

# Topic : Firmware Over The Air (OTA)

Session conducted by

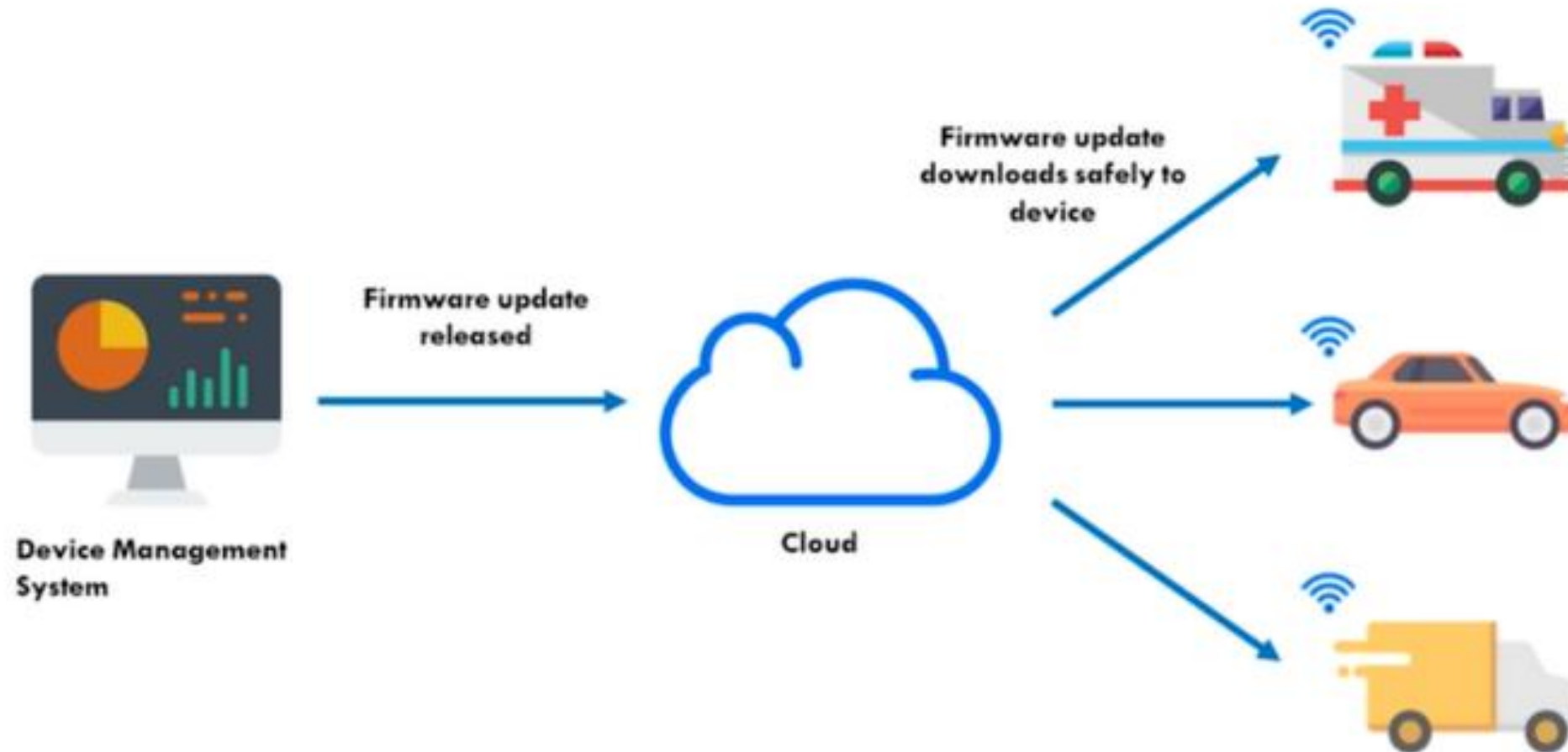
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Former System Design Engineer

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# Firmware Over The Air (FOTA)





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## Platform uses OTA update with connected devices



