

# DS16

## Lighting Controller

## Specification V4.0



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## 1 Update Records

| Document Version | Hardware Version | Release Time      | Update Record |
|------------------|------------------|-------------------|---------------|
| V4.0             | DS16（V1.0）       | July 18(th), 2025 | First release |

## 2 Product Introduction

DS16 is a lighting controller developed by Mooncell, featuring 16 output ports. Each port supports up to 500 pixels at 60Hz, with the entire unit capable of controlling a maximum of 8000 pixels at 60Hz. Its high refresh rate ensures flicker-free visuals, while multi-unit cascading enables frame-synchronized images without tearing or mosaic artifacts. Support for Gamma processing delivers superior control performance and precise grayscale management.



\*Product images are for reference only. The actual product shall prevail upon purchase.

## 3 Controllable Driver Chip

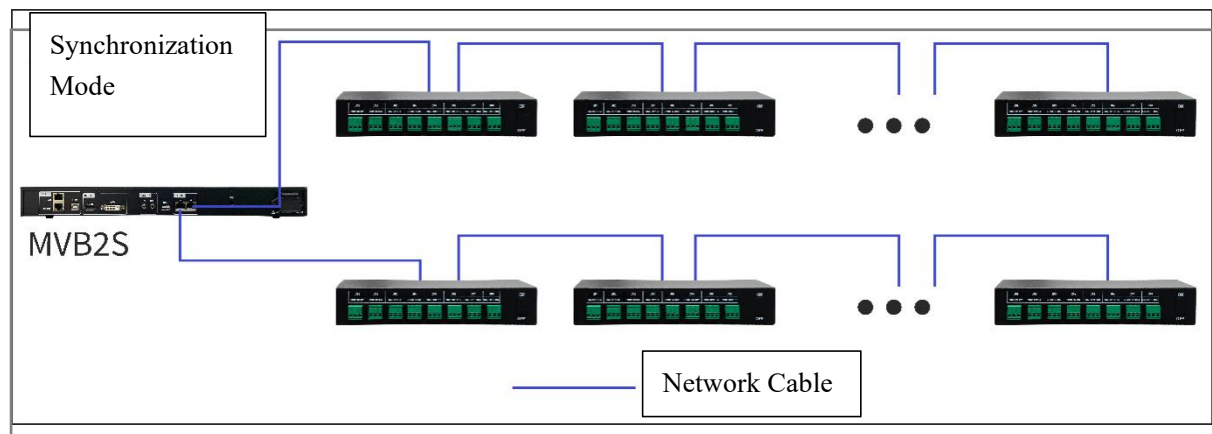
| Driver Chip List                                                                                                                                                                                             |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| SM16188、Universal Zero-Code Chip、MT1865、UCS2903、FL2811XH、GJ1911、FL3101、HBS1923、HBS1910、SK9816、T2020M、RT7920、WS2816A、GM2020、HBS2910、TX1816、CP2025D、SK9828、HL1812、UCS9812、SM16212、SM16212_N、SK9818、SM16288S 等。 |

## 4 Product Specification

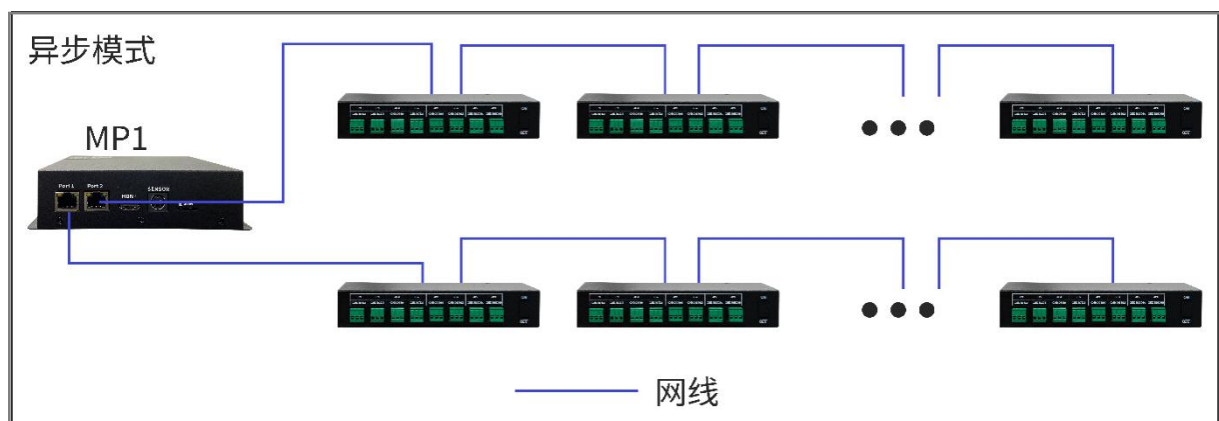
### 4.1 Network Connection Diagram

Port 2 can be configured for independent control, or only one network port may be used. Common methods are shown below:

**Synchronization Mode:** Connect to an external PC or media player via HDMI signal source to synchronize display output.



