格式

|  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Head | len | mid | dir | version | addr | msg | payload | sum | Tail |
| 1B | 2B | 2B | 1B | 2B | 4B | 1B | NB | 1B | 1B |
| @ |  |  |  |  |  |  |  |  | ‘\n’ |

Len:不含head和tail长度

Mid:每次加1

Dir: 订阅端(0x01上行 0x81下行) 发布端(0x02上行 0x82下行)

Sum:除去head、tail和sum其他字段的和

MSG01:检查更新

|  |  |  |  |
| --- | --- | --- | --- |
| Up Payload | loadsta | 2B |  |
|  |  |  |  |
| Down Payload | Version | 2B | 新版本号 |
| Updata | 1B | 0 不升级 1需要升级(由服务器判定终端是否升级) |
| Filesize | 4B | 新固件大小 |
| Packsize | 2B | 固件分包 包大小 |
| Crc16 | 2B | 校验 |

MSG02：下载

|  |  |  |  |
| --- | --- | --- | --- |
| Up Payload | PackId | 2B | 请求包序号 0开始 |
| Packsize | 2B | 请求包的大小,除了最后一包，其他的应该和msg01一样 |
|  |  |  |  |
| Down Payload | PackId | 2B | 包序号 |
| PackSize | 2B | 包大小 |
| binData | NB | packSize个字节 |
|  |  |  |
|  |  |  |

订阅端定期发送0x01检查更新，一旦有更新，就进入更新初始化，再进入下载状态，一系列操作后，自动重启，引导程序检测标志文件,开始固件更新操作，最后清0标志进入正常状态