Cumulocity IoT Platform



Microsoft Azure IoT Suite



Google Cloud's IoT Platform



AWS IoT Platform



Cisco IoT Cloud Connect

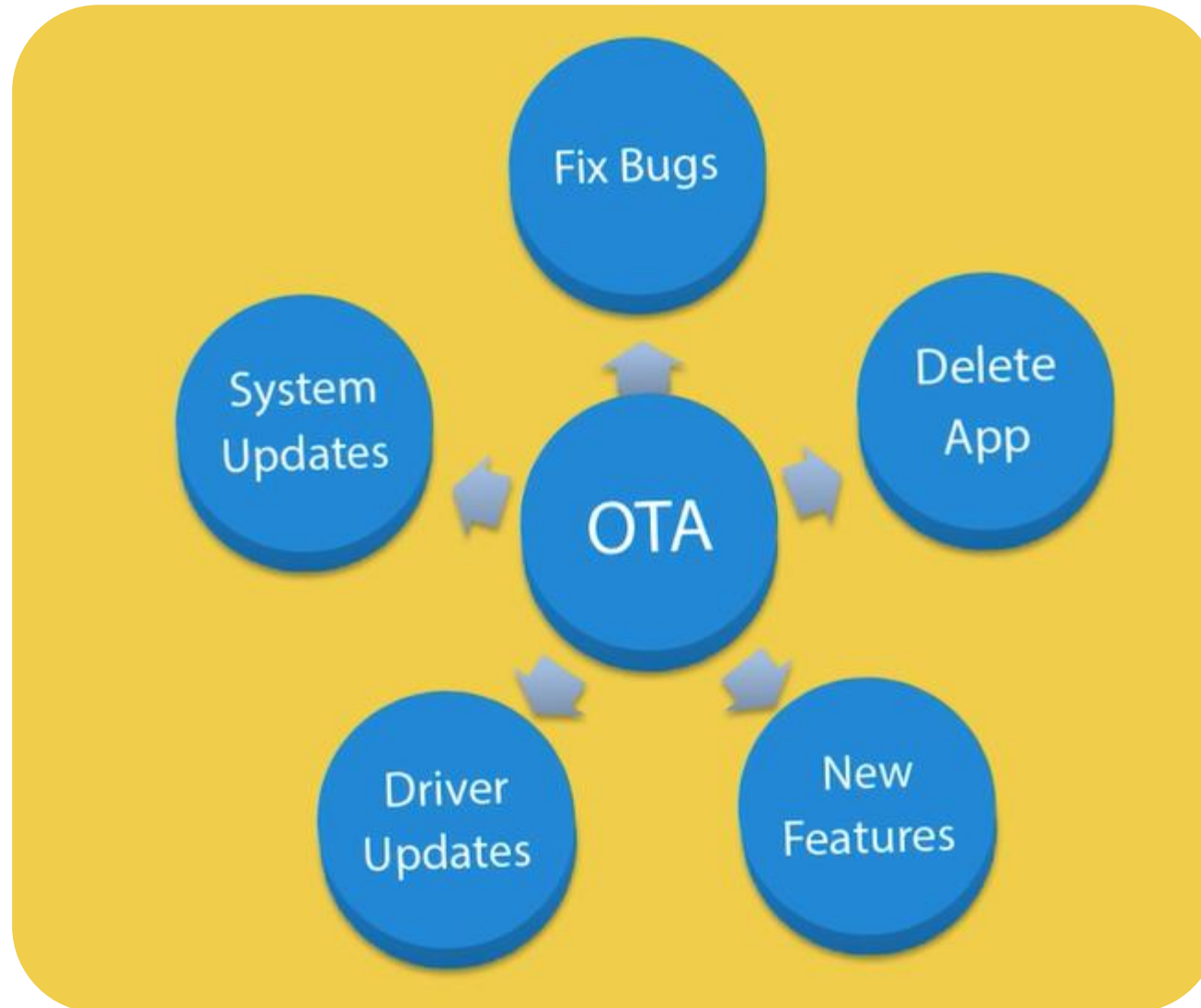


Oracle IoT Platform



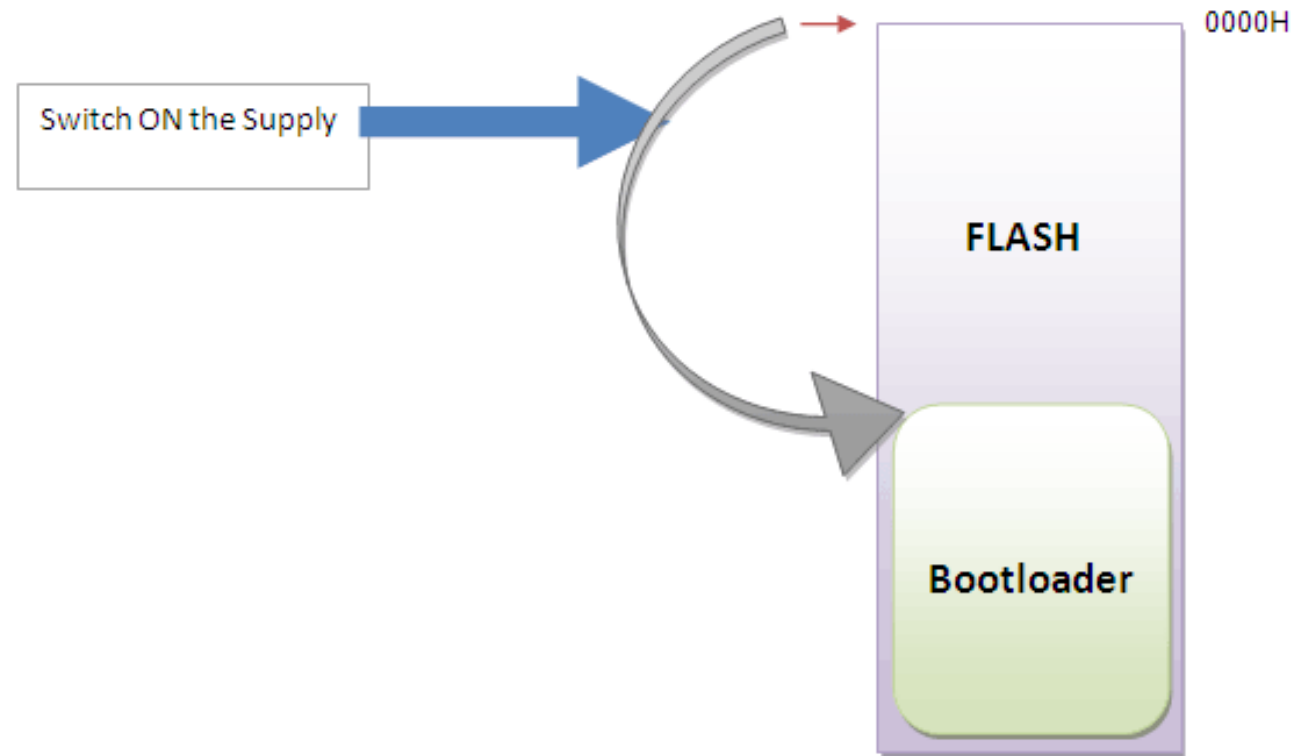
IBM Watson IoT Platform

## OTA Update Offers Many Benefits for IoT Devices



# Bootloader

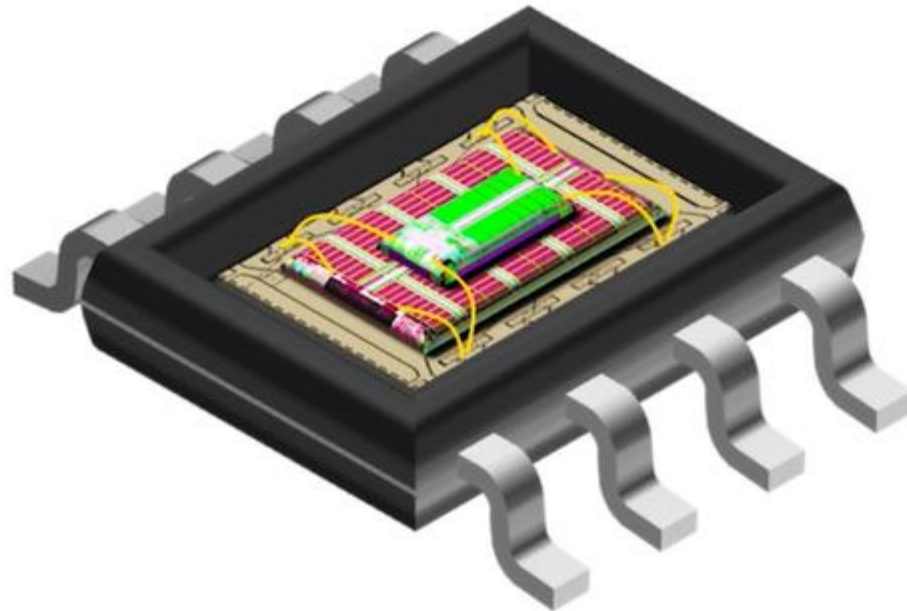
