P3-050 System Controller
ENTRY LEVEL P3 LED VIDEO CONTROLLER

HIGHLIGHTS

• Compact and affordable LED Video Controller
• Compatible with all Martin Creative LED products and P3-enabled MAC moving heads
• Integration with lighting controls (DMX, Art-Net) and automation systems

OVERVIEW

The P3-050 System Controller is a compact and affordable video processor for the entire range of Martin LED Video products and P3 enabled MAC moving heads, driving up to 100,000 pixels. Integration with lighting and automation controls is facilitated via the integrated DMX, Art-Net and Kinesys interfaces.

KEY MESSAGES

ONE VISUAL CANVAS
P3 brings creative Martin LED Video products and P3 enabled MAC moving heads together into one visual canvas; allowing all to be treated as one and to prevent the need for dedicated control solutions for each of the different products.

SIMPPLICITY TO ENABLE CREATIVITY
The P3 ecosystem removes the need for manual addressing and external computers for setup, while featuring an ergonomic user interface. Mapping and scaling is automated to give you more time to be creative.

CREATE LOOKS THE WAY YOU WANT
P3 offers the freedom to use the most suited tool for each vision. Whether using video content, traditional DMX controls, or a mix of control methods, you can achieve uniquely creative looks for each application.

OPTIMAL PERFORMANCE
All P3-enabled products feature advanced color & brightness calibration & color-matching between fixture types. The entire system is fully synchronized, ensuring all elements work cohesively without visible latency.
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### FEATURES

- Drives up to 100,000 pixels
- Built-in scaler and mapper
- DVI-D input up to 1920x1080
- Built-in GUI (Graphical User Interface) including easy setup wizards
- Real-time visualization of the video mapping within the GUI (Graphical User Interface)
- Most user-friendly LED Video processor on the market
- Compatible with all Martin Creative LED products and P3-enabled MAC moving heads
- Integration with lighting controls (DMX & Art-Net) and automation systems
- All connected products report status and problems back to the controller for easy monitoring and maintenance
- Showfiles compatible with all products within the P3 System Controller family (including the P3-PC offline editor)

### ORDERING INFORMATION

- Martin P3-050 System Controller ......................... P/N 90721090

### INCLUDED ITEMS

- EU-type power cable with Schuko connector
- US-type power cable
- UK-type power cable

### RELATED ITEMS

- Martin P3-150™ System Controller ......................... P/N 90721015
- Martin P3-300™ System Controller ......................... P/N 90721060
- Martin P3-PC™ System Controller... Free download at martin.com

### P3 SYSTEM CONTROLLER COMPARISON

<table>
<thead>
<tr>
<th></th>
<th>P3-050 System Controller</th>
<th>P3-150 System Controller</th>
<th>P3-300 System Controller</th>
<th>P3-PC System Controller</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Video Input</strong></td>
<td>1x DVI-D up to 1920x1080</td>
<td>1x DVI-D up to 1920x1080</td>
<td>1x DVI-D up to 1920x1080</td>
<td>2x SDI up to 3G-SDI 1x Genlock</td>
</tr>
<tr>
<td><strong>DMX Input</strong></td>
<td>1 universe DMX 32 universes Art-Net</td>
<td>1 universe DMX 32 universes Art-Net</td>
<td>1 universe DMX 32 universes Art-Net</td>
<td>4 universes Art-Net</td>
</tr>
<tr>
<td><strong>P3 Output</strong></td>
<td>1 network with up to 100,000 pixels worth of fixtures</td>
<td>1 network with up to 500,000 pixels worth of fixtures</td>
<td>4 networks with up to 2,000,000 pixels worth of fixtures</td>
<td>1 network with up to 20,736 pixels worth of fixtures</td>
</tr>
<tr>
<td><strong>Form-Factor</strong></td>
<td>1U 19” rackmount</td>
<td>1U 19” rackmount</td>
<td>2U 19” rackmount</td>
<td>Software installed on customer-supplied Windows computer</td>
</tr>
<tr>
<td><strong>Remote Management</strong></td>
<td>Yes, internal webpages and syslog</td>
<td>Yes, internal webpages and syslog</td>
<td>Yes, internal webpages and syslog</td>
<td>No</td>
</tr>
</tbody>
</table>

*Screen-capture or Media Server Integration
*Software installed on customer-supplied Windows computer

