图像识别板通讯协议V1.0

2021-07-02

# 1.通信方式

图像智能板与上位机通过网络UDP方式通信。

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| --- | --- | --- | --- |
|  | IP | PORT | 备注 |
| **上位机** | 初始化IP：192.168.0.100 | 5001 | RTSP服务器 |
| **图像智能板** | 初始化IP：192.168.0.15 | 5001 |  |

# 2 通信协议

## 2.1概述

图像智能板接收指令：

|  |  |  |  |
| --- | --- | --- | --- |
| 指令源 | 接口方式 | 指令内容 | 备注 |
| **上位机** | 网口UDP（即时发送） | 操作设置指令 | 3.2节 |

图像智能板发送信息：

|  |  |  |  |
| --- | --- | --- | --- |
| 接收端 | 接口方式 | 指令内容 | 备注 |
| **上位机** | 网口UDP | 当前工作状态及目标信息 | 3.3节 |

## 3.2 操作指令：上位机图像智能板（UDP，即时发送）

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 描述 | 1(帧头) | 2(UID) | 3(CID) | 4 | 5 | | 6 | | 7 | | | 8 | | | 9 | | 10 | | 11 | | 12(帧尾) | 备注 |
| 传感器切换 | 0x7E | 0x05 | 0x01 | 控制值 |  | |  | |  | | |  | | |  | |  | |  | | 0xE7 |  |
| 控制值 0-可见光 1-红外 | | | | | | | | | | | | | | | | |
| 工作模式 | 0x02 | 控制值 | | 跟踪坐标XH | | 跟踪坐标XL | | 跟踪坐标YH | | | 跟踪坐标YL | | |  | |  | |  |  |
| 控制值 0-普通模式 1-识别模式 2-跟踪模式  跟踪坐标以十字线中心为基准，右正，上正 | | | | | | | | | | | | | | | | |  |
| 自检信息 | 0x03 |  | |  | |  | |  | | |  | | |  | |  | |  |  |
|  | | | | | | | | | | | | | | | | |  |
| 波门控制 | 0x04 | 波门宽 H | 波门宽 L | | 波门高 H | | 波门高 L | | |  | | |  | |  | |  | |  |
|  | | | | | | | | | | | | | | | | |
| 校轴 | 0x05 | 控制值 | |  | |  | |  | | |  | | |  | |  | |  |  |
| 控制值 1-向上 2-向下 3-向左 4-向右 5-保存轴中心位置  上下左右每次移动一个像素 | | | | | | | | | | | | | | | | |  |
| 十字线显示消隐 | 0x06 | 控制值 | |  | |  | |  | | |  | | |  | |  | |  |  |
| 控制值 0-消隐 1-显示 | | | | | | | | | | | | | | | | |  |
| 图像码率设置 | 0x07 | 控制值 | |  | |  | |  | | |  | | |  | |  | |  |  |
| 控制值 1-8对应1-8M，默认为4M | | | | | | | | | | | | | | | | |  |
| 图像测距 | 0x08 | 控制值 | |  | |  | |  | | |  | | |  | |  | |  |  |
| 控制值 0-图像测距关闭 1-图像测距打开 | | | | | | | | | | | | | | | | |  |
| 时间校准信息 | 0x09 | 年 | | 月 | | 日 | | 时 | | | 分 | | | 秒 | | 毫秒H | | 毫秒L |  |
| Years since 1970, 按照时统信息修正本地时间 | | | | | | | | | | | | | | | | |  |
| 可见光控制 | 0x20 | 控制值 | |  | |  | |  | | |  | | |  | |  | |  |  |
| 1. 小视场 1-大视场 2-聚焦+ 3-聚焦- 4-调焦停止 5-图像增强开启 6-图像增强关闭   7-电子变倍1x 8-电子变倍2x | | | | | | | | | | | | | | | | |  |
| 红外控制 | 0x21 | 控制值 | |  | |  | |  | | |  | | |  | |  | |  |  |