The bootloader is **the first program to run after power up or reset**. Its primary goal is to ready the system for control by the operating system.



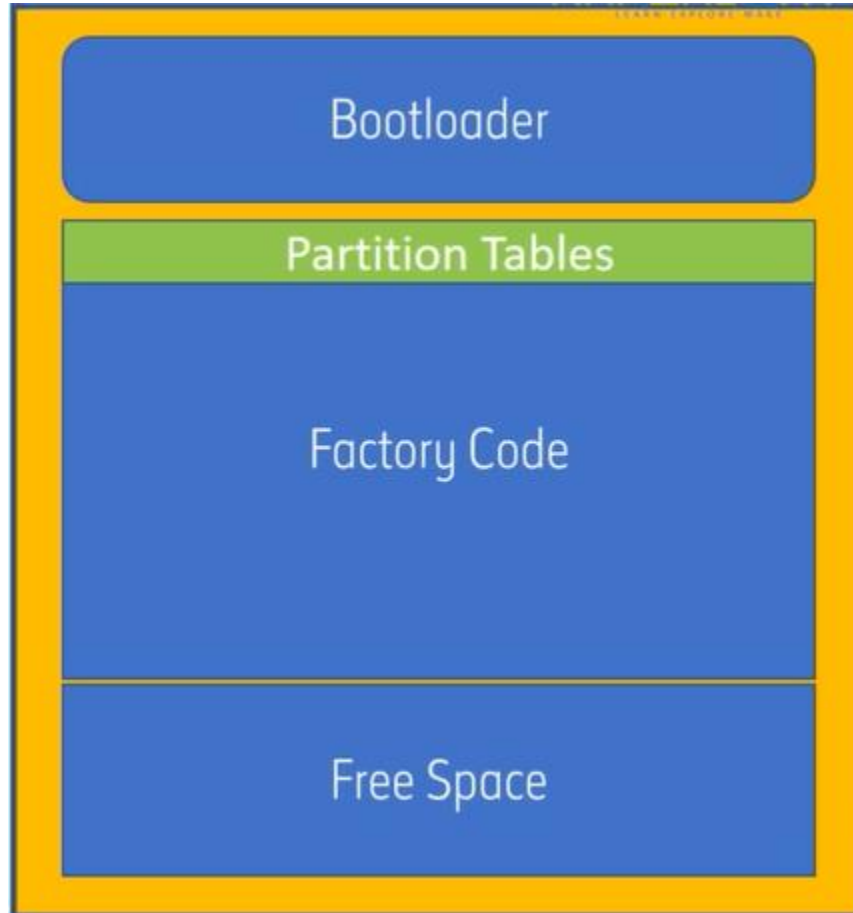
If the program counter **enters the bootloader section** then after **executing the bootloader**, there must be an instruction in the **bootloader which will force the program counter to go to 0000H**.

