## Lighting Playback Controller X Series 3

The Pharos LPC X (Lighting Playback Controller X) offers an extreme level of power and integration, making it an ideal solution for landmark lighting installations with significant channel counts. It integrates with the full range of Pharos Designer products and offers an optional real-time video input. The LPC X S3 is a next generation hardware platform with improved connectivity and new functionality with Audio In for Linear Timecode.

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## LPC X Features

### Designer Engine
The intelligent Designer Engine gives you complete control of your installation. Based on individually controllable and independently running timelines and scenes, it lets you build dynamic, precise, fully customisable pre-programmed lighting displays, all while giving you the freedom of real-time manual overrides, flexible multi-zone control, prioritisation and more.

### Designer Trigger
Timing is everything. Whatever the stimulus, Designer Trigger can handle it. You can control your lighting with responsive, reactive programming. Designer Trigger is a rules engine that uses conditional logic and a broad range of interfaces and protocols. Send and receive any command, to and from any system. Conditional logic is supported, along with a powerful built-in scripting language for unlimited flexibility.

### Flexible
Be limited by your design brief, not your control system. Our products support a vast range of different fixture types and can output multiple DMX-over-Ethernet (eDMX) lighting protocols at the same time. No other system gives you this level of flexibility and control over your project.

### Custom Interfaces
Create a custom web interface for your installation that gives your users the control they need and the look they expect. Our built-in web server supports an extensive JavaScript API and access control with multiple user levels.

### Remote Management
Future-proof your lighting projects by connecting your Designer controllers to Pharos Cloud. This allows direct control of your Controllers from anywhere in the world, letting you check all of your Controllers' statuses, inputs and outputs, firing triggers, scheduling events, uploading new projects and much more. All Pharos Designer Controllers also have their own Web Interface that can be accessed on a local area network that provides real-time statuses, access to the full log and the ability to fire triggers on the controller.

### Designer Mapping
Design the big picture; control every pixel. Create a map of your fixtures within the Designer software, then use Designer Mapping to create visually striking effects or play video across the entire array. Powerful controls allow you to build maps fast with pixel-precise adjustment. Multiple maps can be created to support different zones or for modelling different views of your installation.

### Scalable
The right fit for every installation. Multiple Pharos Designer Controllers can be seamlessly linked together to work as one via a standard Ethernet network giving impressive scalability. For additional integration options simply add Designer Remote Devices to further extend the network. Whether one Controller or many, it's all easily programmed using our Designer software.

### Pharos Designer
Programmed and configured using the free Pharos Designer software – available for Windows or macOS – with upload over Ethernet.

### Reliable
Hardware and firmware are self-sufficient, so no PC needs to be left on site. Rugged 19" rack mount unit designed for 24/7 operation and reliability.

### Timecode
The stereo balanced line level audio input can receive linear timecode on both channels. The format is auto-detected and supported formats are 24fps (film), 25fps (EBU), 29.97fps (NTSC) & 30fps (SMPTE). A software flywheel with error correction and jump support ensures smooth but responsive timecode playback.

### Video Input
Optional HDMI input for mapping live video, supporting up to 1080p60 with configurable scaling and X/Y pixel offset.

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## Supported Fixtures

| | |
|---|---|
| **LEDs** | Any colour configuration e.g. RGB, RGBW, 8-bit, 16-bit, tuneable white |
| **Generic** | Downlights, spotlights, uplights, etc. via controllable dimmers, relays or ballasts |
| **Intelligent** | Moving and multi-parameter fixtures |
| **Fountain Jets** | Fountain jets for fountain animation or other animatronics |
| **Fixture Library** | Pharos offers a cloud library with over 30,000 fixture profiles, for easy download of your luminaires |

## Output

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|---|---|
| **sACN** | ANSI E1.31 (with per fixture priority) standard |
| **Art-Net** | Art-Net I, Art-Net II and Art-Net 3. Configurable broadcast override |
| **KiNET** | KiNET V1, V2, V3; PDS/Data Enabler discovery |
| **Pathport** | Pathway Connectivity protocol |
| **EDN** | Via EDN: natively integrate, and output DMX, with the EDN |
| **SPI** | Via EDN+SDI: synchronous and asynchronous serial data output |
| **DisplayPort** | Output for video-mapped fixtures |
| **DMX512** | Via the EDN or any other eDMX node |
| **RDM** | Via Art-Net or EDN, supports discovery and addressing via Designer 2 software |
| **DALI** | Via RIO D |
| **Audio Out** | Audio Output with two audio layers; a background layer for ongoing audio, and an alert layer for high-priority overriding |
| **Simultaneous** | Multiple protocols can be in operation simultaneously. Limited by patched channels, not universes used |
| **Scalable** | Synchronises with up to 40 Pharos Designer Controllers over network |

