

LED-M12E

Receiving card



Specification

Version V1.0

Revision History

| No. | Summary of Revision Content | Date | Version |
|-----|-----------------------------|------------|---------|
| 1 | First Release | 2024/11/20 | V1.0 |
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LED-M12E Receiving card

● Product Description

The LED-M12E is a fine-pitch receiving card introduced by MAGNIMAGE. It features high-precision interfaces and has a maximum capacity of 256K (512*512) pixels per card. It supports up to 24 groups of RGB parallel data and a maximum 64 scans. Additionally, it offers various advanced features including point-by-point brightness correction, fast light and dark line repair, non-upgradable dead card prevention, customizable RGB gamma adjustment, module flash management, smart module support, automatic module calibration, color restoration, contour smoothing, HDR10, HLG, . When paired with different transmitting devices, it self-adapts to two operating modes of 0.65 million and 2.2 million.



● Payload Capacity

| Three-wire parallel(RGB) | Maximum Load pixels | Number of cascade cards per 1g port | Support scans |
|--------------------------|---|--|---------------|
| 24 groups | 512X512 | ≤128 | 1-64 scans |
| Large capacity | When paired with Mach series transmitting equipment, a single network cable can support maximum load of 2.2 million (2048x1080) pixels. | | |

● Improved Display performance

| | |
|---|---|
| Color Restoration | Utilizing a color analyzer, the LED's original color space is measured and then converted to various standard color spaces or user-defined ones, eliminating color deviations between the playback source and the LED, resulting in display that closely resembles reality. |
| Contour Smoothing (18bit+) | Effectively addresses the issue of grayscale loss on the display screen, particularly in low brightness conditions, enhancing the improvement of dark details in images and thus elevating the quality of LED displays. |
| RGB Customizable RGB Gamma Adjustment | Independently adjusts the gamma of red, green, and blue, effectively addressing issues such as unevenness and color deviation in low gray levels of LEDs. |

| | |
|---------------------------------------|---|
| Fast Bright and Dark Line Repair | Improves the bright and dark lines caused by uneven installation between modules or cabinets, enhancing overall display uniformity.。 |
| Brightness Correction | With the assistance of calibration software, performs brightness correction on each LED pixel individually, effectively eliminating color deviations to achieve highly consistent displays and improve display quality. |
| 3D Display | Achieves LED 3D display when combined with sending devices that support 3D functionality. |
| Rotate by multiples of 90 degrees" | The display supports rotation in increments of 90 degrees. |
| Mirror display | Horizontal or vertical mirroring. |

● Enhanced Portability of Operation

| | |
|----------------------------|--|
| Communication detection | The system assesses the communication quality between the network ports of the receiving cards. In tandem with the display on the cabinet and the flickering of indicator lights, it aids users in swiftly pinpointing the location of potential issues. |
| Mapping | Upon activating the intelligent numbering feature within the CLINK software, the cabinet will display the receiving card's |

| | |
|-----------------------------|---|
| | identification number and network port information, thereby facilitating a clear understanding of the receiving card's location and wiring configuration. |
| Upgrade-free | The factory firmware is compatible with conventional and the vast majority of dual-latch and PWM chips. |
| parameter readback | It supports the parameter read-back function for the configuration of the receiving card. |
| Pre-stored Image | The display image shown on the LED when there is no input signal or when the network cable is disconnected.。 |
| Data interface Customizable | In conjunction with Clink software, it is possible to monitor and edit the output data of the receiving card. |