# Flash Memory

Flash Memory is a non volatile memory. Even your ESP32 switched off, code will be saved in Flash Memory

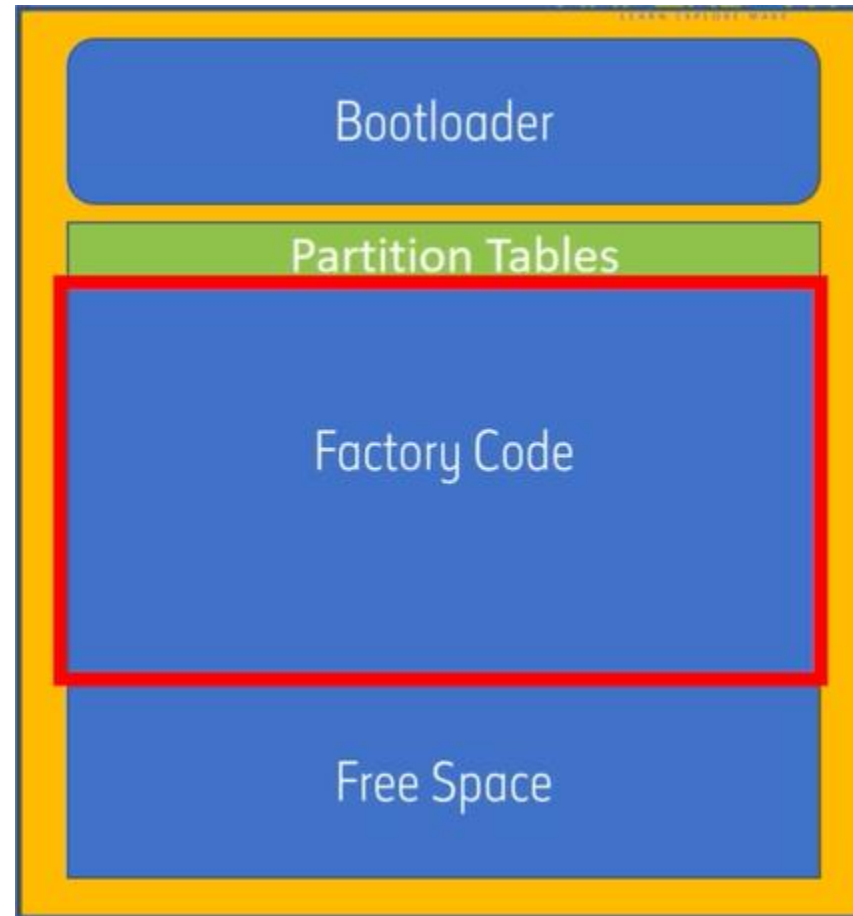


# Flash Memory

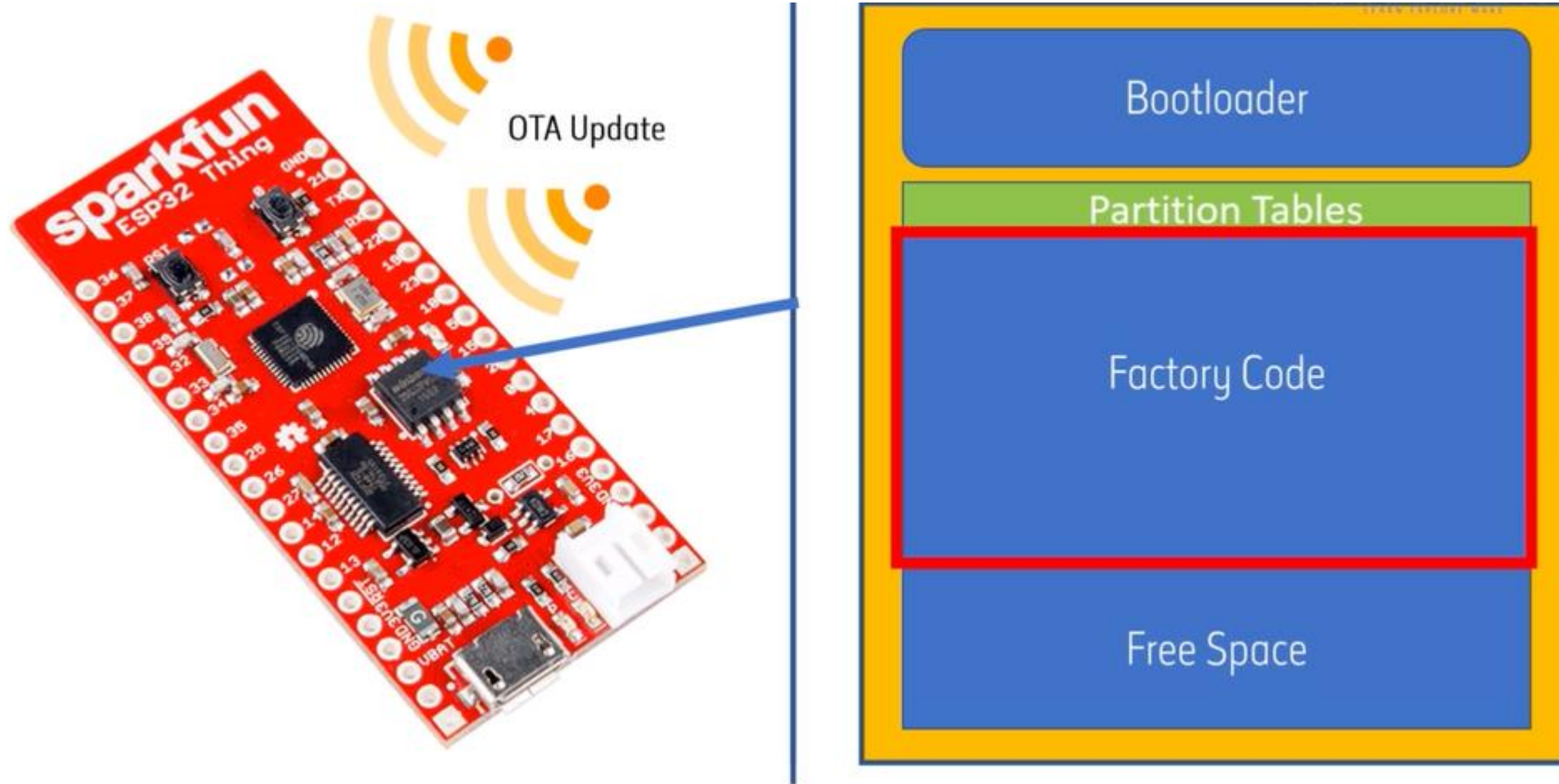




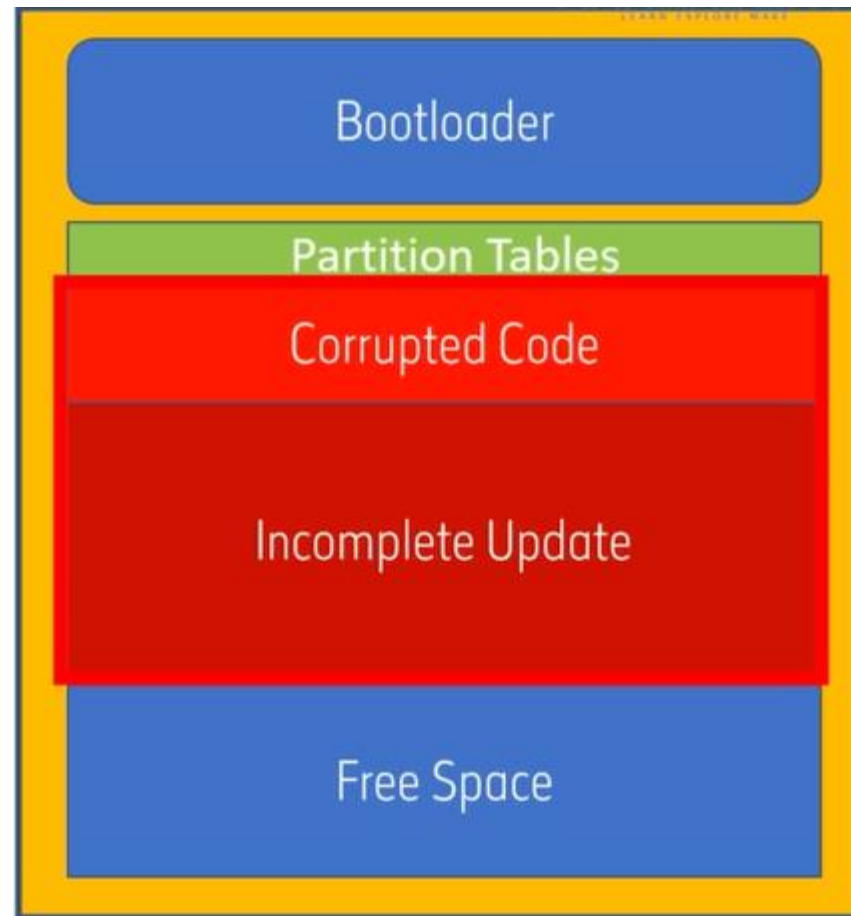
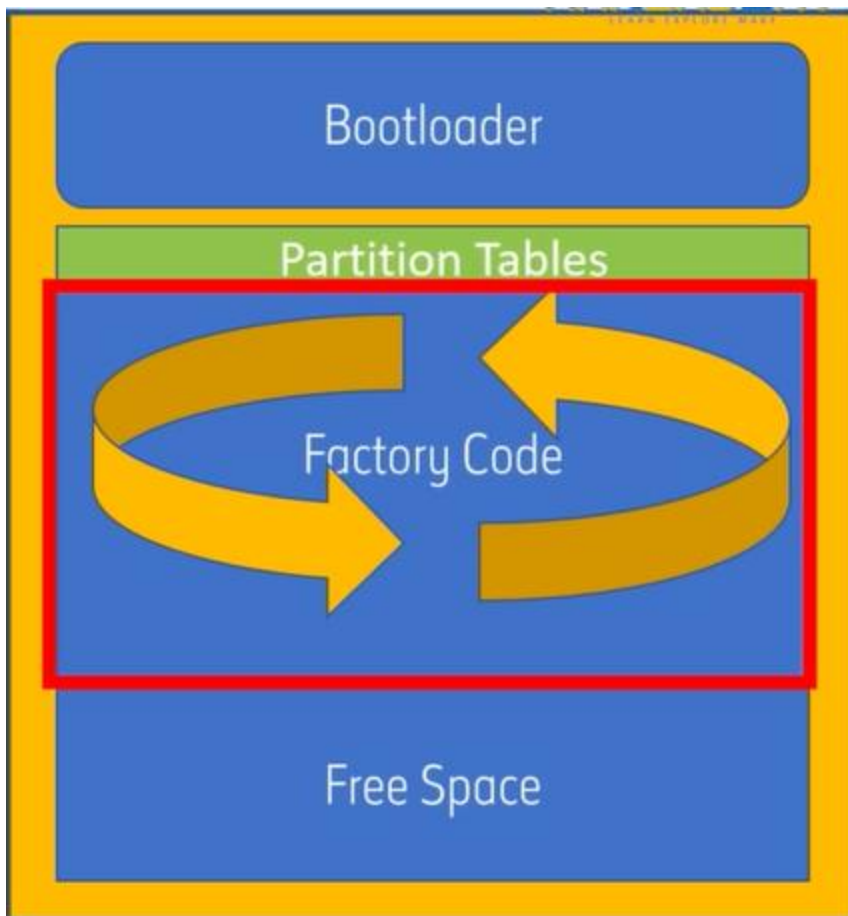
# Flash Memory