| 控制值 0-小视场 1-大视场 2-聚焦+ 3-聚焦- 4-调焦停止 5-自动聚焦6-图像增强开启 7-图像增强关闭8-手动矫正 9-白热 10-黑热 11-亮度+ 12-亮度-  13-对比度+ 14-对比度- 15-状态查询 | | | | | | | | | | | | | | | | |  |
| 激光控制 | 0x22 | 控制字 | |  | |  | |  | | |  | | |  | |  | |  |  |
| 控制值 0-测距 | | | | | | | | | | | | | | | | |  |
| 简易(周期式) | 0x30 | 方位向角速度 H | | 方位向角速度 L | | 俯仰向角 速度  H | | 俯仰向角 速度  L | | |  | | |  | |  | |  |  |
| 左负右正,0.1mil/s/bit；下负上正，0.1mil/s/bit. | | | | | | | | | | | | | | | | |  |
| 调转 | 0x31 | 方位向角速度 H | | 方位向角速度 L | | 俯仰向角 速度  H | | 俯仰向角 速度  L | | |  | | |  | |  | |  |  |
| 左负右正,0.1mil/s/bit；下负上正，0.1mil/s/bit. | | | | | | | | | | | | | | | | |  |
| 回零 | 0x32 | 控制字 | |  | |  | |  | | |  | | |  | |  | |  |  |
| 控制字 1-发送回零指令 | | | | | | | | | | | | | | | | |  |
| 零位校准 | 0x33 | 控制字 | |  | |  | |  | | |  | | |  | |  | |  |  |
| 控制字 1-发送零位校准指令 | | | | | | | | | | | | | | | | |  |
| 零漂校准 | 0x34 | X方向校准 | |  | | Y方向校准 | |  | | |  | | |  | |  | |  |  |
| 左负右正,0.1mil/s/bit；下负上正，0.1mil/s/bit. | | | | | | | | | | | | | | | | |  |
| 校准保存 | 0x35 | 控制字 | |  | |  | |  | | |  | | |  | |  | |  |  |
| 控制字 1-发送校准保存指令 | | | | | | | | | | | | | | | | |  |
| 稳像/简易 | 0x36 | 控制字 | |  | |  | | |  | | |  | |  | |  | |  |  |
| 0-稳像 1-简易 | | | | | | | | | | | | | | | | |  |
| 周扫 | 0x37 | X向速度H | | X向速度L | |  | | |  | | |  | |  | |  | |  |  |
| 左负右正,下负上正，0.1°/s/bit | | | | | | | | | | | | | | | | |  |

## 3.3 图像智能板上位机（UDP）

识别信息

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 描述 | 1（帧头） | 2(UID) | 3(CID) | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | | 12 | 13 | 14 |
| 识别 | 0x8D | 0x50 | 0x01 | 工作模式 | 传感器类型 | 视场类型 |  |  |  |  | 方位HH | | 方位H | 方位L | 方位LL |
| 模式 0-普通模式 1-识别模式 2-跟踪模式  传感器类型 0-红外 1-可见光  视场类型 0-小视场 1-大视场 | | | | | | | | 帧方位 | | | |

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 15 | 16 | 17 | 18 | 19 | 20 | | 21 | 22 |  |  | … |  | 帧尾 |
| 俯仰HH | 俯仰H | 俯仰L | 俯仰LL | H | L | | H | L | 目标1 | 目标2 | … | 目标N | 0xD8 |
| 帧俯仰 | | | | 目标个数 | | 帧号 | | | 目标信息参看下表 | | | |

目标信息

|  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 |
| H | L | H | L | H | L | H | L |  |  |  |
| 目标帧内方位像素坐标 | | 目标帧内俯仰像素坐标 | | 目标宽度（像素） | | 目标高度（像素） | | 目标类别 | 目标置信度 | 目标编号 |