LPC

Lighting Playback Controller

Overview

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.

Features

Pharos Engine

The intelligent Pharos 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.

Pharos Mapping

Design the big picture; control every pixel. Create a map of your fixtures within the Designer software, then use Pharos 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.

Pharos Trigger

Timing is everything. Whatever the stimulus, Pharos Trigger can handle it. You can control your lighting with responsive, reactive programming. Pharos 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.

Scalable

The right fit for every installation. Multiple Pharos 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.

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.

Remote Management

The control you need in your browser - from anywhere. Pharos Controllers can be connected to Pharos Cloud, a secure remote management service from SixEye. 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 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.

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.

Pharos Designer

Programmed and configured using the free Pharos Designer software – available for Windows or Mac OS X – 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.

5 Year Warranty

Designed and manufactured in the UK, with quality and reliability our top priority.

Certifications

CE compliant, ETL/cETL listed, and California Title 20/24 compliant.

Specifications subject to change without notice (01-05-2021).

Supported Fixtures

LEDs	LEDs in any colour configuration (RGB, RGBW, 8-bit, 16-bit, tuneable white)
Automated	Moving heads, yokes or scanners
Generic	Downlights, spotlights, uplights, etc. via controllable dimmers, relays or ballasts
Fountain Jets	Fountain jets for fountain animation or other animatronics
Fixture Library	Pharos offers a cloud library with over 13,000 fixture profiles, for easy download of your luminaires

Output

DMX512	2 ports (max 512 channels each) USITT E1.11-2008
RDM	Supports discovery and addressing via Designer software
sACN	USITT E1.31 (with per fixture priority) standard
Art-Net	ArtNet, ArtNet II and ArtNet III (configurable broadcast override)
KiNET	KiNET V1 (DMX out) and V2 (Port out); PDS/Data Enabler discovery
Pathport	Pathway Connectivity protocol
DALI	Via RIO D (supplied separately)
Scalable	Synchronises with up to 40 Pharos Controllers over network
Simultaneous	Multiple protocols can be in operation simultaneously. Limited by patched channels, not universes used
EDN	Can natively integrate with and output DMX through the ports of the EDN (Ethernet Data Node, supplied separately)

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
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 Timecode
Timecode	Linear Timecode via RIO A (SMPTE, Film, EBU, NTSC)
Audio Level	Stereo 30-band spectrum analysis via RIO A
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	Trigger on any message, via RIO D
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
Scalable	Supports Pharos Remote Devices
IO Modules	Supports our extensive IO Module library for easy integration

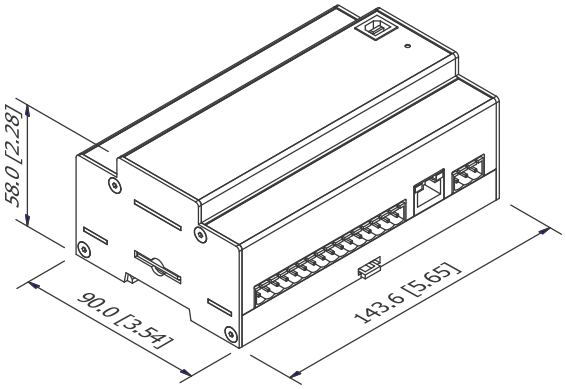
Interfaces

Ethernet	RJ45 socket for 10/100Base-TX Ethernet with Link/Data LEDs; Static IP or DHCP; Dual IP address for eDMX
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 5-pin DIN 41524 socket
USB-B socket	USB 1.1 for connection to PC

Specifications

Certifications	CE compliant, ETL/cETL listed
Power	9V to 48V DC * or PoE (IEEE802.3af, Class 2) 4W typical
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)) 0.5 kg (1.1 lbs)
Shipping	20 x 15 x 12 cm (8″ x 6″ x 5″) 0.8 kg (1.8 lbs)
Recovery	Hardware watchdog and recessed reset button
Warranty	5 years

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



Order Code & Variants

LPC 1	Lighting Playback Controller 1 (512 channels DMX/eDMX)
LPC 2	Lighting Playback Controller 2 (1,024 channels DMX/eDMX)
LPC 4	Lighting Playback Controller 4 (2,048 channels eDMX incl 1,024 ch DMX)

TPC

Touch Panel Controller

Overview

The Pharos TPC (Touch Panel Controller) is an elegant lighting controller with a customisable, 4.3″ capacitive touch screen, 512 channels of eDMX output and vast interfacing potential, all over a single Power-over-Ethernet (PoE) network connection. TPCs are available in a range of different coloured bezels and overlays.

Features

Touch Interface

Touch screen user interface is fully customisable using the free Pharos Designer software. Create multiple pages of controls including buttons, sliders, keypads and colour pickers, and configure their appearance and visual feedback. Make it eye-catching by importing your own graphics or picking from one of our attractive themes.

Pharos Engine

The intelligent Pharos 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.

Pharos Trigger

Timing is everything. Whatever the stimulus, Pharos Trigger can handle it. You can control your lighting with responsive, reactive programming. Pharos 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.

Pharos Mapping

Design the big picture; control every pixel. Create a 2D map of your fixtures within the Designer software, then use Pharos 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.

Scalable

The right fit for every installation. Multiple Pharos 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.

Remote Management

The control you need in your browser - from anywhere. Pharos Controllers can be connected to Pharos Cloud, a secure remote management service from SixEye. 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 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.

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.

Pharos Designer

Programmed and configured using the free Pharos Designer software – available for Windows or Mac OS X – 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.

EXT

DIN rail mounting companion product provides PoE power, DMX and DALI outputs, RS232 serial and 8 digital/analog inputs for triggering and integration.

5 Year Warranty

Designed and manufactured in the UK, with quality and reliability our top priority.

Certifications

CE compliant, ETL/cETL listed, and California Title 20/24 compliant.