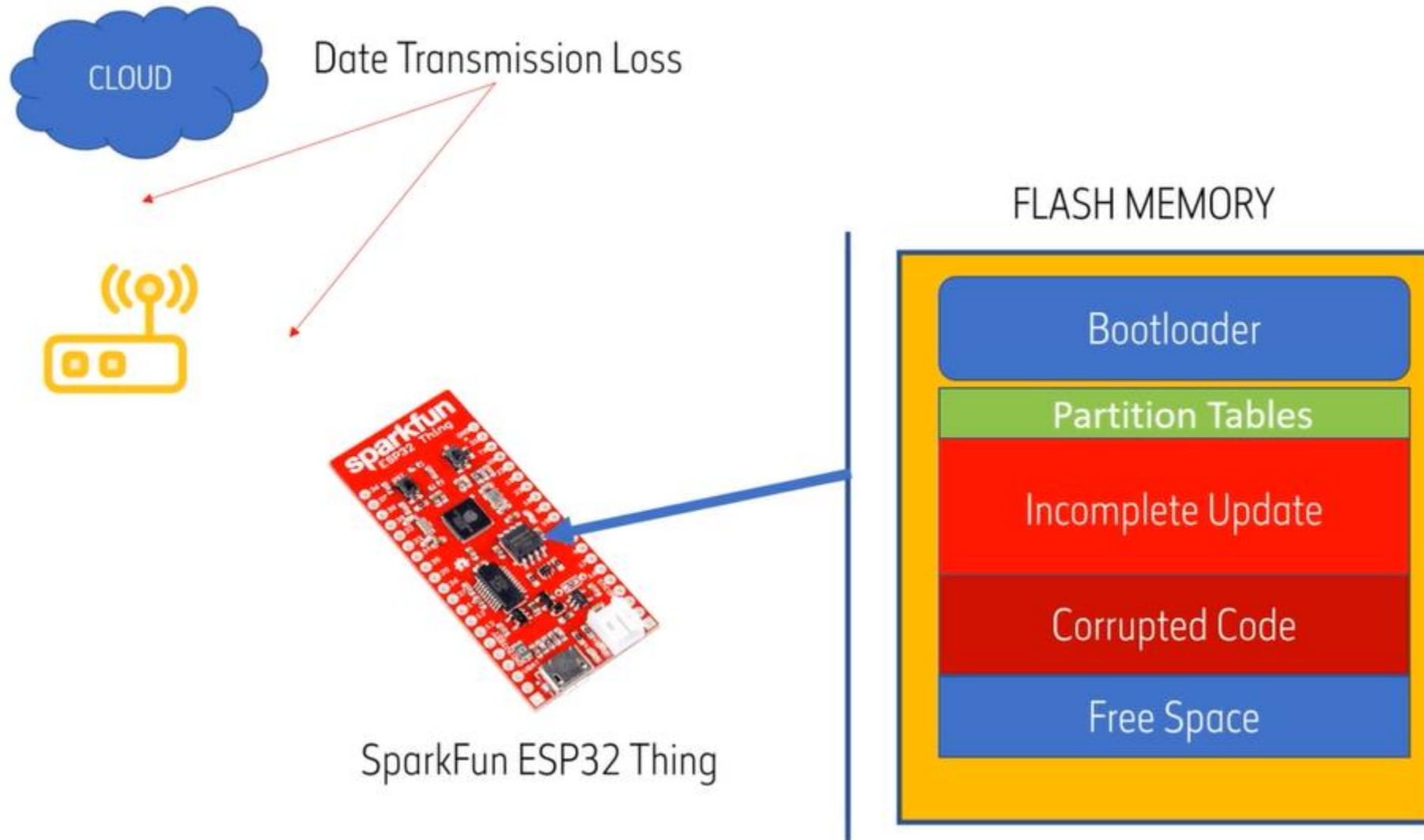
# Flash Memory



# Flash Memory



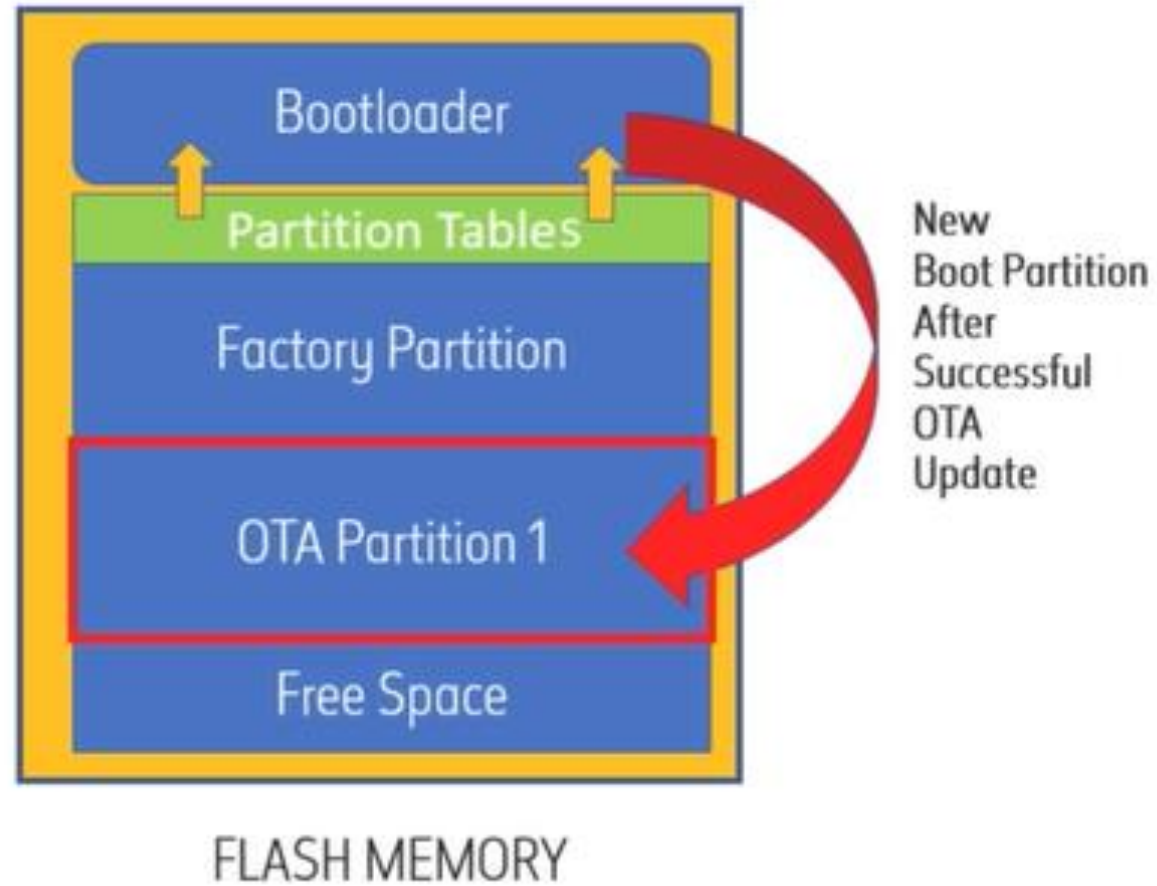
# Flash Memory



# Flash