and Send to Cloud



 blues wireless



**"Making wireless IoT easier for developers
and more affordable for all"**

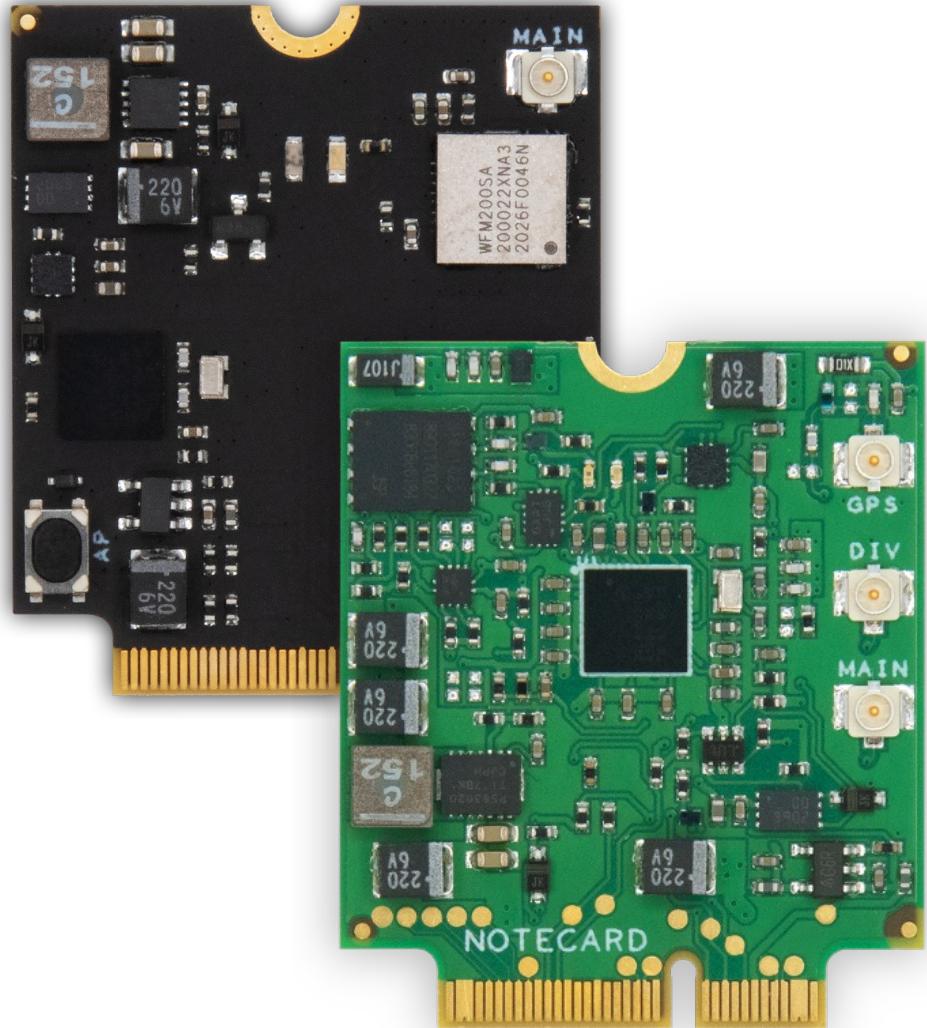


Easy for developers and **affordable** for all.

- 🔒 Securing your data from device to cloud
- 🔋 Building zero-config low-power hardware
- 💻 Providing an unmatched developer experience

