Lighting Playback Controller

The Pharos LPC (Lighting Playback Controller) is an award-winning, all-in-one control solution for themed entertainment and LED lighting installations. It features individually controllable and independently running timelines and scenes, letting you build dynamic, precise, fully customisable pre-programmed lighting effects with the freedom of real-time manual overrides and the versatility of powerful show control and integration features.

LPC FAMILY

LPC 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 and HTTP 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 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, compact unit designed for 24/7 operation and reliability.

Installer Friendly
Made for permanent installation, with installer-friendly connectors and easy DIN rail mounting.

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

DMX512	2 ports (max 512 channels each) USITT E1.11-2008
RDM	Via local ports or Art-Net, supports discovery and addressing via Designer 2 software
sACN	USITT 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
DALI	Via RIO D4. Interface limits apply. DALI ballasts do not count towards used channels.
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

Startup	Commences programmed playback automatically on receiving power
Contact Closures	Connect an external volt-free switch between input and ground (internal 2.2k pull-up to 5V)
Digital In	Connect an external voltage source between input and ground (24V maximum; internal 2MOhm pull-down to 0V); software configurable low/high threshold
Analog In	Connect an external voltage source between input and ground (24V maximum); software-configurable range
Outputs	Via RIO: isolated relay outputs (48V, 250mA)
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
Serial Data	RS232, RS485; configurable port; send/receive free syntax in ASCII, HEX or decimal
MIDI	MIDI Notes, SysEx or MIDI Time Code
Timecode	Via RIO A: Linear Timecode (SMPTE, Film, EBU, NTSC)
Audio Level	Via RIO A: stereo 30-band spectrum analysis
DMX	Trigger on changes within a range or entering a range
eDMX	sACN or Art-Net (option to pass-thru on local DMX output)
DALI	Via RIO D4: 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

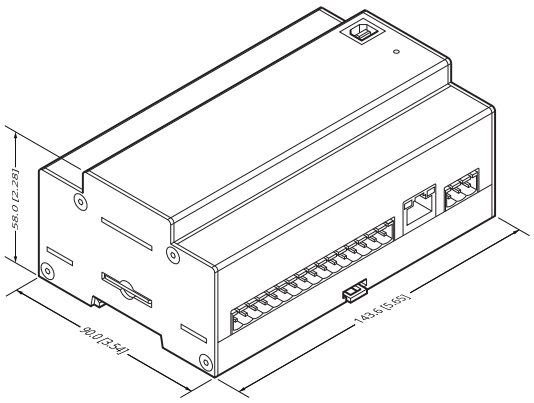
Interfaces

Ethernet	RJ45 socket for 10/100Base-TX Ethernet with Link/Data LEDs; Static IP or DHCP; Dual IP address for eDMX; Supports IEEE 802.1Q VLAN Tagging
DMX512	Two isolated DMX ports, RDM compatible *
Serial	RS232 / RS485 / DMX in *
Inputs	Eight inputs, individually selectable operating mode for contact closure, digital or analog input *
MIDI In & Out	MIDI via standard 5-pin DIN
USB-B socket	USB 1.1 for connection to PC

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

Specifications

Power	9-48V DC * or PoE (IEEE802.3af, Class 2), 4W typical
Configuration	Pharos Designer 2
Data Storage	Removable SD Card (supplied)
Temperature	0°C to 50°C (32°F to 122°F)
Humidity	10-50% relative, non-condensing
Ingress	IP40
Physical	8 unit wide DIN rail mounting enclosure (DIN43880 / EN60715 (35/7.5 rail)) 14.4 x 9 x 5.8 cm (5.7 x 3.5 x 2.3 in) 0.5 kg (1.1 lbs)
Shipping	20 x 15 x 12 cm (8 x 6 x 5 in) 0.8 kg (1.8 lbs)
Recovery	Hardware watchdog and recessed reset button



Order Code & Variants

LPC 1	Designer Lighting Playback Controller 1 (512 channels DMX/eDMX)
LPC 2	Designer Lighting Playback Controller 2 (1,024 channels DMX/eDMX)
LPC 4	Designer Lighting Playback Controller 4 (2,048 channels eDMX, 2 local DMX ports)

Warranty & Certifications

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

LPC24001