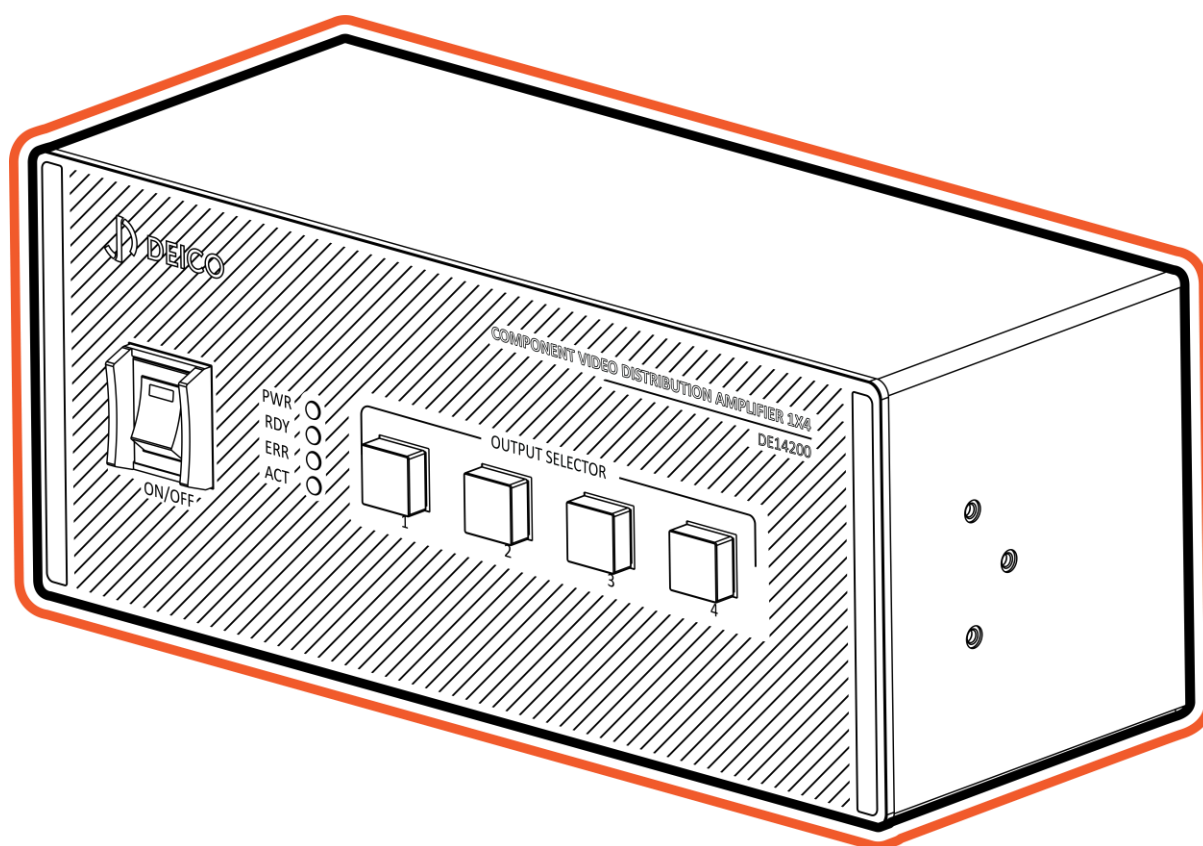


# DE14200 DATASHEET

COMPONENT VIDEO  
DISTRIBUTION AMPLIFIER 1X4



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## DESCRIPTION

The DE14200 – Component Video Distribution Amplifier 1x4 is a high-performance distribution amplifier for composite video signals. It takes one input, provides correct buffering and isolation, and distributes the signal to four identical outputs. The DE14200 also provides Ethernet, USB, RS-232 and GPIO interfaces for programming output configurations. It maintains high resolution video – beautiful HDTV resolutions up to 1080i are easily achieved.