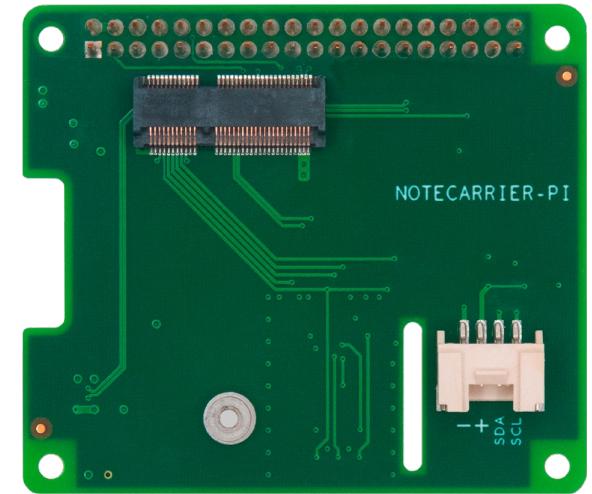
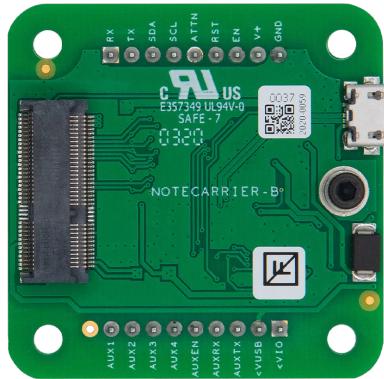
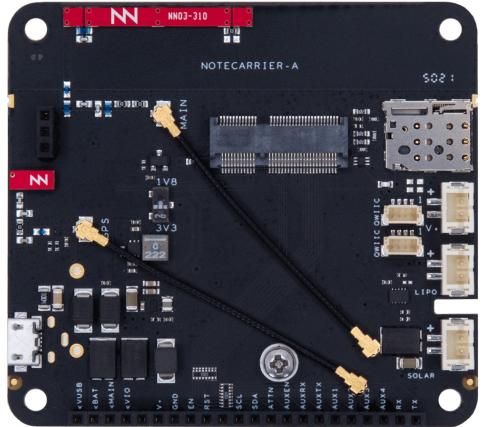
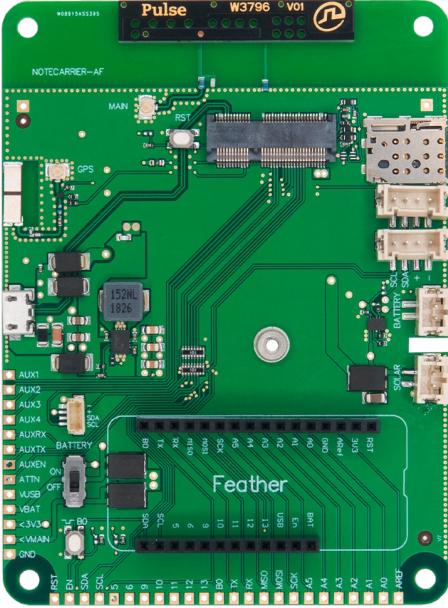
Notecard

- Low-power system-on-module
- Global cellular/GPS or Wi-Fi
- 500MB cell data + 10 years service
- JSON-based API
- Python, Go, Arduino, C/C++
- Cellular: NB-IoT, LTE-M, Cat-1



