# Structure of packets

Version 4.0

23.01.2023

After switching on, the device begin to transmit the first packet, which contains information about the device. The the first packet structure is shown in Table 2. Packets are transmitted using the TCP-IP protocol. The following packets from the device are either control packages or data packages. If the package contains a signature - 1614081Eh, this are control packages; if there is no signature, then this is a data package. Minimum packet size is 6 bytes. The header of any control packet is given in the table 1.

Device control commands are given in tables 3 and 4.

Table 1 – The header of any control packet

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Offset in bytes** | **ID** | **Description** | **Size in bytes** | **Notes** |
| 0 | Sign | Signature | 4 | 1614081Eh |
| 4 | RequestSize | Size of Request | 1 | Range: 6 .. 255 bytes |
| 5 | RequestType | Type of Request | 1 | Range: 0 .. 2 |

Table 2 - The structure of the first packet

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Offset in bytes** | **ID** | **Description** | **Size in bytes** | **Notes** |
| 0 | Sign | Signature | 4 | 1614081Eh |
| 4 | HeaderSize | Size of header | 1 | 64 bytes |
| 5 | RequestType | Type of Request | 1 | 0 |
| 6 | HeaderVer | Version of header | 1 | 1 version |
| 7 | DeviceType | Type of device | 1 | 1 version |
| 8 | IMEI | IMEI | 15 | Defined in device configuration |
| 23 | Reserve |  | 1 | Filled «0» |
| 24 | ICCID | ICCID | 20 | Defined in device configuration |
| 44 | ImageType | Type of Image  (0 – RAW, 1 – BMP, 2 – JPG) | 1 | 0 - RAW |
| 45 | ImageSize | Size of image | 2 | 57600 bytes |
| 47 | ImageWidth | Width of Image in pixels | 2 | 320 pixels |
| 49 | ImageHeight | Height of Image in pixels | 2 | 180 pixels |
| 51 | FrameSize | Size of Frame in bytes | 2 | 320 bytes |
| 53 | FrameCount | Count of Frames | 2 | 180 frames |
| 55 | Brightness | Brightness of flashlight | 1 | Range: 0 .. 255 |
| 56 | Reserve |  | 8 | Filled «0» |

Table 3 - Command of request an image from a device

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Offset in bytes** | **ID** | **Description** | **Size in bytes** | **Notes** |
| 0 | Sign | Signature | 4 | 1614081Eh |
| 4 | RequestSize | Size of Request | 1 | 6 |
| 5 | RequestType | Type of Request | 1 | 1 |

Table 4 - Command for setting device parameters

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Offset in bytes** | **ID** | **Description** | **Size in bytes** | **Notes** |
| 0 | Sign | Signature | 4 | 1614081Eh |
| 4 | RequestSize | Size of Request | 1 | 8 |
| 5 | RequestType | Type of Request | 1 | 2 |
| 6 | Param1 | Set brightness of flashlight | 1 | Range: 0 .. 255 |
| 7 | Param2 | Reserve | 1 | Range: 0 .. 255 |