### Key Features

- ⇒ Accepts 480i, 480p, 576i, 576p, 720p and 1080i resolutions
- ⇒ 100Mbps ethernet interface
- ⇒ USB2.0 full-speed interface
- ⇒ RS-232 interface
- ⇒ Discrete I/O control
- ⇒ User button control
- ⇒ USB type-C or barrel jack power in

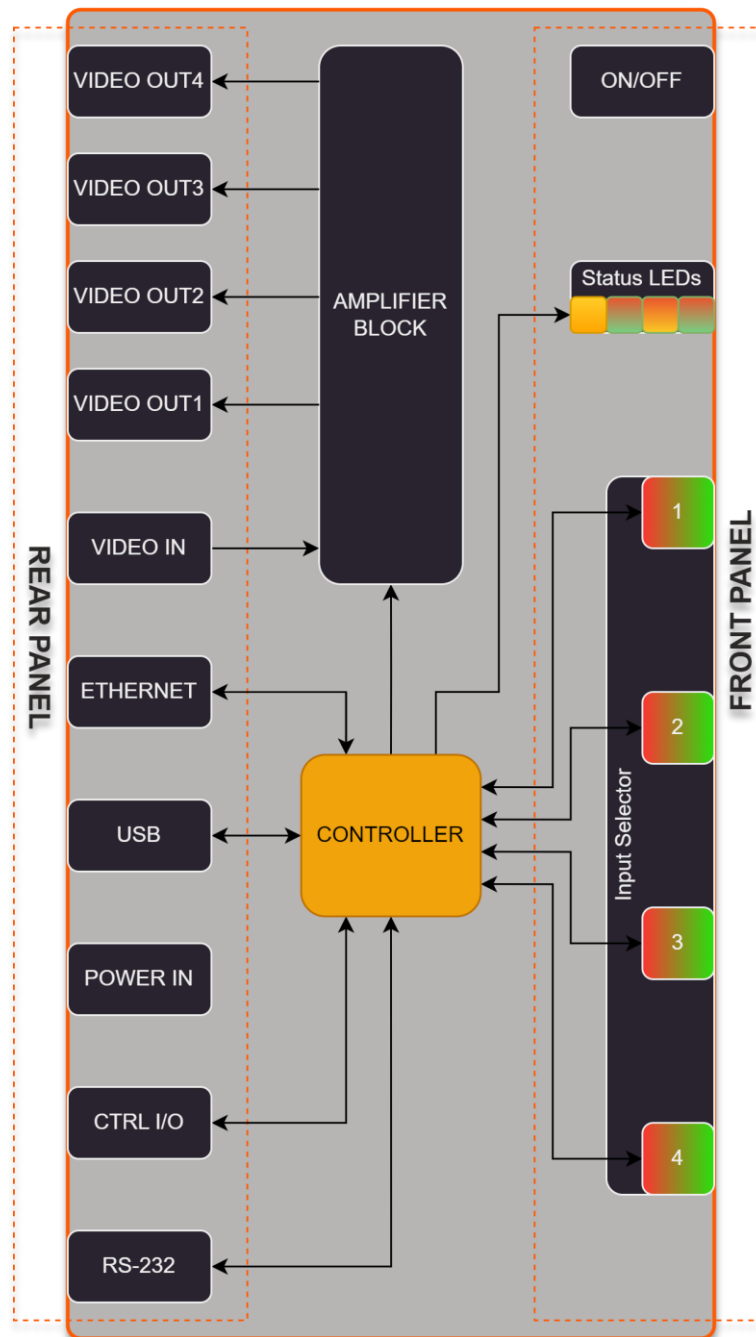
DE14200 is compatible with *IEC 60068-2-1 / IEC 60068-2-2 / IEC 60068-2-78 / IEC 60068-2-27 / IEC 60068-2-64 / EN 61326 (IEC 61326) / EN 55011 (CISPR 11) / AS/NZS CISPR 11 / FCC 47 CFR Part 15B / ICES-001* standards.

Areas of application include:

- ⇒ Video Switching
- ⇒ Component Video Testing

## HARDWARE OVERVIEW

### Circuitry



DE14200 General Block Diagram

## Hardware Specifications

### General

| Specification                   |   |
|---------------------------------|---|
| <b>Video Input</b>              | 1 Composite Video (YPbPr), 1Vpp/75Ω on a BNC connector  |
| <b>Video Output</b>             | 4 Composite Videos (YPbPr), 1Vpp/75Ω on a BNC connector |
| <b>Maximum Video Output</b>     | 2Vpp  |
| <b>Video Bandwidth (-3dB)</b>   | 350MHz (2Vpp)   |
| <b>Differential Gain Error</b>  | 0.02%   |
| <b>Differential Phase Error</b> | 0.03°   |
| <b>K-Factor</b>                 | <0.04%  |
| <b>Crosstalk</b>                | -87dB@10MHz   |
| <b>Coupling</b>                 | DC  |
| <b>Control Mode</b>             | Local + Remote  |
| <b>Control Connector</b>        | DB9, RJ45   |
| <b>Power Input</b>              | USB Type-C or Barrel Jack 2.5x5.5mm                     |

