

MiniApp for IoT

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Co-chair, MiniApp CG

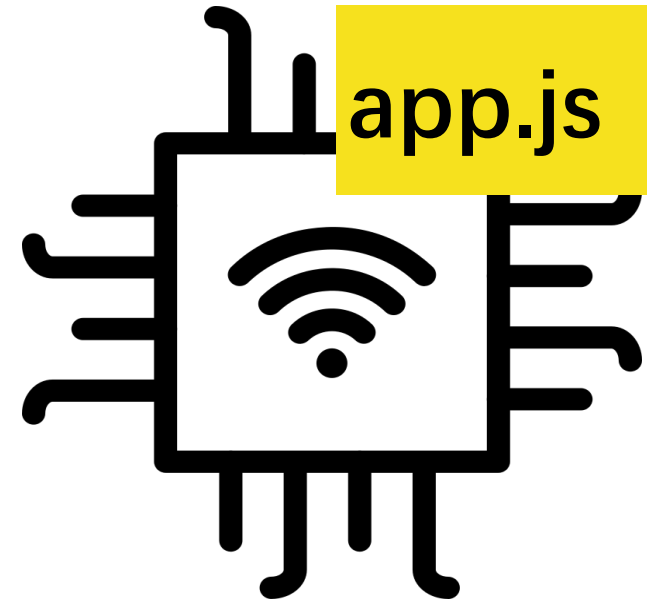
Alibaba Group

MiniApp overview

- A new format of mobile application, running on top of Native Apps or OS
- Web-like, free of installation
 - Small package (2M-4M)
 - Split packages
 - Streaming
- App-like experience
 - Native API/data access with permission
 - High-level components (e.g. map)

What is MiniApp for IoT

- MiniApp running on IoT devices
- Share similar architecture of MiniApp running on the cellphone and PC
- Run on top of IoT OS, rather than on Native Apps
- Has its unique features
 - Packaging
 - Lifecycle
 - Extended API for IoT