Memory



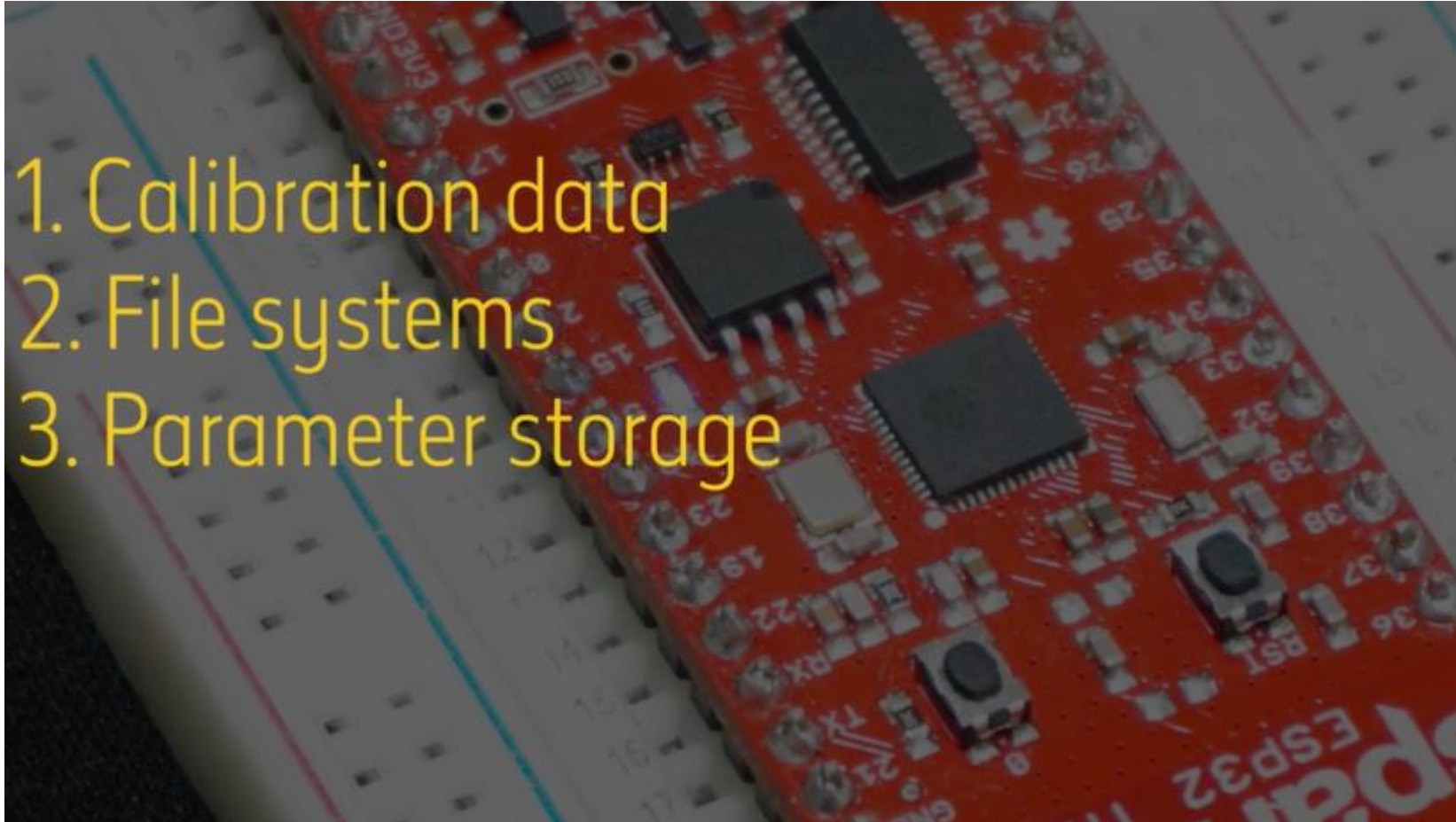
FLASH MEMORY





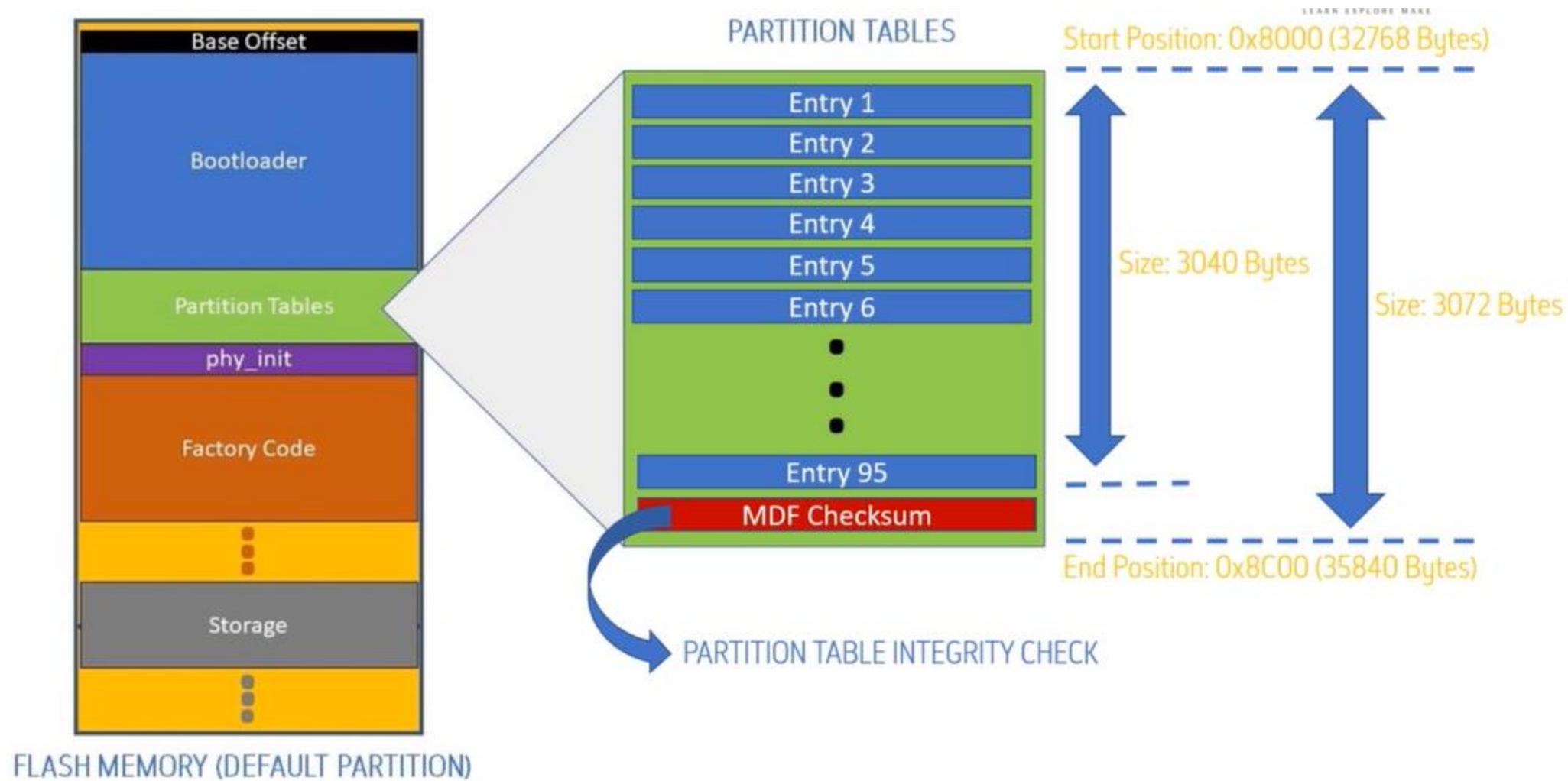
# Flash Memory Can Handle..

