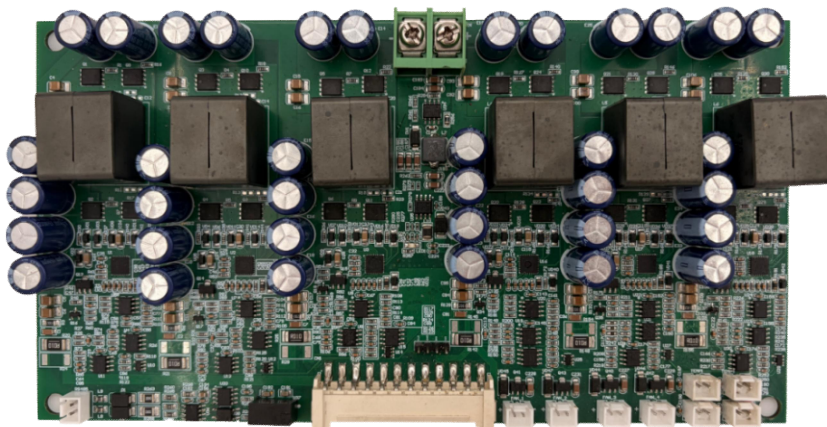


Plant Grow Light Control Board

Features

- Supports 6 driver channels, providing stable current for light source boards and lighting up LED beads of different wavelengths.
- By adjusting the driver current, the brightness of the LED beads on the light source board can be regulated.
- Supports 4-channel temperature acquisition and 4-channel fan speed control.
- Single-channel output voltage up to 36V and output current up to 3.5A, featuring strong driving capability and compatibility with light source boards of various specifications.
- Supports remote online firmware upgrade, enabling function iteration and defect fixing without disassembling the equipment or being on site.
- Provides an RS-485 communication interface and supports the Modbus fieldbus protocol.