Supported Fixtures

LEDs	LEDs in any colour configuration (RGB, RGBW, 8-bit, 16-bit, tuneable white)
Automated	Moving heads, yokes or scanners
Generic	Downlights, spotlights, uplights, etc. via controllable dimmers, relays or ballasts
Fountain Jets	Fountain jets for fountain animation or other animatronics
Fixture Library	Pharos offers a cloud library with over 13,000 fixture profiles, for easy download of your luminaires

Output

sACN	USITT E1.31 (with per fixture priority)
Art-Net	ArtNet, ArtNet II and ArtNet III (configurable broadcast override)
KiNET	KiNET V1 (DMX out) and V2 (Port out); PDS/Data Enabler discovery
Pathport	Pathway Connectivity protocol
DMX512	Via EXT or second port on LPC 1
RDM	Via EXT or EDN, supports discovery and addressing via Designer software
DALI	Via EXT or RIO D (supplied separately)
Scalable	Synchronises with up to 40 Pharos Controllers over network
Simultaneous	Multiple protocols can be in operation simultaneously. Limited by patched channels, not universes used
EDN	Can natively integrate with and output DMX through the ports of the EDN (Ethernet Data Node, supplied separately)

Triggering & Integration

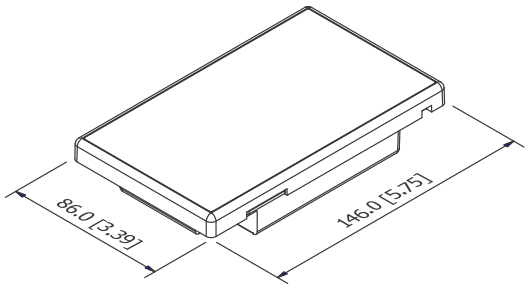
Startup	Commences playback automatically on receiving power
Touchscreen	Buttons, sliders, colour picker, etc
Clock	Battery-backed real-time clock for calendar and time-based triggers
Astronomical	Sunrise/Sunset/Twilight and Lunar phases
Temperature	Trigger on changes or entering a range
Ethernet	UDP, TCP, Multicast; send/receive any Ethernet message
eDMX	sACN or Art-Net
DALI	Trigger on any message, via EXT or RIO D
Serial Data	RS232 via EXT; RS232 or RS485 via RIO; send/receive free syntax in ASCII, HEX or decimal
MIDI	MIDI Notes, SysEx or Timecode
Timecode	Linear Timecode via RIO A (SMPTE, Film, EBU, NTSC)
Audio Level	Stereo 30-band spectrum analysis via RIO A
Inputs	Contact closure, active low, active high or 0-24V analog level via EXT or RIOs
Outputs	Isolated relay outputs (48V 250mA) via RIOs
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
Scalable	Supports Pharos Remote Devices
IO Modules	Supports our extensive IO Module library for easy integration

Interfaces

Ethernet	RJ45 socket for 10/100Base-TX Ethernet with Link/Data LEDs; Static IP or DHCP; Dual IP address for eDMX
Touchscreen	4.3” capacitive touch; 480×272 24bpp; 340 cd/m2; magnetic overlay
IR Sensor	Learning IR sensor for remote control
Temperature	Built-in ambient temperature sensor

Specifications

Certifications	CE compliant, ETL/cETL listed
Power	PoE (IEEE802.3af, Class 2) 4W typical
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	Wall mounted, partly recessed in UK 2-gang 35mm or custom US 2.5” backbox (supplied separately) 0.25 kg (0.55 lbs)
Shipping	20 x 15 x 12 cm (8″ x 6″ x 5″) 0.6 kg (1.3 lbs)
Recovery	Hardware watchdog and recessed reset button
Warranty	5 years



Order Code & Variants

TPC BB	Touch Panel Controller Black-on-Black (512 channels eDMX)*
TPC CC	Touch Panel Controller Cream-on-Cream (512 channels eDMX)
TPC WW	Touch Panel Controller White-on-White (512 channels eDMX)
TPC FBB	Flush back box
TPC SBB	Surface back box
EXT	Extension for TPC connectivity (DMX, DALI, IO, serial, mains-powered)

* TPC BB is default colour and shipped as standard

Colour Information	
Cream	Bayblend T45 (UL94 HB) RAL 9001 cream
Signal White	Bayblend T45 (UL94 HB) RAL 9003 signal white
Jet Black	Bayblend T45 (UL94 HB) RAL 9005 jet black

TPS

Touch Panel Station

Overview

The Pharos TPS (Touch Panel Station) is an elegant interface with a customisable, 4.3” capacitive touch screen, that works with any Pharos Controller.

Features

Touch Interface

A 4.3″ vivid colour capacitive touchscreen makes navigating your project’s controls appealing and intuitive. It’s quick and easy to activate presets, manual overrides, or even use a custom colour picker to personalise your lighting. The TPS puts control of your Pharos system at your fingertips.

Customisable

Create your fully customisable user interface using the free Pharos Designer software. Create multiple pages of controls including buttons, sliders, keypads and colour pickers, and configure their appearance and visual feedback. Make it eye-catching by importing your own graphics or picking from one of our attractive themes.

Pharos Trigger

Timing is everything. Whatever the stimulus, Pharos Trigger can handle it. You can control your lighting with responsive, reactive programming. Pharos 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 interface. Whether you want to show a few simple buttons, or use custom branded graphics, the touch panel supports it all. It is also capable of supporting any font, including those with extended character sets; e.g. Chinese, Korean, Japanese.

Learning IR

The TPS may be taught to recognise up to 16 different IR codes from a standard infra-red remote control. When one of these keys on the remote control is pressed, the TPS will treat that as a press on its own screen.

Scalable

Multiple Touch Devices can be combined with one or more Pharos controllers on the same network to build the ideal system for your installation, with a maximum of 40 Controllers and Touch Devices in total. Each Touch Device is easily programmed using our Designer software.

Network

Works with any Pharos Controller, and links to it using standard protocols over an Ethernet network.

Pharos Designer

Programmed and configured using the free Pharos Designer software – available for Windows or Mac OS X – with upload over Ethernet.

PoE Powered

As a Power-over-Ethernet (PoE) device, the TPS can be placed at any remote location and only needs a single Cat5 cable that provides both power and data.

5 Year Warranty

Designed and manufactured in the UK, with quality and reliability our top priority.