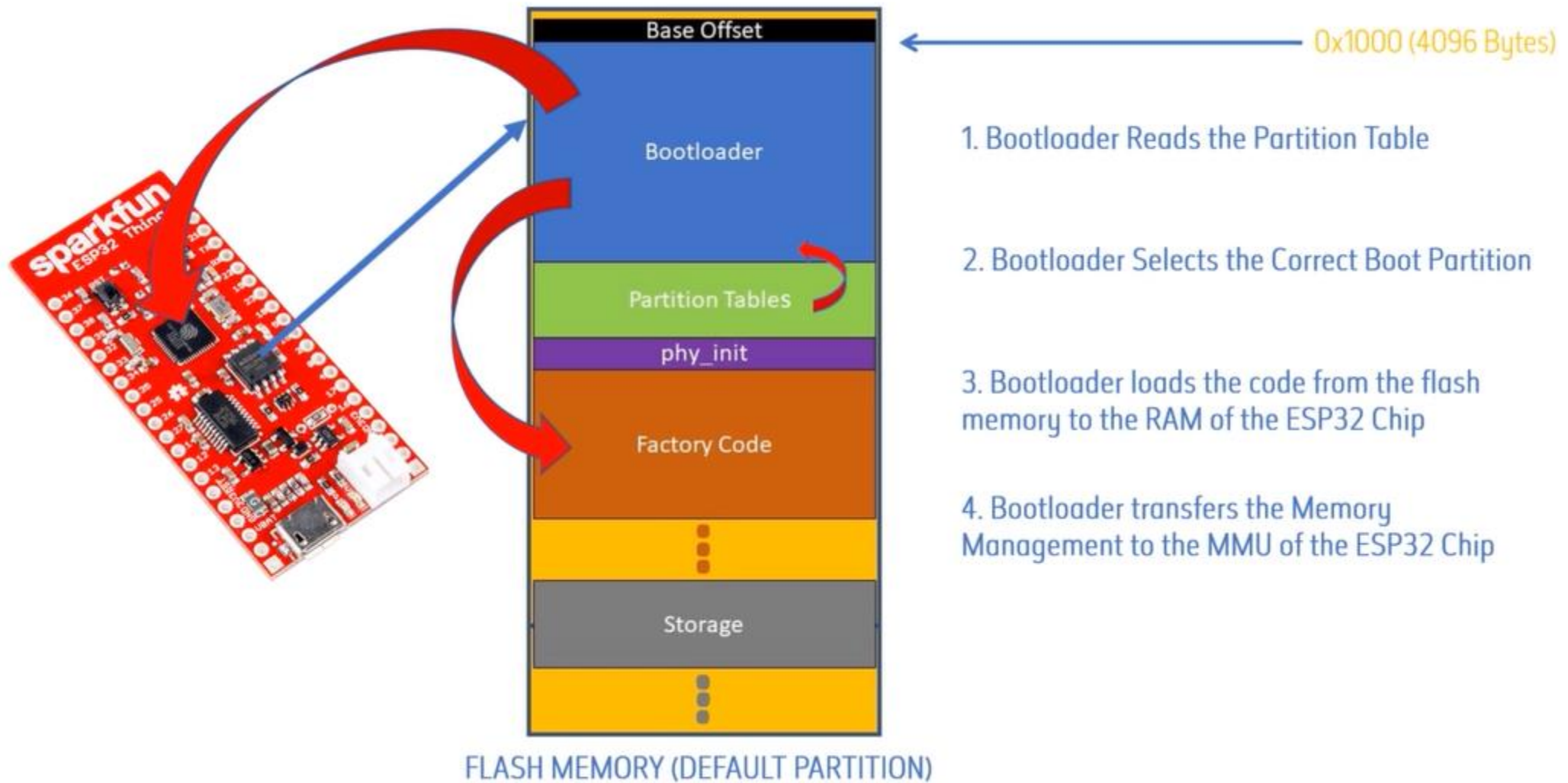
1. Calibration data
2. File systems
3. Parameter storage