Notecarrier

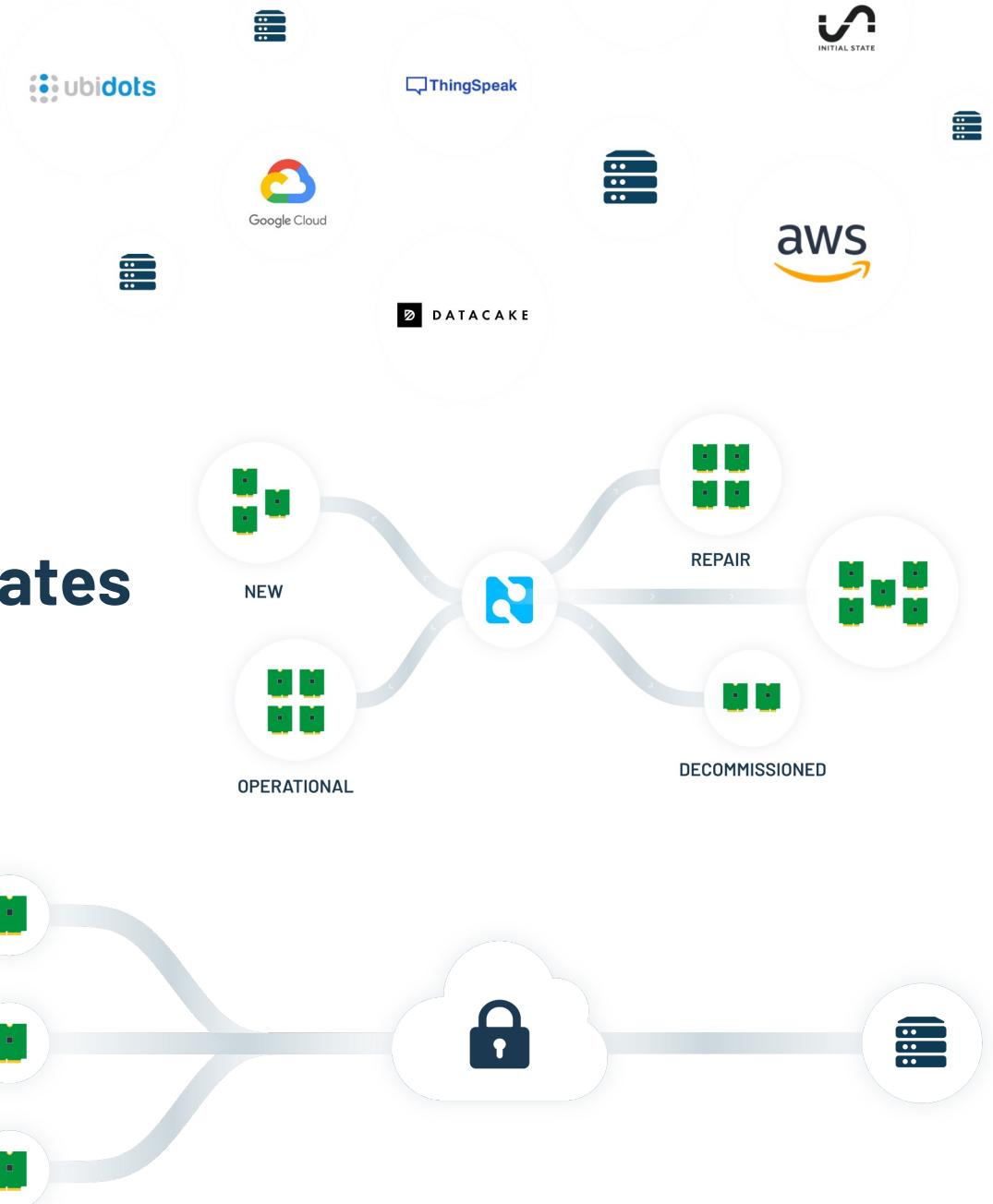
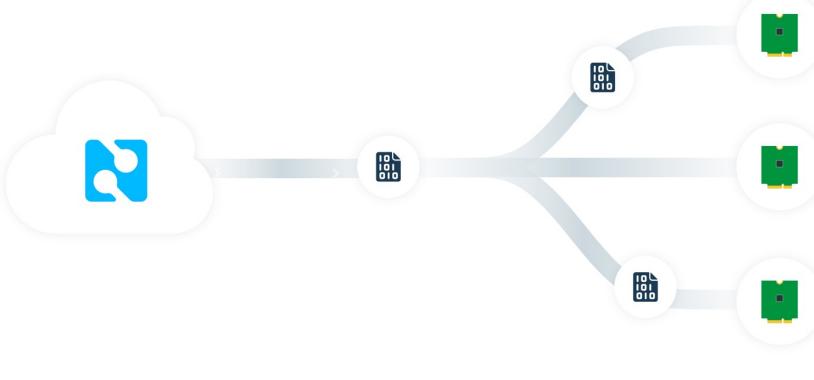
- Dev boards for easy prototyping
- Notecarrier for every scenario:
 - **AF** - Feather-compatible socket
 - **A** - Any MCU, onboard antennas
 - **B** - Small form factor
 - **Pi** - Raspberry Pi SBC



Notehub

- Route data to **any cloud** app
- Manage **fleets** of devices
- OTA MCU/Notecard **firmware updates**
- **Secure** communications