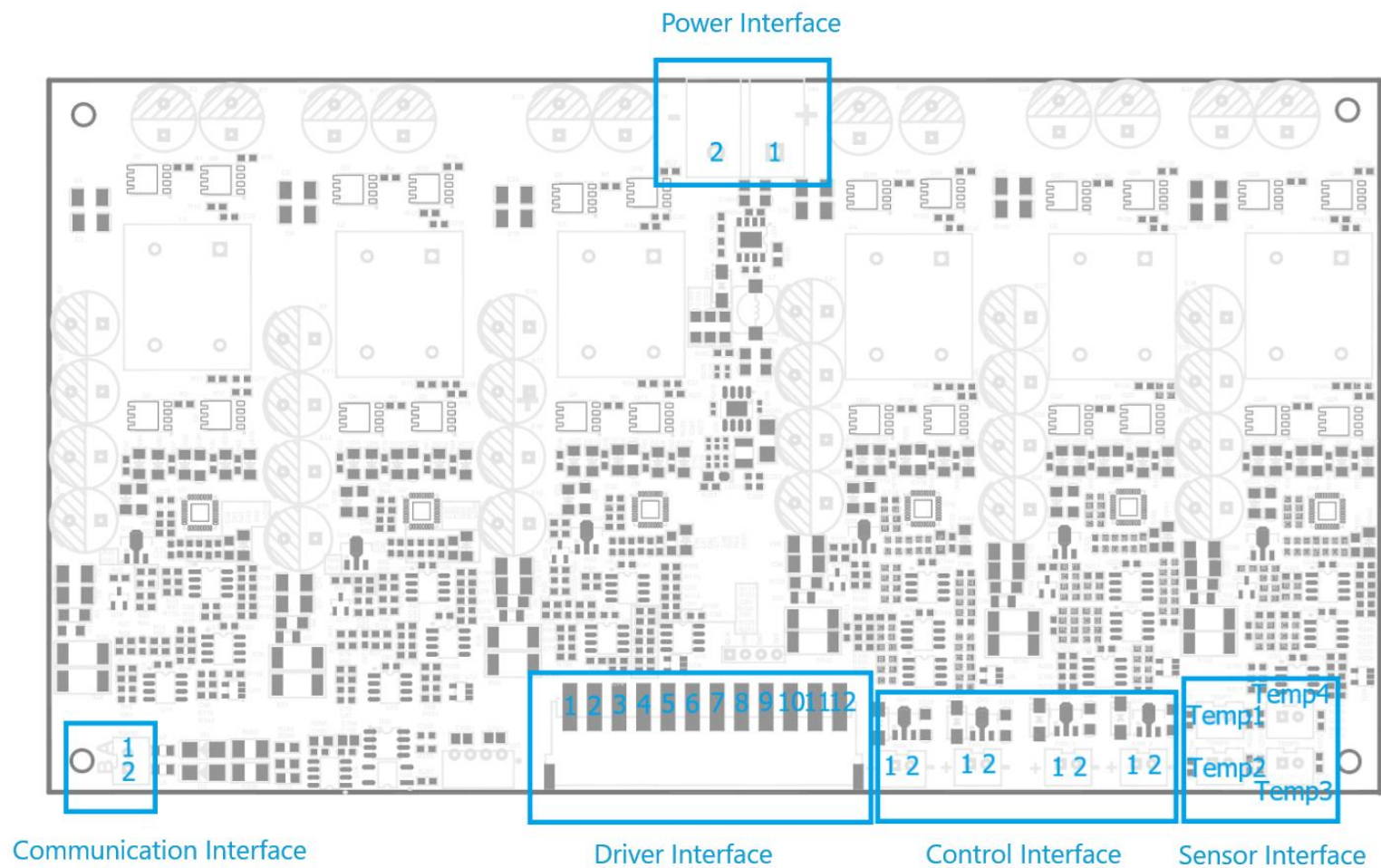


Introduction

This plant grow light controller is a control board used to drive plant grow light source boards. It integrates 6-channel constant current driving, brightness adjustment, 4-channel temperature acquisition, fan cooling control, RS-485 communication, and remote firmware upgrade. It can simultaneously drive six LED light source boards of different wavelengths and achieve stepless adjustment of light intensity by regulating the driving current. The product comes standard with an RS-485 interface and supports the Modbus fieldbus protocol. It can realize functions such as light on/off, fan speed control, and temperature reading through Modbus commands, and supports remote online firmware upgrade, enabling function iteration and defect fixing without disassembling the equipment or being on site. It is a highly integrated, remotely manageable drive control product for intelligent plant lighting systems. It is mainly used in controllable lighting scenarios such as plant factories, vertical farming, greenhouse supplemental lighting, tissue culture seedling cultivation, and life science experiments.



Interface Description





Communication Interface

No.	Definition	Description
1	A	RS-485 bus receiver non-inverting input / transmitter non-inverting output. Input voltage range -15V to 15V
2	B	RS-485 bus receiver inverting input / transmitter inverting output. Input voltage range -15V to 15V

Power Interface

No.	Definition	Description
1	VCC	Power positive, input voltage range 24V±5%
2	GND	Power negative

Sensor Interface

Sensor model: NTC thermistor, B value 3950, resistance 10K

No.	Definition	Description
1	Temp1	Temperature acquisition channel 1
2	Temp2	Temperature acquisition channel 2
3	Temp3	Temperature acquisition channel 3
4	Temp4	Temperature acquisition channel 4



Control Interface

Control FAN_1, FAN_2, FAN_3, FAN_4

No.	Definition	Description
1	+	Voltage output 24V
2	-	Power negative

Driver Interface

No.	Definition	Description
1	LED_1N	Channel 1 negative
2	LED_3N	Channel 3 negative
3	LED_4N	Channel 4 negative
4	LED_5N	Channel 5 negative
5	LED_2N	Channel 2 negative
6	LED_6N	Channel 6 negative
7	LED_6P	Channel 6 positive
8	LED_2P	Channel 2 positive
9	LED_5P	Channel 5 positive
10	LED_4P	Channel 4 positive
11	LED_3P	Channel 3 positive
12	LED_1P	Channel 1 positive



KFLY ELECTRONIC TECH. (SHANGHAI) CO.,LTD.

Product Dimension Drawing

