P3-300 System Controller

HIGH CAPACITY P3 LED VIDEO CONTROLLER

HIGHLIGHTS

• Powerful and ergonomic 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 P3-300 System Controller combines the award-winning and intuitive P3 workflow with a brand new high-performance video processing engine. No matter how you mix Creative LED fixtures, LED Video panels and P3-enabled MAC moving heads, the workflow remains simple and integrated. The P3-300 is equipped with a DVI input, a component video input and two SDI input ports (up to 3G). The output capacity of 2,000,000 pixels allows even more products to be driven from a single controller.

KEY MESSAGES

ONE VISUAL CANVAS
P3 brings Martin creative 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.

SIMPLICITY 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 2,000,000 pixels
- Built-in scaler and mapper
- DVI-D input up to 1920x1080
- 2x 3G-SDI input up to 1920x1080
- Analog video input up to 1920x1080
- Dedicated bi-level and tri-level sync input for genlock
- 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 P3-300 System Controller ..................... P/N 90721060

**INCLUDED ITEMS**

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

**RELATED ITEMS**

- Martin P3-050™ System Controller ..................... P/N 90721090
- Martin P3-150™ System Controller ..................... P/N 90721015
- Martin P3-PC™ System Controller ... Free download to 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>Screen-capture or Media Server Integration</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>

*Please consult P3 System Controller Capacity Info Note for more details*
P3-300 System Controller

HIGH CAPACITY P3 LED VIDEO CONTROLLER

TECHNICAL SPECIFICATIONS

CONTROL/USER INTERFACE
User interface: SXGA (1024 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

COMPONENT VIDEO INPUT
Via DVI-I breakout cable (not supplied)
Supports all resolutions up to 1920x1080
Supports progressive and interlaced scan
10-bit color sampling
Supports composite NTSC/PAL/Secam, S-Video (Y/C) and component YPbPr w/Sync-on-G (Y)
Supports tri-level sync

SDI VIDEO INPUT
2 x SDI 525/60 (NTSC) or 625/50 (PAL) per SMPTE 259M
2 x HD-SDI 720p per SMPTE 296M or 1080i per SMPTE 292M
1 x dual-link HD-SDI per SMPTE 372M
2 x 3G-SDI per SMPTE 424M (compatible with level A and level B sync)

GENLOCK INPUT
Supports bi-level and tri-level sync

VIDEO PROCESSING
Controller pixel processing capacity: 2,080,000 pixels (expandable by adding P3-300s)*
Controller fixture capacity: 2,000 fixtures (expandable by adding P3-300s)*
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 (2U) or free-standing

CONNECTIONS
Power input: IEC socket with integrated power switch
P3 data in/out: 4 x etherCON socket
Genlock in: 1 x BNC
Genlock thru: 1 x BNC
SDI video in: 2 x BNC
SDI video thru: 2 x BNC
DVI/component video in: DVI-I (component via BNC-to-DVI-A adapter cable, not supplied)
DVI/component video thru: DVI-I
DMX in: 5-pin locking XLR
DMX thru: 5-pin locking XLR
Management network: etherCON socket
EtherDMX / motion network: etherCON socket
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)
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TECHNICAL SPECIFICATIONS

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 61000-4-6, EN 61000-4-11
US safety ............................................. ANSI/UL 60950-1
Canadian safety .................................... CAN/CSA C22.2 No. 60950-1

DIMENSIONS

PHYSICAL
Width ............................................. 482 mm (19.0 in.)
Height .............................................. 90 mm (3.5 in.) rackmount 2U
Depth ................................................ 508 mm (20.0 in.)
Weight .............................................. 9.0 kg (19.8 lbs.)