Please consult P3 System Controller Capacity Info Note for more details.
## P3-050 System Controller

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### TECHNICAL SPECIFICATIONS

#### CONTROL/USER INTERFACE

- **User interface**: SXGA (1280 x 1024) or better monitor (VGA, DVI, HDMI or DP), USB keyboard, USB mouse
- **Device status**: Status indicator LEDs

#### DVI VIDEO INPUT

- Supports all resolutions up to 1920x1080
- Supports both RGB and YCbCr, progressive scan only

#### VIDEO PROCESSING

- **Controller pixel processing capacity**: ...100,000 pixels (expandable by adding P3-050s)*
- **Controller fixture capacity**: 2000 fixtures (expandable by adding P3-050s)*
- **Maximum workspace area**: 2,073,600 pixels
- **Maximum active capture area**: 2,073,600 pixels
- **System processing depth**: 16 bits per color (48 bits per pixel)
- **System latency, DVI**: 2 frames
- **Latency between first and last panel**: None
- **Image rotation**: Scaling (global and mixed pixel pitch)
- **De-interlacing**: Gamma curve selection and adjustment
- **Real-time panel content remapping**: Real-time color temperature and color space control
- **Real-time preview of video input and mapped canvas**

#### DMX 512 / Art-Net real-time controllable parameters:

- **Up to 32 universes of Art-Net input**
- **Global intensity**
- **RGB intensity**
- **Color temperature**
- **X-Y video image position**
- **Video image rotation**
- **Freeze**
- **Blackout**
- **Test pattern selection**
- **Preset recall (incl. video input selection and scaling)**

**Kinesys K2 / Tait Navigator real-time controllable parameters:**

- **X-Y video image position**
- **Video image rotation**

*See also P3 System Controller Capacity Info Note on Support & Downloads page

#### P3 SIGNAL PROTOCOL

- **Signal type**: Gigabit Ethernet
- **Protocol**: Proprietary Martin P3
- **Hot pluggable**: Yes, electrically isolated at all connections
- **Cable type**: Ethernet, shielded, CAT 5e or better
- **Cable length**: Up to 100 m between any 2 devices, extendable with Ethernet switch

#### Maximum number of fixtures per line**: 50, extendable with Ethernet switch

#### CONSTRUCTION

- **Housing**: Steel and aluminum
- **Color**: Matte black
- **Protection rating**: IP20

#### INSTALLATION

- **Mounting**: 19-inch rackmount (1U) or free-standing

#### CONNECTIONS

- **Power input**: IEC socket with integrated power switch
- **P3 data in/out**: etherCON socket
- **Network (remote management, Art-Net and Kinesys K2/Vector)**: etherCON socket
- **DVI video in**: DVI-D (via DVI-I connector)
- **DVI video thru**: DVI-D (via DVI-I connector)
- **DMX in**: 5-pin locking XLR
- **DMX thru**: 5-pin locking XLR
- **Peripherals and USB memory devices**: 4 x USB 2.0 ports
- **User interface monitor**: DisplayPort++ (compatible with adapters to DVI, HDMI and VGA, not supplied)

#### ELECTRICAL

- **AC power**: 100-240 V, 47-63 Hz
- **Power supply unit**: Integrated, universal multi-voltage

#### THERMAL

- **Cooling**: Forced air
- **Maximum ambient temperature**
  - **(Ta max)**: 50° C (122° F)
- **Minimum ambient temperature**
  - **(Ta min)**: 0° C (32° F)
- **Total heat dissipation (calculated, +/- 10%)**: 685 BTU/hr.

#### APPROVALS

- **EU safety**: EN 60950-1
- **EU EMC**: EN 55022, EN 55024, EN 61000-3-2, EN 61000-3-3, EN 61000-4-2, EN 61000-4-3, EN 61000-4-4, EN 61000-4-5, EN 61000-4-8, EN 61000-4-11
- **US safety**: ANSI/UL 60950-1
- **Canadian safety**: CAN/CSA C22.2 No. 60950-1
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DIMENSIONS

PHYSICAL
Width ........................................ 482 mm (19.0 in.)
Height ....................................... 45 mm (1.8 in.) rackmount 1U
Depth ......................................... 360 mm (14.2 in.)
Weight ....................................... 3.0 kg (6.7 lbs.)

All dimensions are in mm