**底层与平台接入通用协议**

**（V0.01）**

**西谷物联科技有限公司**

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| **修改内容** | **修改时间** | **修改人** |
| 协议基础版本制定 | 2018-03-29 | 余加东 |
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**1概述**

**1.1 传输层协议**

**1.2 通信数据格式**

**1.3 协议设计原则**

**2 数据报文格式定义**

**2.1 包头定义（PackageHeader）**

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| 帧头 | 帧类型 | 协议版本 | 控制类型 | 时间戳 | 用户ID | 功能ID | 设备ID |
| 2Bytes | 2Bytes | 4Bits | 4Bits | 4Bytes | 4Bytes | 3Bytes | 3Bytes |

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| 数据长度 |  |  |  |  |  |
| 2Bytes |  |  |  |  |  |

**2.2 数据部分定义（PayLoad）**

**2.2.1 通用产品协议**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| 数据 | 数据类型 | CRC(16) |  |  |
| 2Bytes | 2Bytes | 2Bytes |  |  |

**2.2.2 固定产品协议**

固定产品通信协议由两部分数组，一部分是固定的包头，另一部分是数据部分PayLoad，尽量缩短数据部分的字段长度，由底层给出字段功能映射表到平台。

**2.3 泊位宝系统通信协议**

**2.3.1包头定义（PackageHeader）**

**协议类型/协议版本**

|  |  |  |
| --- | --- | --- |
| 协议类型 | 协议版本 | 协议类型版本说明 |
| 0x01-特定协议 | 0x01 - V0.01 | 泊位宝特定通信协议V0.01版本 |

**帧类型**

|  |  |  |  |
| --- | --- | --- | --- |
| 0x01 | 心跳帧 |  |  |
| 0x02 | 数据帧 |  |  |
| 0x03 | 设备盘点帧 |  |  |
| 0x04 | 更改设备ID帧 |  |  |
| 0x05 | 更改射频 |  |  |
| 0x05 | 通道参数帧 |  |  |
| 0x06 | 固件升级帧 |  |  |
| 0x07 | ACK帧 |  |  |
| 0x08 | 请求升级帧 |  |  |
| 0x09 | 升级数据帧 |  |  |
| 0x0A | 升级结束帧 |  |  |
| 0x0B | 功率测试帧 |  |  |
| 0x0C | 距离测试命令帧 |  |  |
| 0x0D | 读取传感器数据帧 |  |  |
| 0x0E | 长期睡眠控制帧 |  |  |
| 0x0F | 唤醒帧 |  |  |
| 0x10 | 为标签配置参数帧 |  |  |
|  |  |  |  |
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**控制类型**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| 是否加密(Bit[0]) | | 是否需要ACK(Bit[1]) | |  |  |
| 0x0-否 | 0x1-是 | 0x0-否 | 0x1-是 |  |  |

**时间戳**

|  |  |  |  |
| --- | --- | --- | --- |
| Byte[0] | Byte[1] | Byte[2] | Byte[3] |
|  |  |  |  |

**用户ID**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| USER\_ID |  |  |  |  |
| 4Bytes |  |  |  |  |

**功能ID**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| FUNCTION\_ID |  |  |  |  |
| 3Bytes |  |  |  |  |

**设备ID**

|  |  |  |  |
| --- | --- | --- | --- |
| DEVICE\_ID |  |  |  |
| 3Bytes |  |  |  |

**数据长度**

|  |  |  |  |
| --- | --- | --- | --- |
| DATALEN |  |  |  |
| 2Bytes |  |  |  |

**2.3.2数据部分定义**

**Payload数据区**

**CRC(16)**