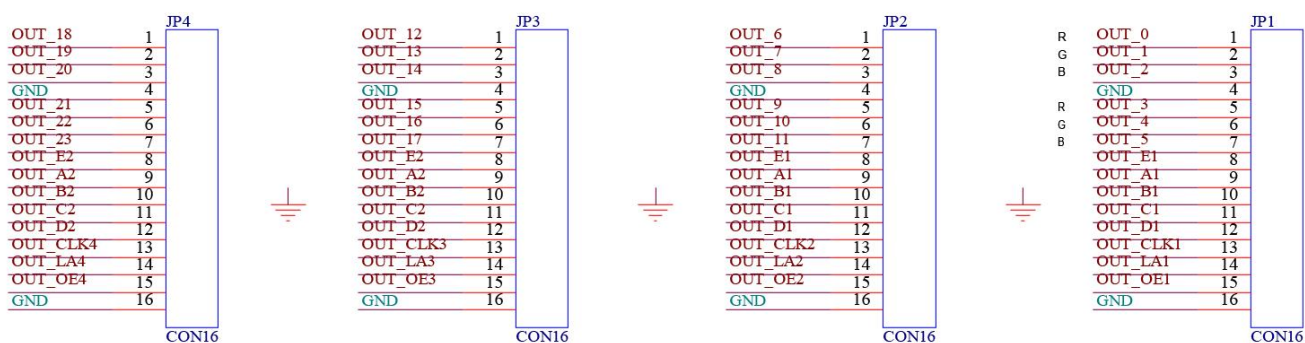
● Enhanced Stability

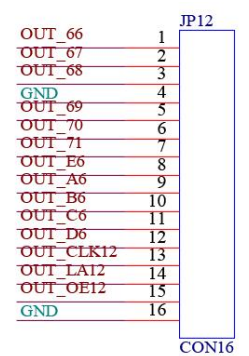
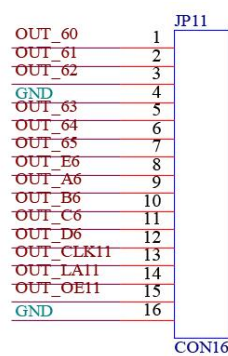
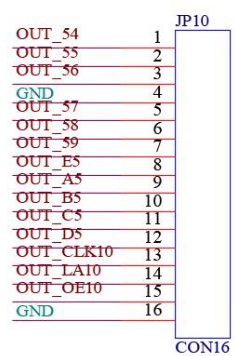
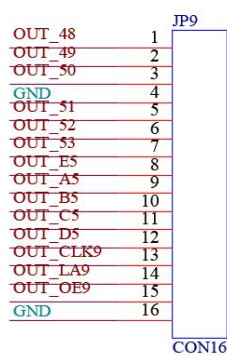
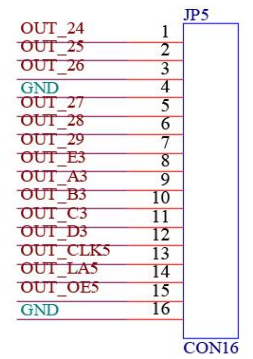
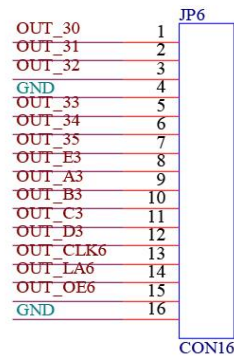
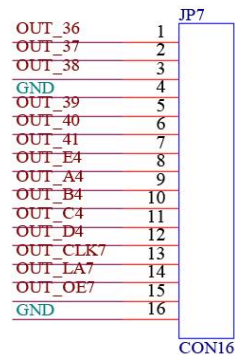
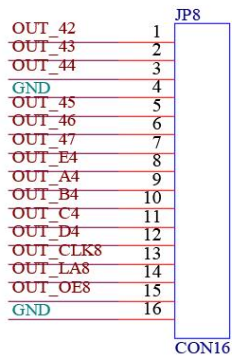
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| Ethernet port loopback backup | The network port is non-directional and can be used arbitrarily, supporting hot backup for primary and secondary network cables.。 |
| Firmware | The receiver card firmware program supports factory reset and |

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| readback | read-back functions to prevent issues such as dead cards after upgrades. |
| Error Rate Detection | Monitors the communication quality between the network ports of the receiving card, records error |
| Temperature and Voltage Monitoring | Detects the temperature and voltage of the receiving card itself. |

● Output interface definition

Definition of 24 groups of parallel data interfaces.





JP1——JP12 Interface Definition:

| Instructions for use | Definition | Pin | Pin | Definition | Instructions for use |
|----------------------|------------|-----|-----|------------|----------------------|
| RGB data output | R | 1 | 2 | G | RGB data output |
| | B | 3 | 4 | GND | Case ground |
| | R | 5 | 6 | G | RGB data output |
| | B | 7 | 8 | OUT_E | Line decoding signal |
| Line decoding signal | OUT_A | 9 | 10 | OUT_B | |
| | OUT_C | 11 | 12 | OUT_D | |

| | | | | | |
|----------------|---------|----|----|---------|--------------|
| Shift clock | OUT_CLK | 13 | 14 | OUT_LAT | Latch signal |
| Display enable | OUT_OE | 15 | 16 | GND | Case ground |

