P3-275 System Controller

NEXT-GENERATION P3 SYSTEM CONTROLLER FOR LARGE APPLICATIONS

SPEC SHEET

OVERVIEW

The Martin P3-275 System Controller supports video input up to DCI 4K (4096x2160) and is intended for bigger shows spanning larger stages with higher fixture quantities. It is also ideal for bridges and large buildings that typically need a larger workspace. This Controller allows fixtures to be mapped onto the visual canvas, patched, addressed, and configured without having to directly access the fixtures. Integrating with third-party software via the MVR standard, P3 System Controllers are able to import and export industry-standard files eliminating duplicate actions and enabling designs (and patches) to be shared between lighting consoles, CAD programs, visualizers and the Martin P3 ecosystem.

P3 System Controllers give you full control over your system from one central location, eliminating the need to address fixtures locally. Real-time previews illustrate how DMX controls and video will be rendered on the fixtures. Whether using video content, traditional DMX controls, Art-Net / sACN PixelMapping, or a mix of control methods, you can achieve uniquely creative looks for each application.

All P3-enabled products feature advanced color and brightness calibration and color-matching between fixture types. The entire system is fully synchronized, ensuring all elements work cohesively without visible latency. Martin P3-275 System Controllers support video input up to DCI 4K (4096x2160) over HDMI and NDI inputs, and output up to 1,040,000 pixels to up to 6,000 fixtures.

Martin P3's groundbreaking technology not only saves time during setup with automated mapping, scaling, configuring, and addressing of fixtures, but they also enable real-time feedback and monitoring, with an ergonomic, next-generation user interface that is incredibly smooth and responsive.

Additionally, the free P3-PC System Controller solution allows you to get started easily. It can be used as a basic mapping tool; addressing tool; Art-Net / sACN to P3 bridge; or as a full, professional P3 control solution, mixing lighting controls and video content into fixtures. Martin P3 offers the freedom to use the tool most-suited for each vision. P3-PC is also great for creating your design at home or on the road, as showfiles can easily be exchanged between P3-PC and P3-275.

KEY MESSAGES

MIX DMX AND VIDEO CONTROL

Gives the lighting designer the freedom to create unique looks by entering parameters or by sending content to fixtures to ultimately create the ideal look that the designer envisions.

TIME-SAVING MVR INTEGRATION

Mapping and patches can be exported to third-party lighting consoles, visualizers and CAD programs. There is no need to re-create a system repeatedly using different software packages.

REMOTE ADDRESSING AND SETTING

Eliminates the need to physically access fixtures to address and configure each one locally via the display.

REAL-TIME MONITORING

Offers a complete view of your entire system to diagnose any issues.

SYSTEM-WIDE SYNCHRONIZATION

Deliver perfect performance across the entire system, without visible lag and latency issues.

LIVE PREVIEW

Visualize results during pre-programming without connecting actual fixtures.

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FEATURES

- DCI 4K video input compatible (HDMI & NDI)
- HDMI input resolution up to 3840 x 2160
- NDI input reolution up to 3840 x 2160
- 1024 universes of Art-Net / sACN input
- Outputs up to 1,040,000 pixels on 6,000 fixtures
- 2U rackmount
- Map a mix of Martin fixtures onto one visual canvas
- Patch, address and configure Martin fixtures, without having to directly address and configure each fixture
- Export mapping and patch to third-party lighting controllers, CAD programs and visualizers via MVR
- Import mapping and patch from third-party lighting controllers, CAD programs and visualizers via MVR
- Export mapping mask to third-party media servers
- Provides real-time feedback and monitoring of Martin fixtures
- Provides remote monitoring of the P3 System Controller and all connected fixtures without physically being onsite

ORDERING INFORMATION

- **Martin P3-275 System Controller**..... P/N MAR-90721101

INCLUDED ITEMS

- **Safety Guide**
- **Quick Start Guide**
- **EU-type power cable with Schuko connector**
- **US-type power cable**
- **UK-type power cable**