Certifications

CE compliant, ETL/cETL listed, and California Title 20/24 compliant.

Capabilities

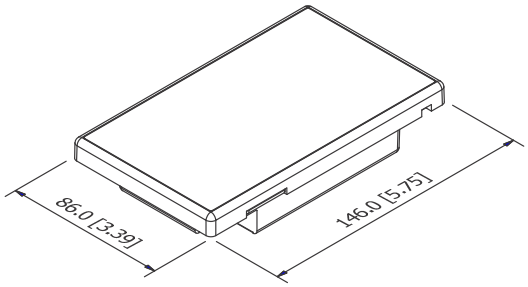
Orientation	Portrait or landscape
Layouts	Free editable layouts
Pages	Any number of pages
Navigation	Convenient and custom navigation via configurable navigation bars
Fonts	Custom font support, including fonts with extended character sets e.g. Chinese, Korean, Japanese
Themes	Wide selection of themes available to download, or create your own with Designer's theme editor
Controls	A wide array of customisable buttons, sliders, colour pickers, labels, keypads and clocks
Flexible integration	Fully integrated with Pharos Trigger, so button states, graphics, and captions can change according to any number of preset triggers
Infra-red	Learning IR allows any standard remote control to be used to activate button presses/state changes
Secure access	Keypad for PIN-code entry; multiple user levels
Commissioning	Commissioned with Pharos Designer

Interfaces

Ethernet	RJ45 socket for 10/100Base-TX Ethernet with Link/Data LEDs; Static IP or DHCP
Touchscreen	4.3" capacitive touch; 480×272 24bpp; 340 cd/m2; magnetic overlay
IR Sensor	Learning IR sensor for remote control
Temperature	Built-in ambient temperature sensor

Specifications

Certifications	CE compliant, ETL/cETL listed
Power Required	PoE (IEEE802.3af, Class 2) 4W typical Any Pharos Controller
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	Wall mounted, partly recessed in UK 2-gang 35mm or custom US 2.5" backbox (supplied separately) 0.25 kg (0.55 lbs)
Shipping	20 x 15 x 12 cm (8" x 6" x 5") 0.6 kg (1.3 lbs)
Recovery	Hardware watchdog and recessed reset button
Warranty	5 years



Order Code & Variants

TPS BB	Touch Panel Station Black-on-Black (Touch Device)*
TPS CC	Touch Panel Station Cream-on- Cream (Touch Device)
TPS WW	Touch Panel Station White-on-White (Touch Device)
TPS FBB	Flush back box
TPS SBB	Surface back box

* TPS BB is default colour and shipped as standard

Colour Information

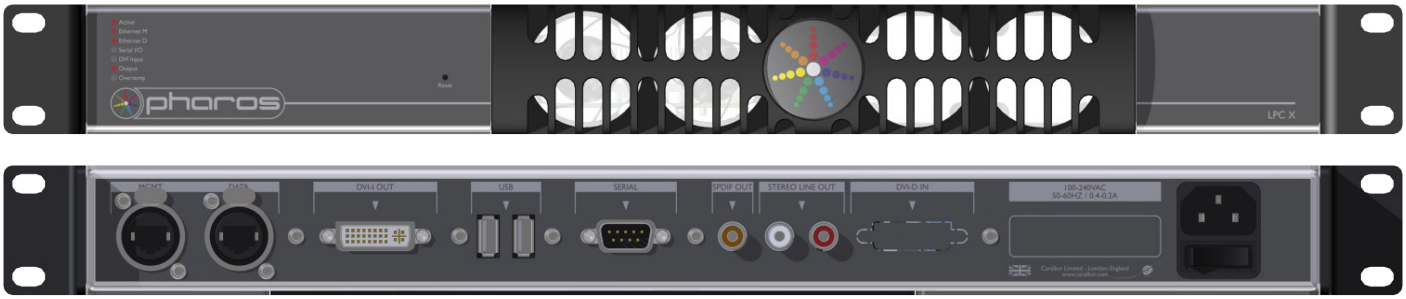
Cream	Bayblend T45 (UL94 HB) RAL 9001 cream
Signal White	Bayblend T45 (UL94 HB) RAL 9003 signal white
Jet Black	Bayblend T45 (UL94 HB) RAL 9005 jet black

Pharos Controller required

LPC X

Lighting Playback Controller X

Overview



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 products and offers an optional real-time video input.

Features

Pharos Engine

The intelligent Pharos 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.

Pharos Mapping

Design the big picture; control every pixel. Create a map of your fixtures within the Designer software, then use Pharos 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.

Pharos Trigger

Timing is everything. Whatever the stimulus, Pharos Trigger can handle it. You can control your lighting with responsive, reactive programming. Pharos 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.

Scalable

The right fit for every installation. Multiple Pharos 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.

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.

Remote Management

The control you need in your browser - from anywhere. Pharos Controllers can be connected to Pharos Cloud, a secure remote management service from SixEye. 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 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.

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.

Pharos Designer

Programmed and configured using the free Pharos Designer software – available for Windows or Mac OS X – 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.

Video Input

Optional DVI-D input for mapping live video, supporting up to 1080p60 with configurable scaling and X/Y pixel offset.

5 Year Warranty

Designed and manufactured in the UK, with quality and reliability our top priority.

Certifications

CE compliant, ETL/cETL listed, and California Title 20/24 compliant.