CN14 Interface Definition:

| | | | | | |
|------------|-----|------|-----|-----|-----|
| Pin | 1 | 2 | 3 | 4 | 5 |
| Definition | GND | KEY+ | LED | VCC | STA |

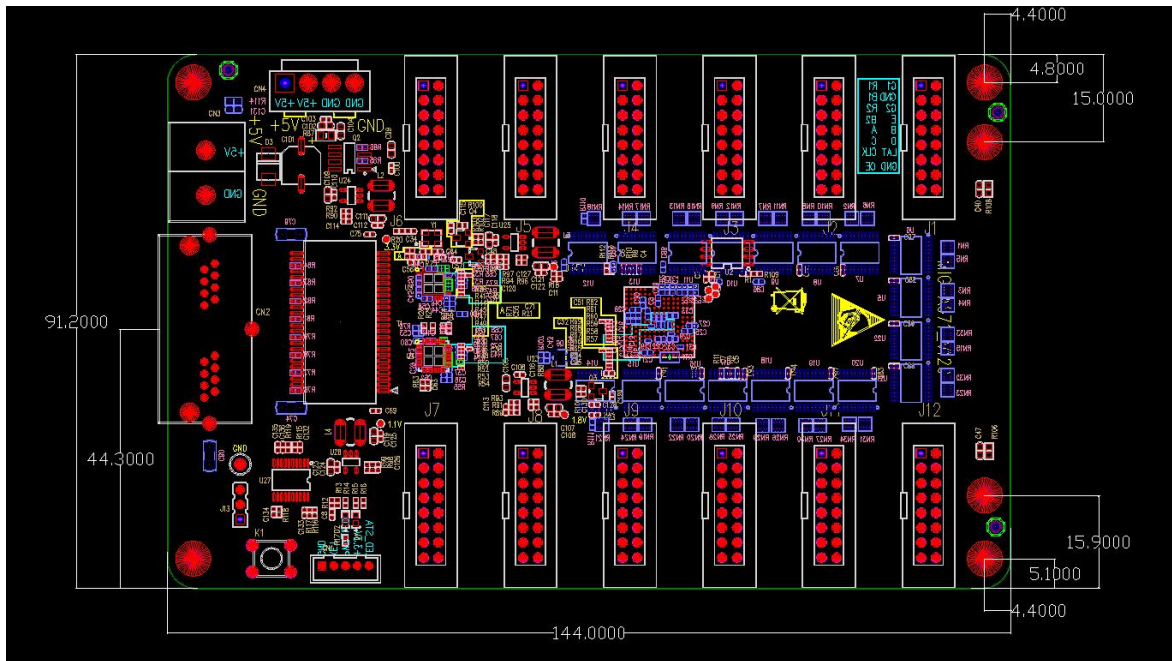
CN46 power socket Definition;

| | | | | |
|------------|-----|-----|-----|-----|
| PIN | 1 | 2 | 3 | 4 |
| Definition | VCC | VCC | GND | GND |

● Indicator light description

| pilot lamp | position | status | instruction |
|-----------------------------------|----------|-----------------------|--|
| Status indicator light (Green) | D16 | Uniform slow flashing | The receiving card is working properly, the network cable connection is normal, and there is |
| | | Uniform Flash | The receiving card is working properly, the network cable is connected properly, and there is a video signal input.。 |
| | | Constant extinction | No gigabit network signal |
| | | Flash twice between | The receiving card is working properly, the network cable circuit is connected, and there is a video signal input. |
| Status indicator light (red) | D17 | Light | Power supply is normal |

● Product dimensions and appearance unit(mm) tolerance
(± 0.3)




● Working Parameters

| | | |
|-----------------------|---------------------|-------------|
| Electrical parameters | INPUT VOLTAGE | DC3.8~5.5V |
| | Rated current | 0.6A |
| | Rated power | 3W |
| Working environment | Working temperature | -20℃ - 70℃ |
| | Working humidity | 10%RH~90%RH |
| Saving environment | Temperature | -25℃~125℃ |
| Size | 144.00mmX91.20mm | |
| Weight | 100g | |

● Note

- Must be installed by professional staff
- Must be anti static
- Attention of water and dust

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