Some use cases

Switch panel



Smart speaker



Checkout pad



Video conference terminal



Face recognition terminal

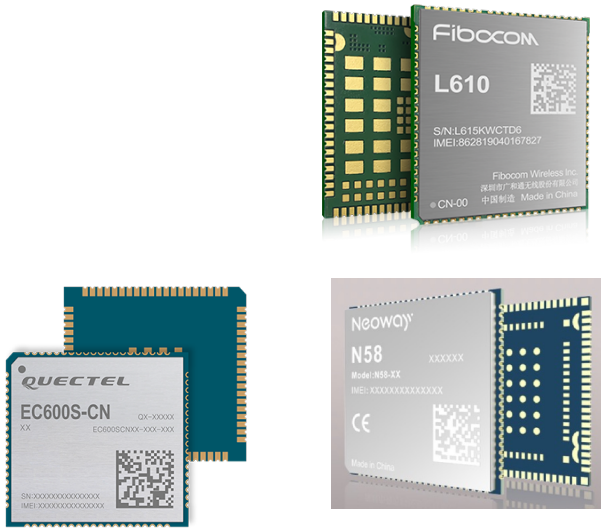


Locator

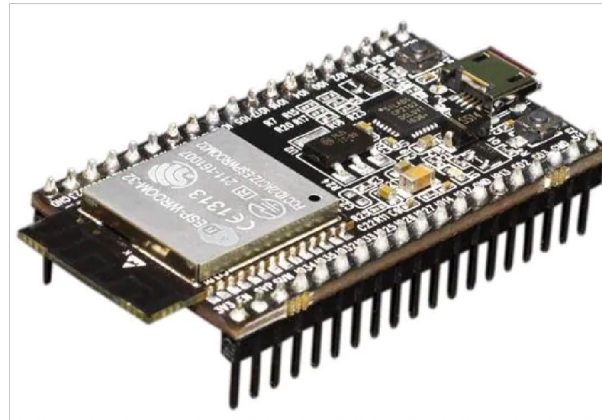


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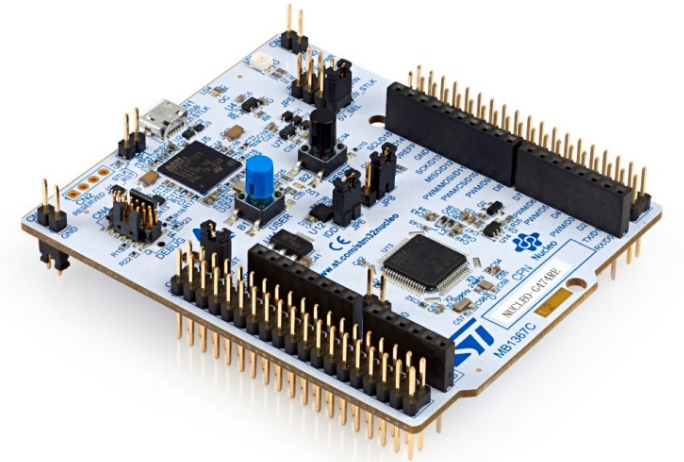
Hardware supporting MiniApp for IoT



LTE Cat 1 Module

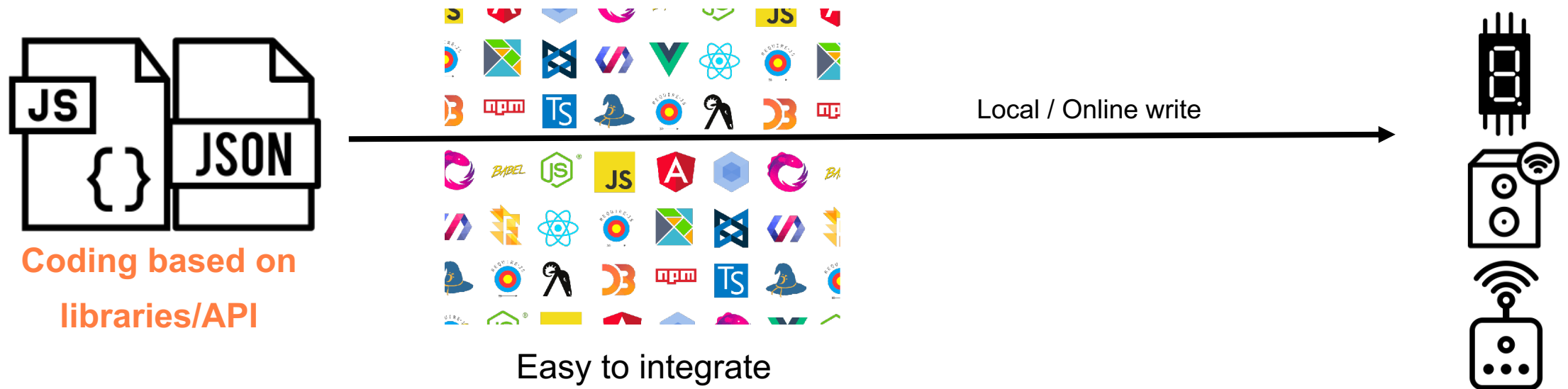
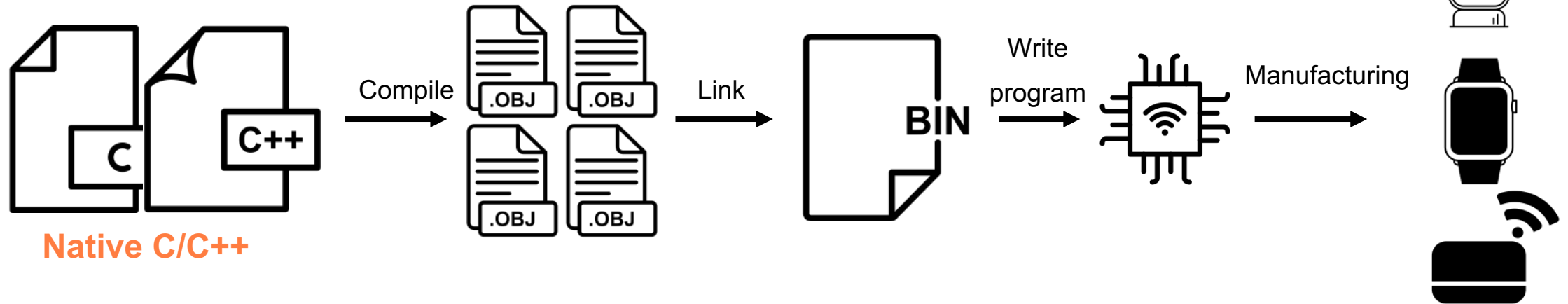