RELATED ITEMS

- **Martin P3-175 System Controller**.....P/N MAR-90721100
- **Martin P3-PC™ System Controller**....Free download from martin.com

P3 SYSTEM CONTROLLER COMPARISON

	P3-175 System Controller	P3-275 System Controller	P3-PC System Controller
Video Input	1x HDMI up to 1920x1080 1x NDI up to 1920x1080	1x HDMI up to 4096x2160 1x NDI up to 4096x2160	NDI, Screen-capture or Media Server Integration
DMX Input	256 universes Art-Net / sACN	1024 universes Art-Net / sACN	256 universes Art-Net / sACN
P3 Output	1 network with up to 520,000 pixels worth of fixtures Maximum 2,000 fixtures	2 networks with up to 1,040,000 pixes worth of fixtures Maximum 6,000 fixtures	1 network with up to 20,736 pixels worth of fixtures Maximum 2,000 fixtures
Form-Factor	1U 19" rackmount	2U 19" rackmount	Software installed on customer-supplied Windows computer
Remote Management	Yes, internal webpages and syslog	Yes, internal webpages and syslog	No

Please consult P3 System Controller Capacity Info Note for more details

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TECHNICAL SPECIFICATIONS

CONTROL/USER INTERFACE

User interface ..... Full HD (1920x1080) or better monitor (VGA, DVI, HDMI or DP), USB keyboard & USB mouse

Device status ..... Status indication LEDs

HDMI VIDEO INPUT

Standard: HDMI 2.0

Resolution: Supporting all standard resolutions up to 4096x2160 (DCI 4K)

Framerate: Supporting frame rates up to 75fps

Scan: Progressive & Interlaced

EDID: Customizable via user interface

Colour Depth: 8/10/12-bit

Colour Sampling: RGB 4:4:4, YCbCr 4:4:4 & YCbCr 4:2:2

Colour Formats: RGB, YCbCr 601, YCbCr 709 & YCbCr 2020

NDI VIDEO INPUT

Standard: NDI

Resolution: Supporting all standard resolutions up to 4096x2160 (DCI 4K)

Framerate: Supporting frame rates up to 75fps

VIDEO PROCESSING

Controller pixel processing capacity: ..... 1,040,000 pixels (expandable by adding P3-275s)*

Controller fixture capacity: ..... 6,000 fixtures (expandable by adding P3-275s)*

Maximum workspace area: ..... 8,847,360 pixels

Maximum active capture area: ..... 8,847,360 pixels

System processing depth: ..... 16 bits per colour (48 bits per pixel)

System latency: ..... 2 frames

Latency between first and last panel: ..... None

Scaling: ..... Yes, global and mixed pixel pitch

Gamma Curve Control: ..... Yes, adjustable

Image Control Parameters: ..... Hue, Saturation, Brightness, Contrast & Lowlight

Mapping: ..... Real-time

Colour Temperature Control: ..... Real-time

Colour Space Control: ..... Real-time

Preview: ..... Real-time (incoming video & mapping onto fixtures)

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

DMX CONTROLS

Up to 1024 universes of Art-Net or sACN input*

Control of intensity and colours

Control of colour temperature

Merge video input with DMX controls towards fixtures

Cross-fade or toggle between video and DMX controls

Freeze, blackout or activate testpatterns on video engine

Recall video presets (video settings, fixture positions and more)

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

MOTION CONTROLS

One universe of Art-Net, sACN or Kinesys K2 input*

Compatible with Kinesys K2/Vector, Tait Navigator and others

Control fixture or group position on video canvas

Control fixture or group rotation on video canvas

*See also P3 System Controller Capacity Info Note on 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 daisy-chain ..... 50, extendable with Ethernet switch