Supported Fixtures

LEDs	LEDs in any colour configuration (RGB, RGBW, 8-bit, 16-bit, tuneable white)
Automated	Moving heads, yokes or scanners
Generic	Downlights, spotlights, uplights, etc. via controllable dimmers, relays or ballasts
Fountain Jets	Fountain jets for fountain animation or other animatronics
Fixture Library	Pharos offers a cloud library with over 13,000 fixture profiles, for easy download of your luminaires

Output

sACN	USITT E1.31 (with per fixture priority)
Art-Net	ArtNet, ArtNet II and ArtNet III (configurable broadcast override)
KiNET	KiNET V1 (DMX out) and V2 (Port out); PDS/Data Enabler discovery
Pathport	Pathway Connectivity protocol
DVI-I	DVI-I output for video-mapped fixtures
DMX512	Via the EDN or any other eDMX node
DALI	Via RIO D (supplied separately)
Scalable	Synchronises with up to 40 Pharos Controllers over network
Simultaneous	Multiple protocols can be in operation simultaneously. Limited by patched channels, not universes used
EDN	Can natively integrate with and output DMX through the ports of the EDN (Ethernet Data Node, supplied separately)
Audio Out	Audio Output with two audio layers; a background layer for ongoing audio, and an alert layer for high-priority overriding

Triggering & Integration

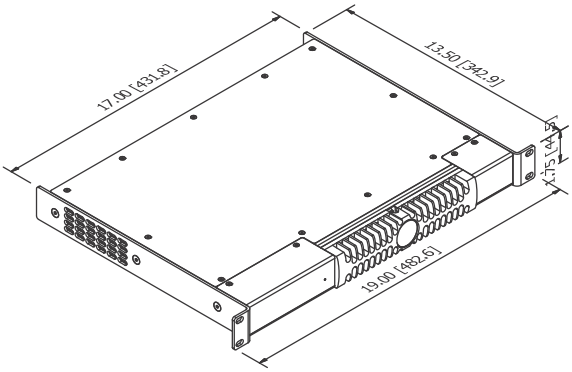
Startup	Commences programmed playback automatically on receiving power
Clock	Battery-backed real-time clock for calendar and time-based triggers
Astronomical	Sunrise/Sunset/Twilight and Lunar phases
Ethernet	UDP, TCP, Multicast; send/receive any Ethernet message
RS232 Serial	Configurable port; send/receive free syntax in ASCII, HEX or decimal
eDMX	sACN or Art-Net
Inputs	Contact closure, active low, active high or 0-24V analog level via RIOs
Outputs	Isolated relay outputs (48V 250mA) via RIOs
MIDI	MIDI Notes, SysEx or Timecode via RIO A
Timecode	Linear Timecode via RIO A (SMPTE, Film, EBU, NTSC)
Audio Level	Stereo 30-band spectrum analysis via RIO A
RS485 Serial	Via RIO; configurable port; send/receive free syntax in ASCII, HEX or decimal
DALI	Trigger on any message, via RIO D
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
Scalable	Supports Pharos Remote Devices
IO Modules	Supports our extensive IO Module library for easy integration

Interfaces

Ethernet	Neutrik etherCon (RJ45 compatible) for 10/100/1000Base-TX Ethernet with Link/Data LEDs; Static IP or DHCP
eDMX	Dedicated Ethernet port for eDMX; Neutrik etherCon (RJ45 compatible) for 10/100/1000Base-TX Ethernet with Link/Data LEDs; Static IP or DHCP
DVI-I Output	DVI-I output for monitoring or video mapped fixtures
Serial	RS232 via DB9 connector
USB	Two USB 2.0 Type A ports (for future development)
Audio Outputs	Stereo analog & digital audio ports
DVI-D Input	Video input up to 1080p60 (with DVI-D IN option)

Specifications

Certifications	CE compliant, ETL/cETL listed
Power	100-240VAC / 50-60HZ / 0.25-0.1A 25W typical (30W maximum) IEC connector with switch * * Power cable not supplied
Data Storage	Internal 16GB SSD (supplied)
Configuration	Pharos Designer 2.2 or later
Temperature	0°C to 50°C (32°F to 122°F)
Humidity	10-50% relative, non-condensing
Ingress	IP40
Physical	19″ rack unit, 1U, 13.5″ deep 3.1 kg (6.8 lbs)
Shipping	57 x 45 x 18 cm (22″ x 18″ x 7″) 5.0 kg (11 lbs)
Recovery	Hardware watchdog and recessed reset button
Warranty	5 years



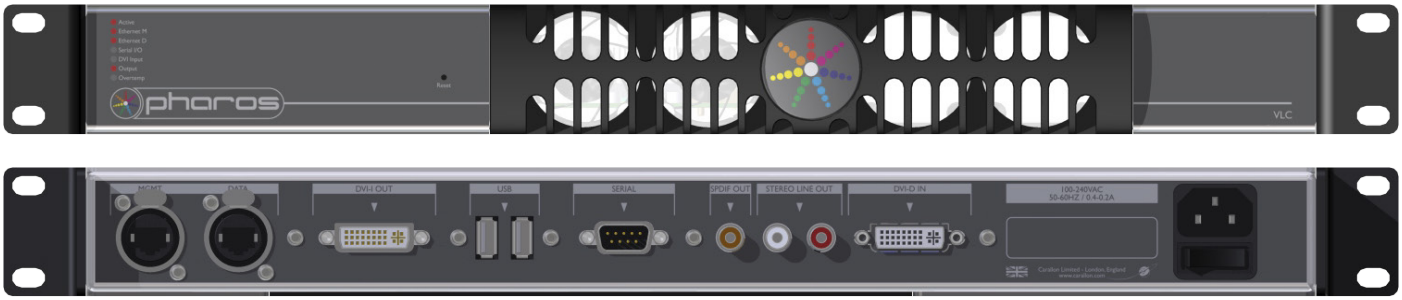
Order Code & Variants

LPC 10	Lighting Playback Controller 10 (5,120 channels eDMX/DVI)
LPC 20	Lighting Playback Controller 20 (10,240 channels eDMX/DVI)
LPC 30	Lighting Playback Controller 30 (15,360 channels eDMX/DVI)
LPC 40	Lighting Playback Controller 40 (20,480 channels eDMX/DVI)
LPC 50	Lighting Playback Controller 50 (25,600 channels eDMX/DVI)
LPC 60	Lighting Playback Controller 60 (30,720 channels eDMX/DVI)
LPC 70	Lighting Playback Controller 70 (35,840 channels eDMX/DVI)
LPC 80	Lighting Playback Controller 80 (40,960 channels eDMX/DVI)
LPC 90	Lighting Playback Controller 90 (46,080 channels eDMX/DVI)
LPC 100	Lighting Playback Controller 100 (51,200 channels eDMX/DVI)
DVI-D IN	DVI-D Input upgrade (HD capture card)

VLC

Video Lighting Controller

Overview



The Pharos VLC (Video Lighting Controller) is an extremely capable but cost effective solution for large LED pixel arrays such as building façades, bridges, and presentation walls. It makes it simple to play video content across your array, either from locally stored HD media files or a DVI-D video input. It also offers a range of creative generative effects, the versatility of powerful show control, and integration features.

