1. 串口配置

Baudrate: 115200
Data Bits: 8
Parity: none
Stop Bits: 1

2. PC发送字符串命令以\n或者\r结束，控制板返回命令以 \r\n>>结束
3. 命令列表可以发送help查看；命令格式：cmd 参数1 参数2 ...
4. 连续发送多条命令时间间隔需大于10ms
通讯受干扰返回command not found的话，请重发命令。

help 命令列表打印
version 打印板卡信息
reboot 控制卡重启

基本命令：

readinput <ch> 读取输入通道ch的状态

```
send1:    readinput 1          send2:     readinput 1 2 2 3
receive1: in[1]=0              receive2:  in[1]=0,in[2]=0,in[2]=0,in[3]=0
```

output on <ch> 设置输出通道ch状态为1

```
send1:    output on 1          send2:     output on 1 2 2 3
receive1: out[1]=1             receive2:  out[1]=1,out[2]=1,out[2]=1,out[3]=1
```

output off <ch> 设置输出通道ch状态为0

```
send1:    output off 1         send2:     output off 1 2 2 3
receive1: out[1]=0             receive2:  out[1]=0,out[2]=0,out[2]=0,out[3]=0
```

savedata <page> <data> 在1~200存储位置写入数据
（最大长度为64个字符，不支持数据带空格,需要把空格用其他字符替换）

```
send:    savedata 1 this_data_is_for_test:position1=100;position2=200;
receive: savedata[1] ok
```

readdata <page> 读取1~200存储位置数据

```
send:    readdata 1
receive: readdata[1]=this_data_is_for_test:position1=100;position2=200;
```

电机相关命令（axis_number=0~2 ； speed=1~2047，不需要设置加速度，内部自动处理）
---后续使用的双层板卡+电机模块+外置驱动器（1600脉冲一圈）
速度105代表0.25RPS（revolutions per second），其他速度按比例计算

motor gohome <axis_number> <speed> 电机以设定的速度开始回原点

```
send:    motor gohome  1 -200
```
电机先左转找到左限位后再右转，触发原点传感器后，设置当前位置为原点
```
receive: motor[1] is start go home by searching home sensor
```

motor golimit <axis_number> <speed> 电机以设定的速度开始回限位点

```
send:    motor golimit  1 200
```
电机右转找到限位后停止，并设置当前位置为原点
```
receive: motor[1] is start go home by searching limit sensor
```

motor stop <axis_number> 电机停止运行并返回当前位置

```
send:    motor stop  1
receive: motor[1] is stop and P[1]=0
```

motor set speed <axis_number> <value> 设定电机运行速度

```
send:    motor set speed  1 105
receive: set motor[1] speed=105 ok
```

motor move <axis_number> <position> 电机相对运动设定值

```
send:    motor move 1 1000
receive: motor[1] is start to make relative motion
```

motor moveto <axis_number> <position> 电机相绝对运动到设定的位置

```
send:    motor moveto 1 1000
receive: motor[1] is start to make absolute motion
```

motor get position <axis_number> 读取对应轴当前位置

```
send:    motor get position 1
receive: motor[1] actual position=0
```

motor get leftLimit <axis_number> 读取对应轴左限位状态
motor get rightLimit <axis_number> 读取对应轴右限位状态

```
send:    motor get leftLimit 1
receive: motor[1] left switch status=0
```

motor get is_homed <axis_number> 读取对应轴回原点是否OK

```
send:    motor get is_homed  1
```

```
receive:  motor[1] homed=1
```
motor get is_stop <axis_number> 读取对应轴回原点是否OK
```
send:     motor get is_stop  1
receive:  motor[1] stop=1
```
motor set limitSignal <axis_number> <value> 更改设置限位触发的电平为1或者0

项目应用命令

printdata
```
send:    printdata
receive: P[1]=3628,Press=+000.005@
         P[1]=3628,Press=+000.005@
         motor[1] is stop and stop printing data
```