blues wireless



Example: *card.location* API

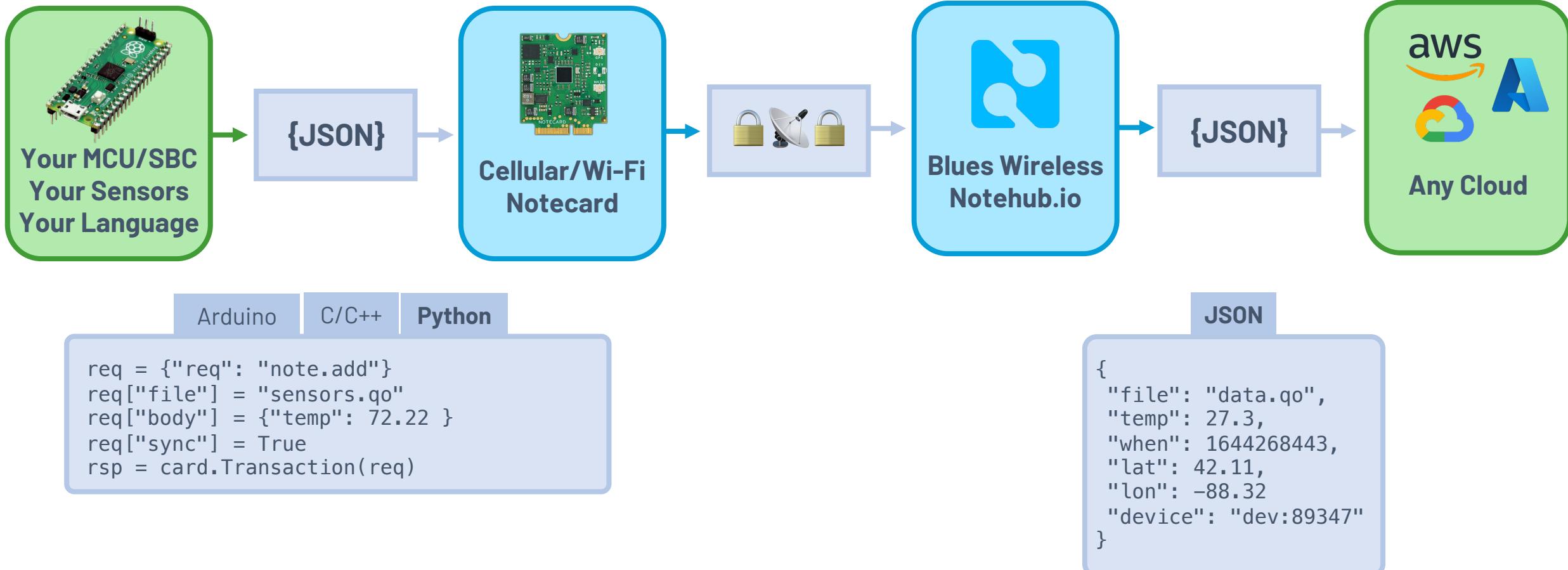
Request

```
{ "req": "card.location" }
```

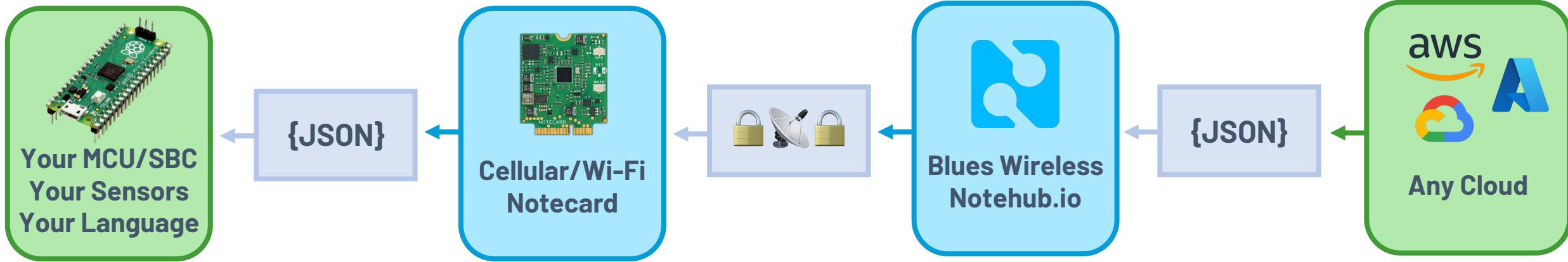
Response

```
{
    "status": "GPS updated (58 sec, 41dB SNR, 9 sats),
    "mode":    "periodic",
    "lat":     42.577600,
    "lon":     -70.871340,
    "time":    1598554399
}
```

Outbound Communication (from MCU to Cloud)



Inbound Communication (from Cloud to MCU)



Arduino C/C++ Python

```
req = {"req": "note.get"}  
req["file"] = "data.qi"  
req["delete"] = True  
rsp = card.Transaction(req)
```

JSON

```
{  
  "file": "data.qi",  
  "sample_freq": 5,  
  "notify": true  
}
```

Lab 1/4



- Chromium-based Browser
 - (e.g. Chrome or Edge)
- Micro USB Cable
- The Hammer of Blues

dev.blues.io/quickstart

Lab 2/4



- VS Code + PlatformIO Extension

dev.blues.io/quickstart/swan-quickstart

Lab 3/4



No More Tools to Install!

Sensor Tutorial @ dev.blues.io

Lab 4/4



No More Tools to Install!

Routing Tutorial @ dev.blues.io