## Triggering & Integration

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|---|---|
| **Startup** | Commences programmed playback automatically on receiving power |
| **Clock** | Battery-backed real-time clock for calendar and time-based triggers |
| **Astronomical** | Sunrise/Sunset/Twilight and Lunar phases |
| **Ethernet** | UDP, TCP, Multicast; send/receive any Ethernet message |
| **RS232 Serial** | Configurable port; send/receive free syntax in ASCII, HEX or decimal |
| **RS485 Serial** | Via RIO: configurable port; send/receive free syntax in ASCII, HEX or decimal |
| **eDMX** | sACN or Art-Net |
| **Timecode** | Linear Timecode (SMPTE, Film, EBU, NTSC) |
| **Inputs** | Via RIO: contact closure, active low, active high or 0-24V analog level |
| **Outputs** | Via RIO: isolated relay outputs (48V, 250mA) |
| **MIDI** | Via RIO A: MIDI Notes, SysEx or MIDI Time Code |
| **Audio Level** | Via RIO A: stereo 30-band spectrum analysis |
| **DALI** | Via RIO D: transmit and receive DALI commands |
| **Web Interface** | Built-in or custom designed |
| **Wall Stations** | Integrate with BPS, TPS or TPC |
| **Conditions** | Full conditional logic support |
| **Scripting** | Lua scripting for total flexibility |
| **IO Modules** | Supports our extensive IO Module library for easy integration |
| **Scalable** | Supports Pharos Designer Remote Devices |

## Interfaces

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|---|---|
| **Ethernet** | Network port for device access and management; Neutrik etherCON (RJ45 compatible) for 10/100/1000Base-TX Ethernet with Link/Data LEDs; Static IP or DHCP |
| **eDMX** | Dedicated Ethernet port for lighting data; Neutrik etherCON (RJ45 compatible) for 10/100/1000Base-TX Ethernet with Link/Data LEDs; Static IP or DHCP |
| **Serial** | RS232 * |
| **USB** | Two USB 2.0 Type A ports (for future development) |
| **Audio Outputs** | Stereo balanced line level analog port * / SPDIF (RCA) port |
| **Audio Input** | Stereo balanced line level analog port * |
| **Video Output** | DisplayPort for monitoring or video-mapped fixtures |
| **HDMI Input** | Video input up to 1080p60 (with HDMI IN option) |

* Install-friendly 0.200" (5.08mm) plug in rising clamp connectors (included)

## Specifications

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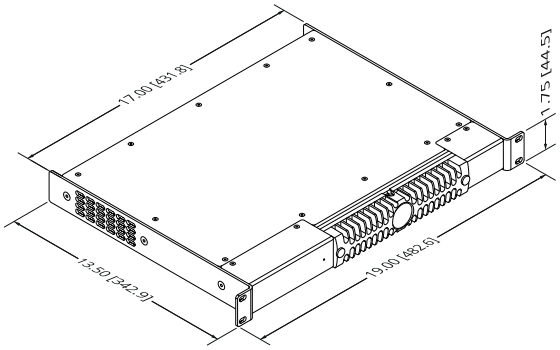
|---|---|
| **Power** | 100-240V AC, 50-60Hz, 0.4-0.2A, 40W typical (50W maximum), IEC connector with switch (power cable not supplied) |
| **Configuration** | Pharos Designer 2.11 or later |
| **Data Storage** | Internal 128GB SSD (supplied) |
| **Temperature** | 0°C to 50°C (32°F to 122°F) |
| **Humidity** | 10-90% relative, non-condensing |
| **Ingress** | IP20 |
| **Physical** | 19" rack unit, 1U, 13.5" deep<br>48.3 x 34.3 x 4.5 cm (19 x 13.5 x 1.8 in)<br>3.5 kg (7.7 lbs) |
| **Shipping** | 57 x 45 x 17 cm (22 x 18 x 7 in)<br>5.5 kg (12 lbs) |
| **Recovery** | Hardware watchdog and recessed reset button |




## Order Code & Variants

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|---|---|
| **LPC X S3 10** | Designer Lighting Playback Controller X S3 10 (5,120 channels eDMX) |
| **LPC X S3 20** | Designer Lighting Playback Controller X S3 20 (10,240 channels eDMX) |
| **LPC X S3 30** | Designer Lighting Playback Controller X S3 30 (15,360 channels eDMX) |
| **LPC X S3 40** | Designer Lighting Playback Controller X S3 40 (20,480 channels eDMX |
| **LPC X S3 50** | Designer Lighting Playback Controller X S3 50 (25,600 channels eDMX) |
| **LPC X S3 60** | Designer Lighting Playback Controller X S3 60 (30,720 channels eDMX) |
| **LPC X S3 70** | Designer Lighting Playback Controller X S3 70 (35,840 channels eDMX) |
| **LPC X S3 80** | Designer Lighting Playback Controller X S3 80 (40,960 channels eDMX) |
| **LPC X S3 90** | Designer Lighting Playback Controller X S3 90 (46,080 channels eDMX) |
| **LPC X S3 100** | Designer Lighting Playback Controller X S3 100 (51,200 channels eDMX) |

For HDMI IN option order codes, please refer to website or price list

## Warranty & Certifications

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|---|---|
| **Warranty** | 5 years |
| **Certifications** | CE compliant, UKCA compliant, ETL/cETL listed, may be used as part of a Title 24 compliant lighting control system. |

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