Wi-Fi Module
(for single SoC solution)



AliOS Things integrated MCU

Benefits of MiniApp for IoT



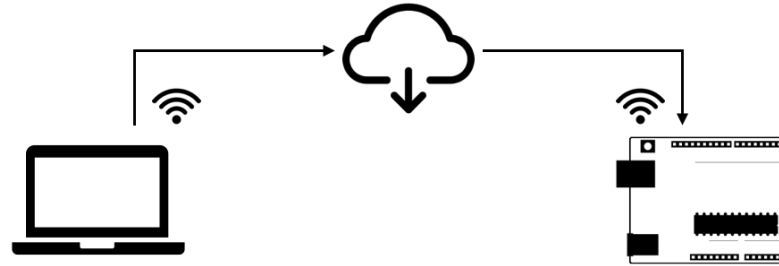
Develop and debug

Local write



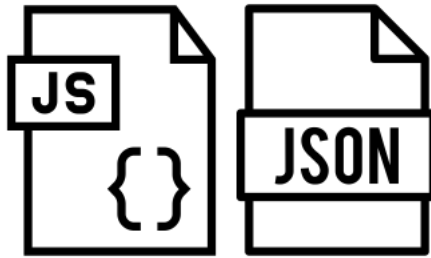
```
$ amp serialput ./app COMx
```

Online write



```
$ amp put ./app <device name>
```

How to develop a MiniApp for IoT 1)



app.js

app.json

\$ amp put ./app <device name>

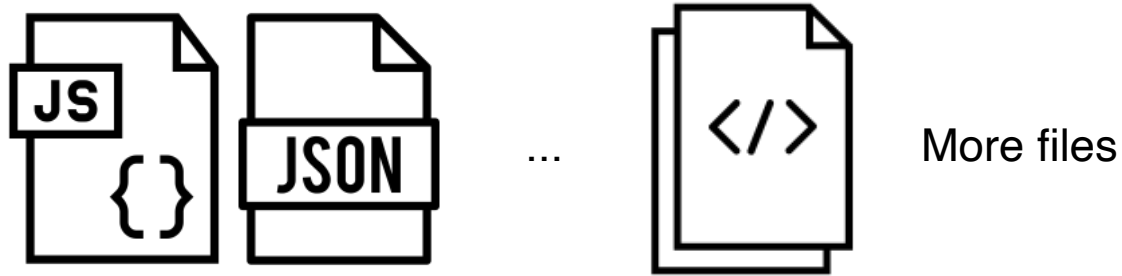
```
console.log("hello world");
setInterval(function() {
  print(Date(system.uptime()));
}, 1000);
```

```
{
  "pages": [
  ],
  "io": {
  },
  "debugLevel": "DEBUG"
}
```

app
├─ app.json
└─ app.js

```
hello world
2020-06-11 12:15:02.988+08:00
2020-06-11 12:15:03.992+08:00
2020-06-11 12:15:04.987+08:00
2020-06-11 12:15:05.988+08:00
2020-06-11 12:15:06.989+08:00
2020-06-11 12:15:07.989+08:00
2020-06-11 12:15:08.987+08:00
2020-06-11 12:15:09.954+08:00
2020-06-11 12:15:10.957+08:00
2020-06-11 12:15:11.953+08:00
```


How to develop a MiniApp for IoT 2)



```
app/  
├── app.json  
├── app.js  
├── pages/  
│   ├── menu/  
│   │   ├── menu.xml  
│   │   ├── menu.css  
│   │   └── menu.js  
│   ├── shop/  
│   │   ├── shop.xml  
│   │   ├── shop.css  
│   │   └── shop.js  
│   └── item/  
└── resources/  
    ├── audio1.wav  
    ├── audio2.wav  
    ├── order_list.data  
    └── shop_list.data
```