Features

Render Engine

Make your light fixtures a canvas onto which you can paint with creative effects or video playback. The powerful Designer 2 software allows you to build your fixture layout fast with pixel-precise adjustment. Then use individually controllable and independently running timelines to build dynamic, striking, pre-programmed lighting displays across your canvas.

Pharos Trigger

Timing is everything. Whatever the stimulus, Pharos Trigger can handle it. You can control your lighting with responsive, reactive programming. Pharos 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.

High Capacity

Big just got a whole lot easier. The VLC can output all commonly used eDMX protocols (sACN, Art-Net, KiNET, EDN 20) over Gigabit Ethernet and there are no restrictions on using these protocols simultaneously. There are six VLC variants with pricing based on channel capacity, ranging from 25,600 channels up to a massive 768,000 channels.

Scalable

The right fit for every installation. Multiple Pharos 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.

High Definition

Live video can be captured on the DVI-D input at resolutions up to 1080p60. Internal video playback at up to 1080p30 supports all major formats such as H.264/MPEG-4 AVC, MJPEG and QuickTime. The built-in 128GB SSD provides plenty of capacity for media storage.

Remote Management

The control you need in your browser - from anywhere. Pharos Controllers can be connected to Pharos Cloud, a secure remote management service from SixEye. 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 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.

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.

Pharos Designer

Programmed and configured using the free Pharos Designer software – available for Windows or Mac OS X – 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.

5 Year Warranty

Designed and manufactured in the UK, with quality and reliability our top priority.

Certifications

CE compliant, ETL/cETL listed, and California Title 20/24 compliant.

Specifications subject to change without notice (01-05-2021).

Supported Fixtures

LEDs	LEDs in any colour configuration (RGB, RGBW, 8-bit, 16-bit, tuneable white)
Fixture Library	Pharos offers a cloud library with over 13,000 fixture profiles, for easy download of your luminaires

Output

sACN	USITT E1.31 (with per fixture priority)
Art-Net	ArtNet, ArtNet II and ArtNet III (configurable broadcast override)
KiNET	KiNET V1 (DMX out) and V2 (Port out); PDS/Data Enabler discovery
Pathport	Pathway Connectivity protocol
DMX512	Via the EDN or any other eDMX node
Scalable	Synchronises with up to 40 Pharos Controllers over network
Simultaneous	Multiple protocols can be in operation simultaneously. Limited by patched channels, not universes used
EDN	Can natively integrate with and output DMX through the ports of the EDN (Ethernet Data Node, supplied separately)
Audio Out	Audio Output with two audio layers; a background layer for ongoing audio, and an alert layer for high-priority overriding

Triggering & Integration

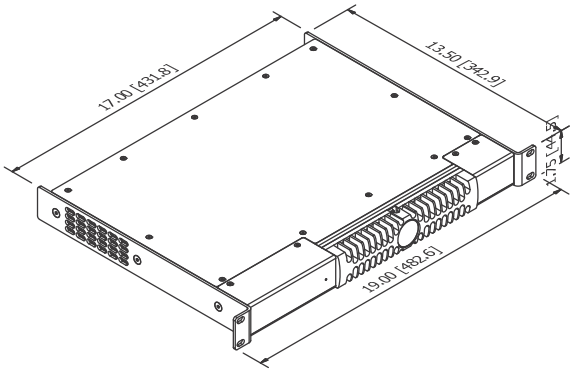
Startup	Commences playback automatically on receiving power
Clock	Battery-backed real-time clock for calendar and time-based triggers
Astronomical	Sunrise/Sunset/Twilight and Lunar phases
Ethernet	UDP, TCP, Multicast; send/receive any Ethernet message
Serial Data	RS232; configurable port; send/receive free syntax in ASCII, HEX or decimal
eDMX	sACN or Art-Net
Inputs	Contact closure, active low, active high or 0-24V analog level via RIOs
Outputs	Isolated relay outputs (48V 250mA) via RIOs
MIDI	MIDI Notes, SysEx or Timecode via RIO A
Timecode	Linear Timecode via RIO A (SMPTE, Film, EBU, NTSC)
Audio Level	Stereo 30-band spectrum analysis via RIO A
RS485	RS485 Serial via RIO; configurable port; send/receive free syntax in ASCII, HEX or decimal
DALI	Trigger on any message, via RIO D
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
Scalable	Supports Pharos Remote Devices
IO Modules	Supports our extensive IO Module library for easy integration

Interfaces

Ethernet	Neutrik etherCon (RJ45 compatible) for 10/100/1000Base-TX Ethernet; Static IP or DHCP
eDMX	Dedicated Ethernet port for eDMX; Neutrik etherCon (RJ45 compatible) for 10/100/1000Base-TX Ethernet; Static IP or DHCP
DVI-D Input	Video input to capture resolutions up to 1080p60
DVI-I Output	DVI-I output (for future development)
Serial	RS232 via DB9 connector
USB	Two USB 2.0 Type A ports (for future development)
Audio Outputs	Stereo analog & digital audio ports

Specifications

Certifications	CE compliant, ETL/cETL listed
Power	100-240VAC / 50-60HZ / 0.25-0.1A 25W typical (30W maximum) IEC connector with switch * * Power cable not supplied
Data Storage	Internal 128GB SSD (supplied)
Configuration	Pharos Designer 2.2 or later
Temperature	0°C to 50°C (32°F to 122°F)
Humidity	10-50% relative, non-condensing
Ingress	IP40
Physical	19″ rack unit, 1U, 13.5″ deep 3.1 kg (6.8 lbs)
Shipping	57 x 45 x 18 cm (22″ x 18″ x 7″) 5.0 kg (11 lbs)
Recovery	Hardware watchdog and recessed reset button
Warranty	5 years