CONSTRUCTION

Colour ..... Matte Black

Housing Material ..... Steel and Aluminum

Protection Rating ..... IP 20

INSTALLATION

Mounting ..... 19-inch rackmount (2U) or free-standing

Orientation ..... Horizontal only

Location ..... Indoor or outdoor protected from elements

CONNECTIONS

Power input ..... IEC socket with integrated power switch

P3 data in/out ..... 2x etherCON socket (100/1000Mbit)

EtherDMX Network (Art-Net, sACN and Kinesys K2/Vector) ..... 1x etherCON socket (100/1000Mbit)

Management Network (remote management, syslog and webserver) ... 1x etherCON socket (100/1000Mbit)

NDI Video in ..... 1x etherCON socket (100/1000Mbit)

HDMI Video in ..... HDMI 2.0

Peripherals & USB memory devices ..... 2x USB 2.0 ports & 2x USB 3.0 ports

User interface monitor ..... DisplayPort++ (compatible with adapters to DVI, HDMI and VGA, not supplied)

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TECHNICAL SPECIFICATIONS (CONT.)

ELECTRICAL

AC Power	100-240 V AC nominal, 50/60 Hz
Power Supply Unit	Auto-ranging electronic switch mode
Typical half-cycle RMS inrush current at 230V, 50 Hz	28 A
Typical earth-leakage current	0.50 mA
Power Factor	0.98 @ 100 V / 120 V, 0.93 @ 208 V / 230 V / 240 V
Max current draw	1.90 A @ 100 V / 120 V, 0.95 A @ 208 V / 230 V / 240 V
Typical current draw	0.46 A @ 100 V / 120 V, 0.23 A @ 208 V / 230 V / 240 V
Power Consumption	Maximum 190 W Typical 46 W* Idle 30 W*

*Measurements made at nominal voltage. Allow for a deviation of +/- 10%. Typical: machine running at full P3, Art-Net/sACN and Video Input capacity. Idle: no showfile loaded.

THERMAL

Cooling	Filtered forced air (temperature-controlled fans)
Maximum Ambient Temperature (Ta max):	50° C (122° F)
Minimum Ambient Temperature (Ta min):	5° C (41° F)
Typical Heat Dissipation (calculated, +/- 10%):	157 BTU/hr

ENVIRONMENTAL

RoHS	Compliant
REACH	Compliant
WEEE	Compliant
Proposition 65	Compliant

APPROVALS

EU Safety	EN 62368-1
EU EMC	EN 55032, EN 55035, EN 61000-3-2, EN 61000-3-3
US Safety	UL 62368-1
Canadian Safety	CSA C22.2 No. 62368-1
Australia/NZ:	RCM
United Kingdom	UKCA
India	BIS (Pending)

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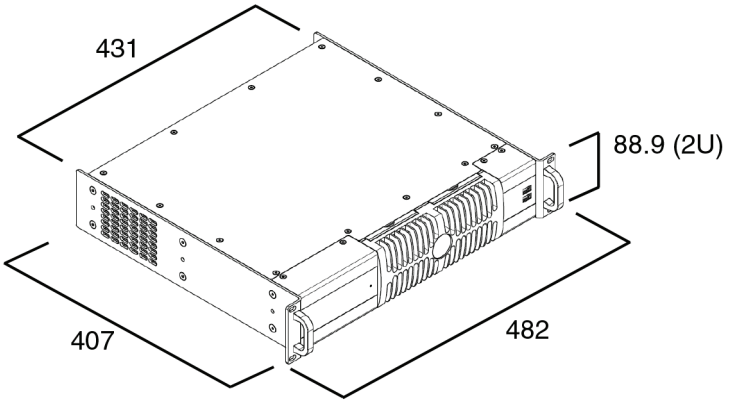
DIMENSIONS

PHYSICAL

Width ..... 482.6 mm (19.0 in.)
Height ..... 88.90 mm (3.50 in.) (rackmount 2U)
Depth ..... 407 mm (16.0 in.)
Weight ..... 7.0 kg (15.4 lbs.)



19-inch rackmount 2U

FRONT VIEW

BACK VIEW

All dimensions are in mm

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