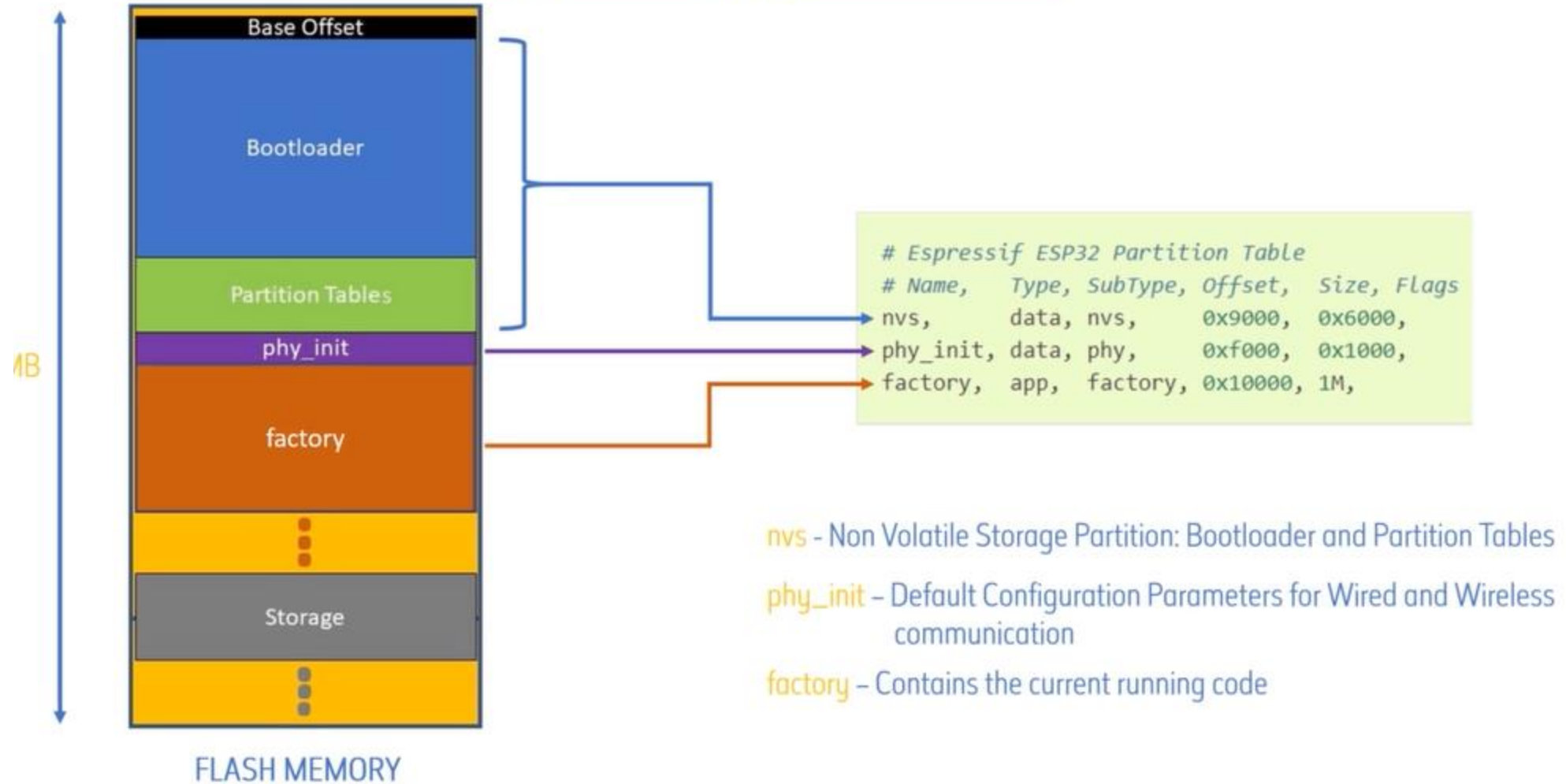
# Partition Tables



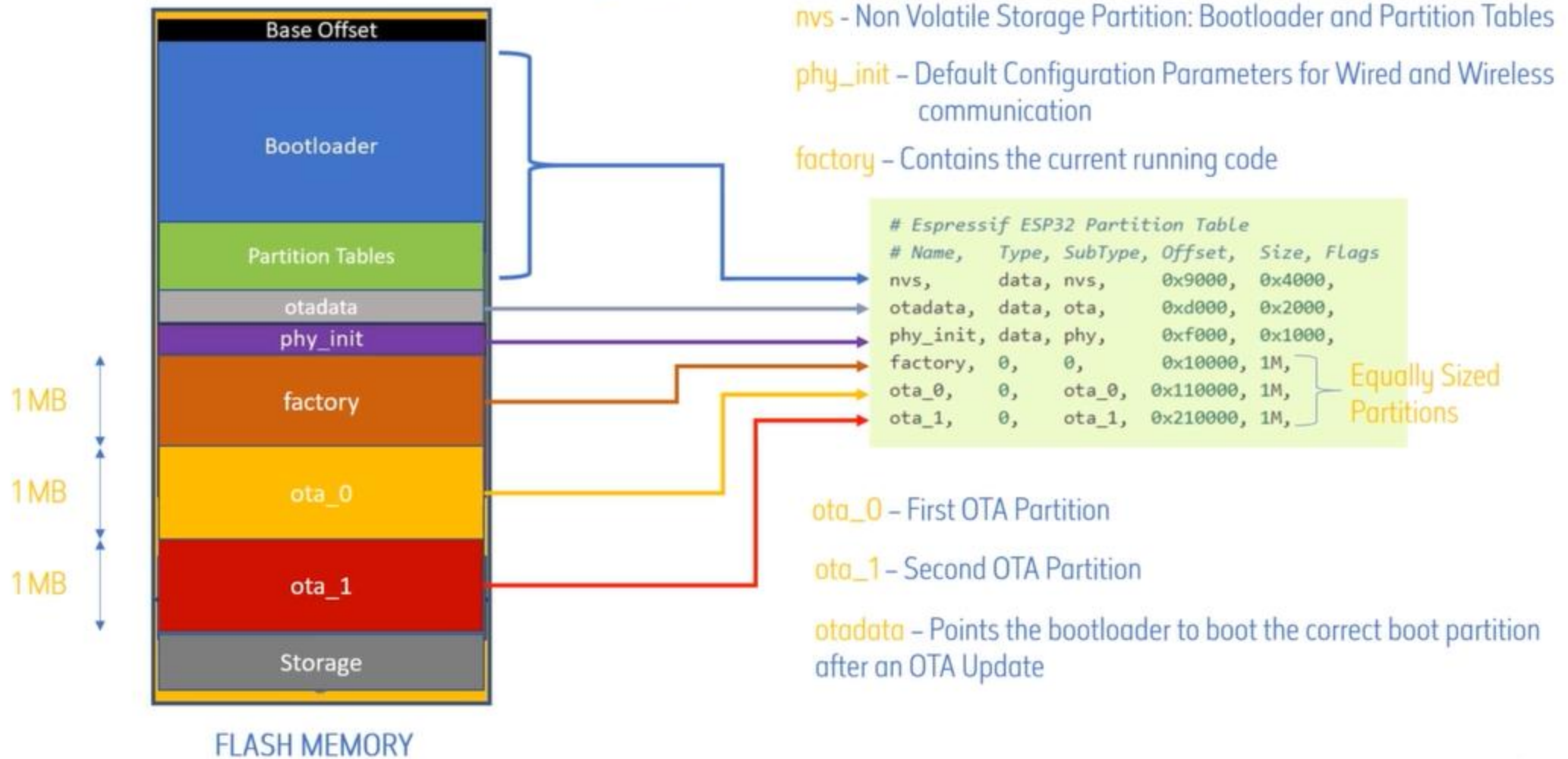


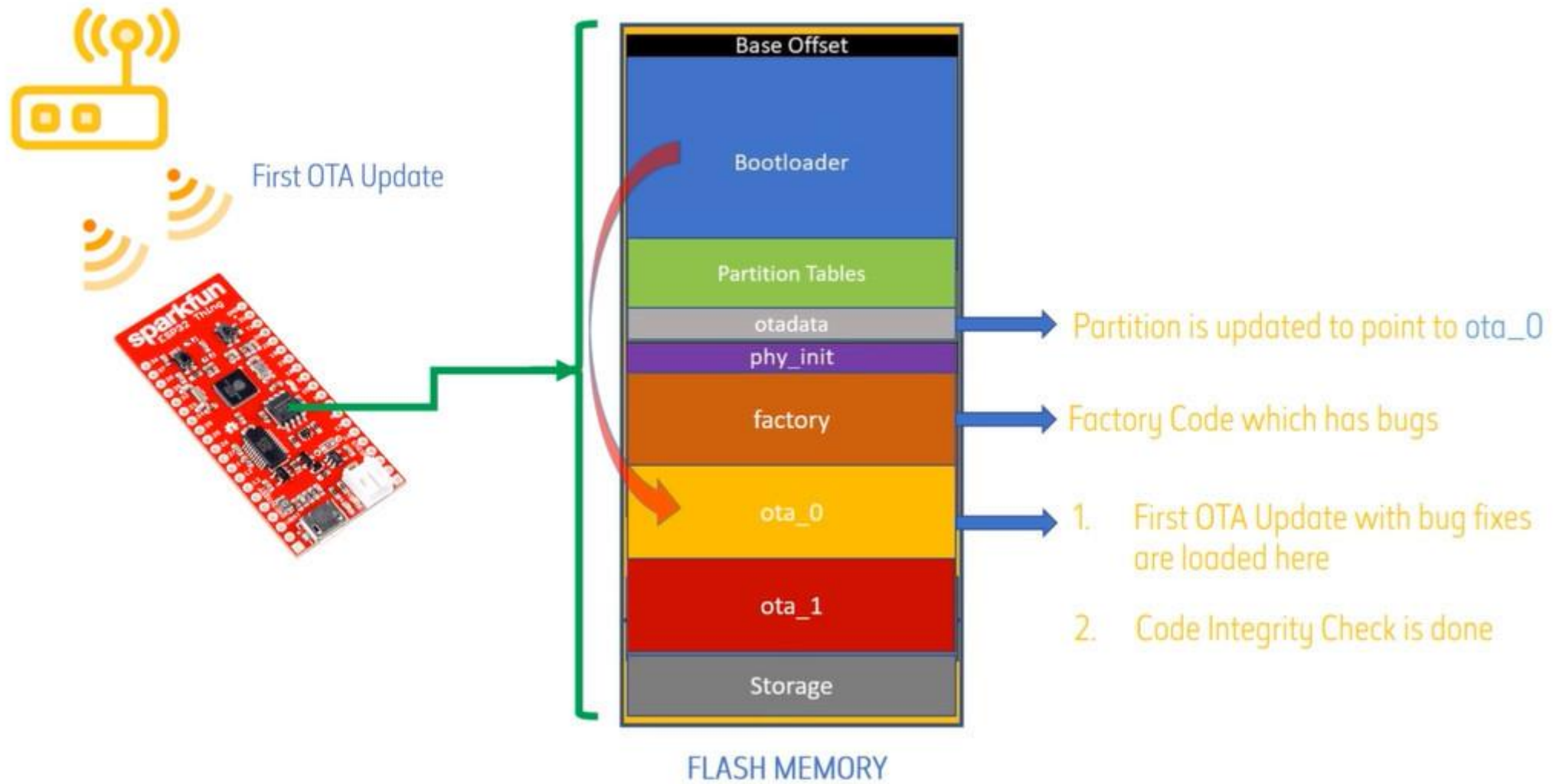


## Single Factory App with No OTA



## Factory App. Two OTA Definitions







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To be continued...

Follow Part 2 for Implementation of FOTA