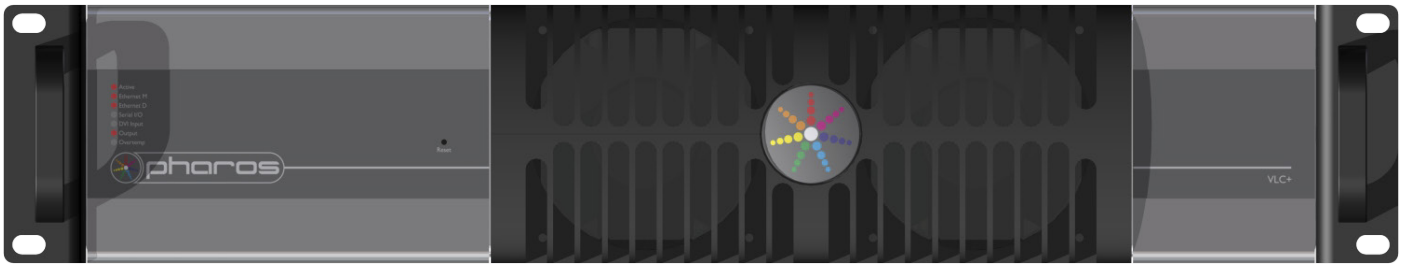
Order Code & Variants

VLC 50	Video Lighting Controller 50 (25,600 channels eDMX)
VLC 100	Video Lighting Controller 100 (51,200 channels eDMX)
VLC 250	Video Lighting Controller 250 (128,000 channels eDMX)
VLC 500	Video Lighting Controller 500 (256,000 channels eDMX)
VLC 1000	Video Lighting Controller 1000 (512,000 channels eDMX)
VLC 1500	Video Lighting Controller 1500 (768,000 channels eDMX)

VLC+

Video Lighting Controller Plus

Overview



The Pharos VLC+ (Video Lighting Controller Plus) is designed to control the world's largest lighting façade projects. It renders multiple layers of effects and video from internal storage or live input and features processing, including rotation and masking. Up to 3,000 universes of eDMX and DVI-D can be output from a single unit with integrated show control.

Features

High Capacity

Big just got a whole lot easier. The VLC+ can output all commonly used eDMX protocols over Gigabit Ethernet as well as providing its full canvas over DVI-D, and there are no restrictions on using these protocols simultaneously. The VLC+ renders effects and video from internal storage or live input onto a canvas up to 16,000 pixels wide or high, and can output up to 3,000 universes of eDMX from a single unit. This can integrate well with the EDN20, which allows 20 universes of eDMX per node.

Render Engine

Make your light fixtures a canvas onto which you can paint with a compositions of creative effects and full HD video playback, including dynamic rotation, translation and masking. The Designer software allows you to build your fixture layout fast with pixel-precise adjustment. Then use individually controllable and independently running timelines to build dynamic, striking, pre-programmed lighting displays across your canvas.

Pharos Trigger

Timing is everything. Whatever the stimulus, Pharos Trigger can handle it. You can control your lighting with responsive, reactive programming. Pharos 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.

High Definition

Live video can be captured on the DVI-D input at resolutions up to 1080p60. Dual 1080p30 internal playback means two full HD streams can be played, and cross-faded seamlessly into two further streams. In total, up to eight players are available, subject to performance limitations. Support for all major formats such as H.264/MPEG-4 AVC, MJPEG and QuickTime with the built-in 512GB SSD provides plenty of capacity for media storage.

Scalable

The right fit for every installation. Multiple Pharos 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.

Remote Management

The control you need in your browser - from anywhere. Pharos Controllers can be connected to Pharos Cloud, a secure remote management service from SixEye. 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 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.

Ease of Use

Easily build huge lighting projects with powerful Pharos Designer features such as fixture template – a tool that enables you to create a composite fixture that is an arrangement of any single-element library fixture, allowing strings and tiles to be built up from individual nodes into reusable templates to speed up commissioning.

Pharos Designer

Programmed and configured using the free Pharos Designer software – available for Windows or Mac OS X – 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.

5 Year Warranty

Designed and manufactured in the UK, with quality and reliability our top priority.

Certifications

CE compliant, ETL/cETL listed, and California Title 20/24 compliant.

Supported Fixtures

LEDs	LEDs in any colour configuration (RGB, RGBW, 8-bit, 16-bit, tuneable white)
Fixture Library	Pharos offers a cloud library with over 13,000 fixture profiles, for easy download of your luminaires

Output

sACN	USITT E1.31 (with per fixture priority)
Art-Net	ArtNet, ArtNet II and ArtNet III (configurable broadcast override)
KiNET	KiNET V1 (DMX out) and V2 (Port out); PDS/Data Enabler discovery
Pathport	Pathway Connectivity protocol
DMX512	Via EDN or any other eDMX node
Scalable	Synchronises with up to 40 Pharos Controllers over network
Simultaneous	Multiple protocols can be in operation simultaneously. Limited by patched channels, not universes used
EDN	Can natively integrate with and output DMX through the ports of the EDN (supplied separately)
Audio Out	Audio Output with two audio layers; a background layer for ongoing audio, and an alert layer for high-priority overriding