### Electrical

| Specification                     | Min   | Typical        | Max     |
|-----------------------------------|-------|----------------|---------|
| <b>Input Voltage</b>              | 5V    | 12V            | 24V     |
| <b>Power Consumption</b>          | -     | 12V DC, 415 mA | -       |
| <b>Reverse Voltage Protection</b> | -     | -              | 40V     |
| <b>Ethernet</b>                   | -     | -              | 100Mbps |
| <b>RS232</b>                      | -     | -              | 250kbps |
| <b>USB2.0</b>                     | -     | -              | 12Mbps  |
| <b>Discrete I/O VIH</b>           | 1.8V  | 3.3V           | 3.6V    |
| <b>Discrete I/O VIL</b>           | -0.3V | 0V             | 1.1V    |

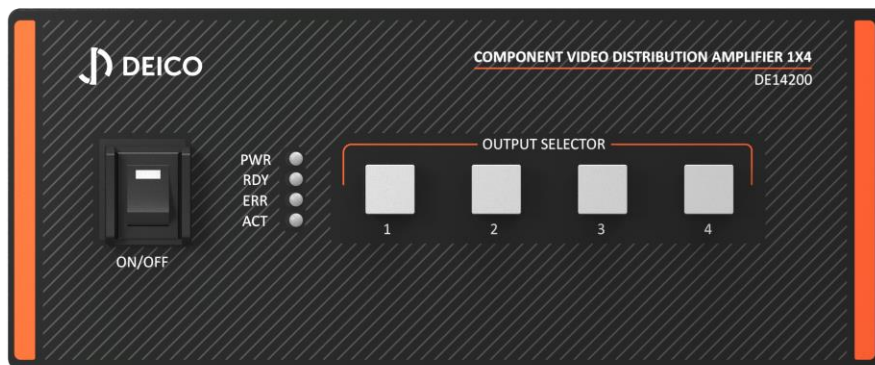
### Physical

| Specification                    | Typical   | Notes  |
|----------------------------------|---|--|
| <b>Dimensions</b>                | 215mm x 88.5mm x 88.5mm   | Interface connectors are not included.             |
| <b>Power Connector</b>           | PN: CUI / PJ-090BH<br>2.50mm ID (0.098"),<br>5.50mm OD (0.217") | Mating Connector (recommended):<br>CUI / PP3-002B. |
| <b>RS232 &amp; I/O Connector</b> | PN: Kycon, Inc. /<br>K88X-ED-9S-BRJ                             | Standard DSUB9 mating connector<br>can be used.    |

## Environmental

| Specification         | Condition                 | Value        |
|-----------------------|---------------------------|--------------|
| Operating Humidity    | Relative, non- condensing | 10% - 90%    |
| Storage Humidity      | Relative, non- condensing | 5% - 95%     |
| Operating Temperature | Operational               | 0°C - 40°C   |
| Storage Temperature   | Non-operational           | -40°C - 85°C |

## Front Side



DE14200 Front Side

## Rear Side



DE14200 Rear Side

## SIGNAL CONNECTIONS

### Power Connector



*Power Plug 2.5 X 5.5mm*

| Pin         | Description |
|-------------|-------------|
| Center Pin  | Positive    |
| Outer Leads | Negative    |

### RS-232 Connector (DB9)

| Pin | Description |
|-----|-------------|
| 1   | NC          |
| 2   | RXD         |
| 3   | TXD         |
| 4   | NC          |
| 5   | GND         |
| 6   | NC          |
| 7   | RTS         |
| 8   | CTS         |
| 9   | NC          |

### CTRL IO Connector (DB9)

| Pin | Description |
|-----|-------------|
| 1   | CTRL IO1    |
| 2   | CTRL IO2    |
| 3   | CTRL IO3    |
| 4   | CTRL IO4    |
| 5   | GND         |
| 6   | CTRL IO5    |
| 7   | CTRL IO6    |
| 8   | CTRL IO7    |
| 9   | CTRL IO8    |



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