**Asynchronous Mode:** Supports program publishing and management via PC, mobile apps, and cloud platforms.



### 4.2 Network Port Indicator Status

|       |                                                         |
|-------|---------------------------------------------------------|
| Green | Steady on when powered on; flashing indicates a signal. |
|-------|---------------------------------------------------------|

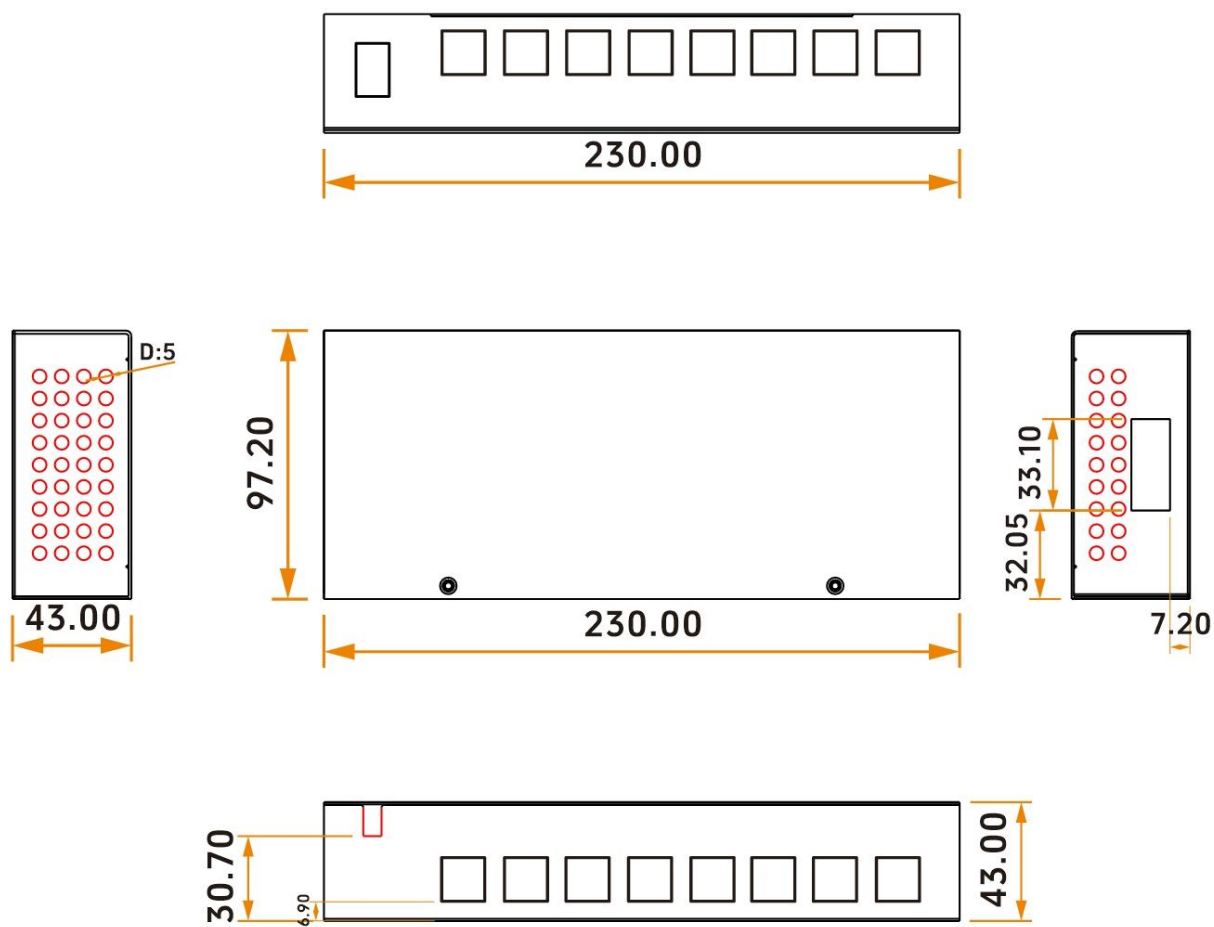
### 4.3 Controller Interface Definition

| JP1-JP8        |                |                |                |                |                |                |                |
|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|
| JP1            | JP2            | JP3            | JP4            | JP5            | JP6            | JP7            | JP8            |
| GND D1 D2      | GND D3 D4      | GND D5 D6      | GND D7 D8      | GND D9 D10     | GND D11 D12    | GND D13<br>D14 | GND D15<br>D16 |
| JP9-JP16       |                |                |                |                |                |                |                |
| JP9            | JP10           | JP11           | JP12           | JP13           | JP14           | JP15           | JP16           |
| GND D17<br>D18 | GND D19<br>D20 | GND D21<br>D22 | GND D23<br>D24 | GND D25<br>D26 | GND D27<br>D28 | GND D29<br>D30 | GND D31<br>D32 |

### 4.4 Product Appearance



## 5 Dimensions



Tolerance:  $\pm 0.3$  Unit: mm

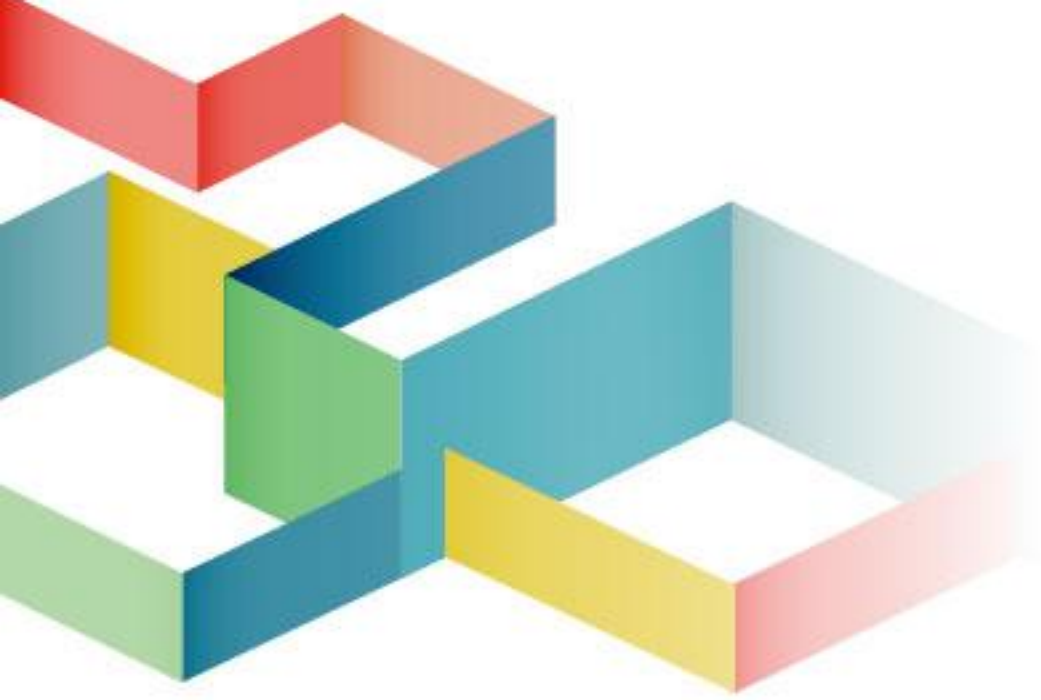
## 6 Specification

|                       |                                                                   |                             |
|-----------------------|-------------------------------------------------------------------|-----------------------------|
| Electrical parameters | Input voltage                                                     | AC100~240V/50~60HZ          |
|                       | Rated current                                                     | 3A                          |
|                       | Working temperature                                               | 36W                         |
| Working environment   | Working humidity                                                  | -20°C~70°C                  |
|                       | Temperature                                                       | 10%RH~90%RH no condensation |
| Storage environment   | Input voltage                                                     | -40°C~85°C                  |
| Board size            | 230mm×97.2mm×43mm                                                 |                             |
| Net weight            | 0.82Kg                                                            |                             |
| Outer packing size    | 280×170×95mm                                                      |                             |
| Gross weight          | 0.99Kg Description: Including wire, accessories                   |                             |
| Packing mode          | 1× Power Cord (with SR Network Plug) 1× Certificate of Conformity |                             |
| Certificate           | Compliant with RoHS standards Compliant with CE-EMC standards     |                             |

\*Current and power consumption may vary depending on factors such as product usage, environment, and settings.

## 7 Precautions

- High voltage hazard: This product operates at AC 100V~240V.
- Do not allow liquids or metal fragments and other conductive materials to enter the device, to prevent safety accidents.
- Please use the device in a dry and clean environment.



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