**Memory Map**

START ADDR : 0x80000000

|  |  |
| --- | --- |
| **Memory Space** | **Purpose** |
| 64K | Active Bootloader |
| 448K | Active Application |
| 64K | New Bootloader |
| 448K | New Application |
| Internal/External Memory | Bootloader Data |
| Internal/External Memory | Application Data |

**Procedure**

1. BLE Connection
2. Go to FW Update Page and press “Check for Updates”
3. Get Active Firmware Version
4. Get fw\_info.json from server , and parse
5. Get latest application file names.
6. If new file available then download and update firmware using below method.

**Packet Format**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Start Byte | Packet Type | Data Length | Data | CRC32 | End Byte |
| 1 Byte | 1 Byte | 2Bytes | N Bytes | 4Bytes | 1 Byte |

Start Byte: 0xAA

Packet Type

CMD: 0, DATA: 1, HEADER: 2, RESPONSE: 3

Data Length: size of the data excluding Start Byte, Packet Type, Data Length, CRC32 and End Byte.

CRC32: CRC32

End Byte: 0xBB

ACK: 0x00 ,NACK: 0x01

OTA START: 1, OTA END: 4, OTA HEADER:2

OTA START COMMAND

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Start Byte | CMD | 1 | OTA START | CRC32 | End Byte |
| 1 Byte | 1 Byte | 2Bytes | 1 Bytes | 4Bytes | 1 Byte |

OTA END COMMAND

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Start Byte | CMD | 1 | OTA END | CRC32 | End Byte |
| 1 Byte | 1 Byte | 2Bytes | 1 Bytes | 4Bytes | 1 Byte |

OTA HEADER

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Start Byte | HEADER | 16 | OTA HEADER | CRC32 | End Byte |
| 1 Byte | 1 Byte | 2Bytes | 1 Bytes | 4Bytes | 1 Byte |

OTA DATA CHUNK

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Start Byte | DATA | Num of data Size | Data | CRC32 | End Byte |
| 1 Byte | 1 Byte | 2Bytes | 1 - 1024 Bytes | 4Bytes | 1 Byte |

OTA RESPONSE

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Start Byte | RESP | 1 | ACK/NACK | CRC32 | End Byte |
| 1 Byte | 1 Byte | 2Bytes | 1 Bytes | 4Bytes | 1 Byte |

**Firmware Update Flow**