Triggering & Integration

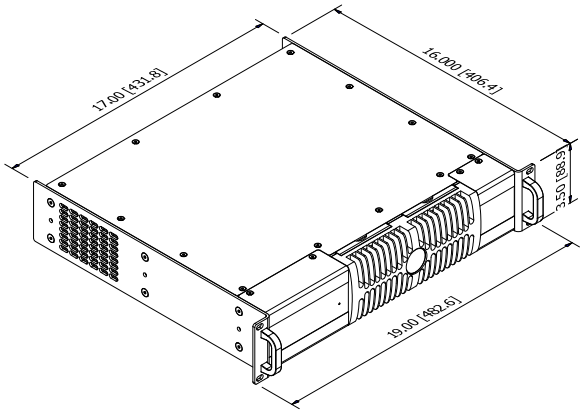
Startup	Commences playback automatically on receiving power
Clock	Battery-backed real-time clock for calendar and time-based triggers
Astronomical	Sunrise/Sunset/Twilight and Lunar phases
Ethernet	UDP, TCP, Multicast; send/receive any Ethernet message
Serial Data	RS232; configurable port; send/receive free syntax in ASCII, HEX or decimal
eDMX	sACN or Art-Net
Inputs	Contact closure, active low, active high or 0-24V analog level via RIOs
Outputs	Isolated relay outputs (48V 250mA) via RIOs
MIDI	MIDI Notes, SysEx or Timecode via RIO A
Timecode	Linear Timecode via RIO A (SMPTE, Film, EBU, NTSC)
Audio Level	Stereo 30-band spectrum analysis via RIO A
RS485	RS485 Serial via RIO; configurable port; send/receive free syntax in ASCII, HEX or decimal
DALI	Trigger on any message, via RIO D
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
Scalable	Supports Pharos Remote Devices
IO Modules	Supports our extensive IO Module library for easy integration

Interfaces

Ethernet	Neutrik etherCon (RJ45 compatible) for 10/100/1000Base-TX Ethernet; Static IP or DHCP
eDMX	Two internally-switched dedicated Ethernet ports for eDMX; Neutrik etherCon (RJ45 compatible) for 10/100/1000Base-TX Ethernet; Static IP or DHCP
DVI-D Input	Live video input up to 1080p60
DVI-I Output	DVI-I output for monitoring patched pixels and DVI fixtures
Serial	RS232 via DB9 connector
USB	Two USB 2.0 Type A ports (for future development)
Audio Outputs	Stereo analog & digital audio ports

Specifications

Certifications	CE compliant, ETL/cETL listed
Power	100-240VAC / 50-60HZ / 0.25-0.1A 25W typical (30W maximum) IEC connector with switch * * Power cable not supplied
Data Storage	Internal 512GB SSD (supplied)
Configuration	Pharos Designer 2.5 or later
Temperature	0°C to 50°C (32°F to 122°F)
Humidity	10-50% relative, non-condensing
Ingress	IP40
Physical	19″ rack unit, 2U, 16″ deep 3.1 kg (6.8 lbs)
Shipping	57 x 45 x 18 cm (22″ x 18″ x 7″) 5.0 kg (11 lbs)
Recovery	Hardware watchdog and recessed reset button
Warranty	5 years



Order Code & Variants

VLC+ 50	Video Lighting Controller Plus 50 (25,600 channels eDMX)
VLC+ 100	Video Lighting Controller Plus 100 (51,200 channels eDMX)
VLC+ 250	Video Lighting Controller Plus 250 (128,000 channels eDMX)
VLC+ 500	Video Lighting Controller Plus 500 (256,000 channels eDMX)
VLC+ 1000	Video Lighting Controller Plus 1000 (512,000 channels eDMX)
VLC+ 1500	Video Lighting Controller Plus 1500 (768,000 channels eDMX)
VLC+ 3000	Video Lighting Controller Plus 3000 (1,536,000 channels eDMX)

EDN

Ethernet Data Node

Overview

The Pharos EDN (Ethernet Data Node) is a convenient and scalable solution, providing cost-effective Ethernet-distributed DMX ports for large control projects. The EDN is an easily configurable networking node that is specifically designed to add physical DMX ports to Pharos Controllers and integrates natively with the full Pharos range.

Extremely compact, it packs up to 20 DMX512 output ports into a 1U 19" form factor. For higher port count installations, nodes can be daisy-chained to provide as many physical DMX ports as you need.

EDNs are discoverable through Pharos Designer software and associated to a Controller to be seamlessly configured as part of your patch. Ports can be flexibly assigned to any controller in your project providing an elegant data distribution solution over an Ethernet network with minimal setup required.

Features

Isolation

The EDN offers up to 20 DMX512 output ports to control your fixtures. Each port is independently galvanically isolated up to 2kV, ensuring the control circuitry and each port of the EDN is protected against a multitude of electrical line faults, including earth potential rise and ground loops.

Protection

The EDN is equipped with "self-healing" DMX ports, giving your equipment added protection from incorrect setup and energy surges, such as short circuits, power induction and AC power faults. Should an energy surge occur, it will be contained by the EDN, preventing it from flowing into other components; once the external fault is cleared, the ports "self-heal", restoring DMX output automatically.

Integration

Built from the ground up on Pharos technology, the EDN natively interfaces with the rest of the Pharos product range including Pharos Designer software. Connecting it to your Designer lighting project is as simple as ensuring the EDN is on the same network as the Controllers. From there, Designer will detect it, giving you full control of your Ethernet network lighting solution with minimal effort.

Scalable

Up to 200 EDN units and other Remote Devices can be combined with one or more Pharos Controllers on the same network to build the ideal system for your installation. Each Remote Device is easily addressed using a convenient thumb wheel. Whether one Controller or many, it's all easily programmed using the Designer software.

RDM Capable (From Designer v2.8)

Supports the Remote Device Management protocol (ANSI E1.20), allowing fixtures connected to any of the DMX512 outputs to communicate back to their respectively assigned Controllers over an Ethernet network.

Network

Works with any Controller in the Pharos range over an Ethernet network. A second network port is provided for daisy-chaining EDNs together. Our recommended limit of 8 daisy-chained EDNs is to ensure high performance; if that number is exceeded, some latency could become apparent.

SDI

Accessory for the EDN supporting serial data protocol outputs for controlling products such as addressable LED tape.

Installer Friendly

Made for permanent installation, with installer-friendly connectors and easy 19" rack mounting.

Reliable

Solid-state design for 24/7 operation and reliability.

5 Year Warranty

Designed in the UK, with quality and reliability our top priority.

Certifications

CE compliant, ETL/cETL compliant, and California Title 20/24 compliant.