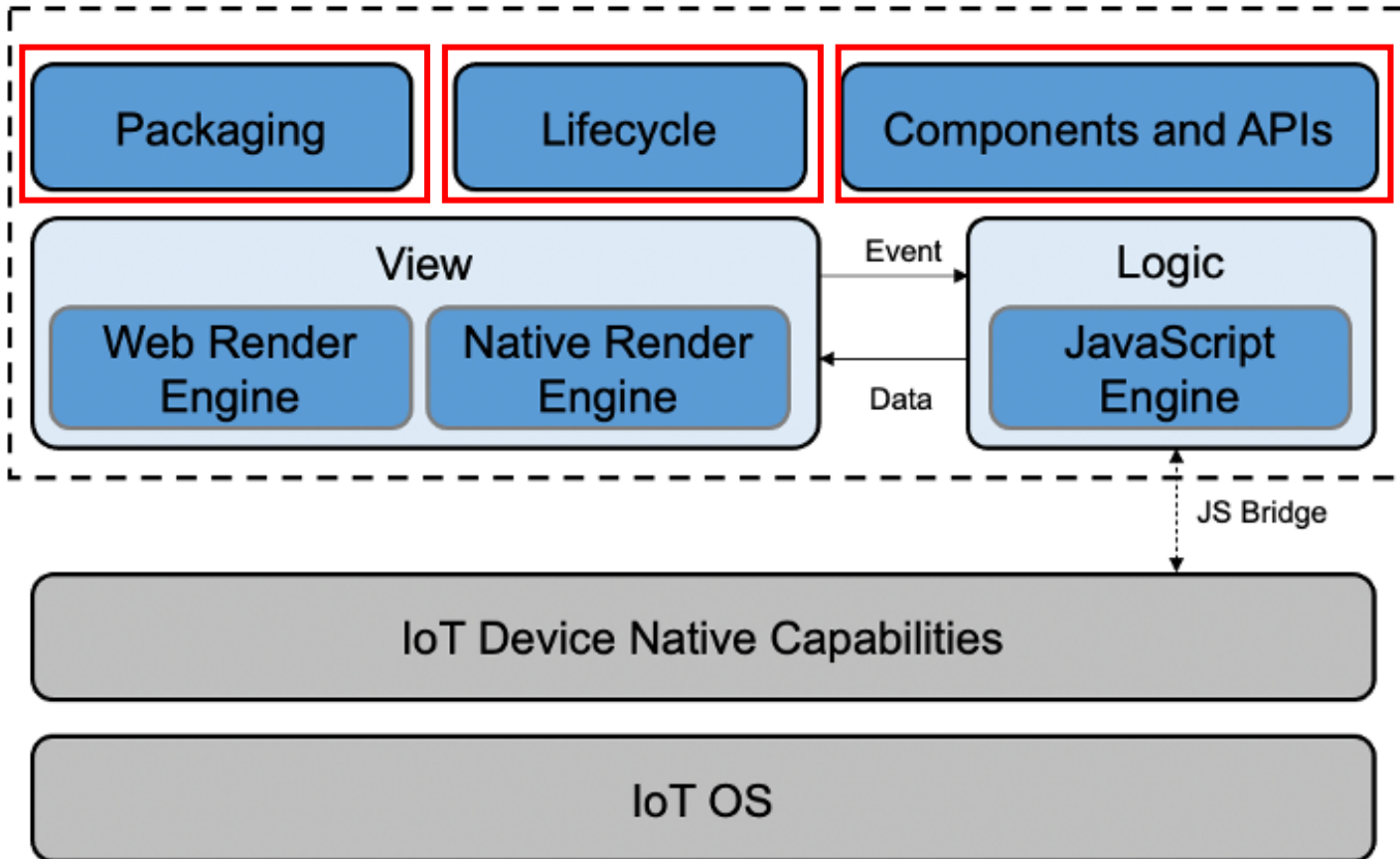


Vending machine



MiniApp for IoT spec

<https://w3c.github.io/miniapp-iot>



- MQTT API
- Bluetooth Mesh API
- UART API
- SPI API
- GPIO API
- I2C API
- Device low power management API
- ADC API
- DAC API
- Hardware timer API

Thanks