Interfaces

Ethernet	Two Neutrik etherCon (RJ45 compatible) for 100*/1000Base-TX Ethernet with Link/Data LEDs; Static IP or DHCP * From Designer v2.8. Note: LPC 1/2/4 & TPCs only support 10/100Base-TX
DMX	Ten (EDN 10) / Twenty (EDN 20) DMX512 ports (USITT E1.11-2008), RDM Compatible** ** Install-friendly 0.200″ (5.08mm) plug in rising clamp connectors (included)

Protocols

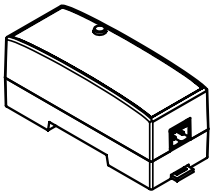
DMX	DMX512 (512 channels each) in DMX mode
RDM	Supports discovery and addressing via Designer Software.
UltraDMX	MY94441 supported natively
SPI	In SDI mode, supports serial data via the Pharos SDI

One output protocol per EDN

Accessories

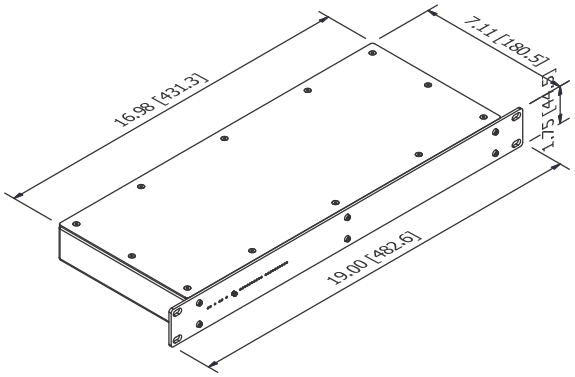
The SDI is an accessory to the EDN. This enables any controller in the Pharos Designer range to output via the EDN + SDI a variety of serial protocols for controlling products such as addressable LED tape.

Both synchronous (SPI) and asynchronous serial lighting data are supported and these protocols allow for 1536 channels per port with supported cable lengths between the EDN and SDI of up to 200m for asynchronous data and 40m for synchronous data.



Specifications

Certifications	CE compliant, ETL/cETL compliant, and California Title 20/24 compliant.
Power	100-240VAC / 50-60HZ / 0.25-0.1A 25W typical (30W maximum) IEC connector with switch * * Power cable not supplied
Required Configuration	Any Pharos Controller Pharos Designer 2.7 or later (EDN 20) Pharos Designer 2.8 or later (EDN 10)
Addressing	By rotary selector switch
Temperature	0°C to 50°C (32°F to 122°F)
Humidity	10-50% relative, non-condensing
Ingress Protection	IP40 Self-healing ports can withstand continuous AC voltage up to 300V or peak impulse voltage up to 650V with duration less than 10ms.
Isolation	Ports independently galvanically isolated up to 2kV
Physical	19″ rack unit, 1U, 7.2″ deep 1.6 kg (3.5 lbs)
Shipping	57 x 30 x 18 cm (22″ x 12″ x 7″) 3.2 kg (7 lbs)
Recovery	Hardware watchdog and recessed reset button
Warranty	5 years



Order Code & Variants

EDN 10	Ethernet Data Node 10 (1+1 Ethernet, 10 DMX/RDM)
EDN 20	Ethernet Data Node 20 (1+1 Ethernet, 20 DMX/RDM)

Pharos Controller required

SDI

Serial Data Interface for EDN

Overview

The Pharos SDI (Serial Data Interface) is an accessory to the Pharos EDN (Ethernet Data Node) providing a powerful solution for converting DMX data to a variety of serial protocols for controlling products such as addressable LED tape. The SDI supports both synchronous (SPI) and asynchronous serial lighting data and allows patching up to 3 universes (1536 channels) per unit.

The SDI features fully isolated data inputs and a DC input range of 5-28V giving the flexibility to use the same power supply as the fixtures. Synchronous data transmission is usually restricted to very short cable lengths, but, with the Pharos EDN + SDI combination outputting synchronous data, you can conveniently locate your SDIs up to 40 metres from the EDN, with asynchronous data transmission reaching up to 200m.

Compatible with all Pharos Designer controllers, and suitable for any size of project, nevertheless we anticipate SDI will be particularly appealing with VLC family controllers, which are often used for very high capacity installations, flexibly mapping live video and video playback to lighting fixtures such as LED tape. The Pharos VLC with Pharos EDN + SDI combination will provide a one-stop single manufacturer supplied solution for the control hardware, all the way to the fixture.

Features

Protocols

The SDI will integrate with the EDN remote device to control SPI enabled fixtures and a variety of other protocols commonly used in addressable LED tape, as well as other products using direct connection to LED driver ICs (Integrated circuits) The SDI supports many synchronous and asynchronous protocols, all from the same hardware, configured directly from the Pharos Designer Software (one protocol per EDN). Our intention is to support the most commonly used protocols. Contact Sales if you have a significant project requiring a driver not listed. Supported SPIs include WS2812 and APA102. For a full and up-to-date list of protocols visit the SDI page on our website.

Isolation

The incoming RS485 data signal is fully isolated and does not need a ground reference.

Topology

In Asynchronous mode (data signal only), each SDI device can be connected via a twisted pair cable up to 200m away from the EDN. In Synchronous mode (data and clock signal), this range is 40m. As the RS485 connection from the EDN does not require grounding, a single cat5e cable could be used to distribute data for up to 4 SDIs. SDIs should ideally be located within 1m of their fixtures and, with a 5-28V DC input range, the SDI can be fed by the same power supply as the LED drivers.

Refresh Rate

As well as standard DMX refresh rates, the SDI will support up to 60Hz refresh when controlled by Pharos VLCs.

Unobtrusive

The SDI is designed to be compact, with a variety of mounting options. Status indicators for power and data are off by default so the unit remains dark in case it is in view next to the fixtures. Pressing the push button will display the current status.

Scalable

Each EDN 20 can control 20 separate SDI devices (10 for EDN 10), with each SDI device able to control up to 1536 channels, or 512 RGB fixtures, allowing a greatly increased capacity for fixture control per port.

Installer Friendly

Made for permanent installation, with installer-friendly 0.200” (5.08mm) plug-in rising clamp terminals, a compact enclosure and easy DIN rail or wall mounting.

Reliable

Solid-state design for 24/7 operation and reliability

5 Year Warranty

Designed in the UK, with quality and reliability our top priority.

Certifications

CE compliant; ETL/cETL pending

Interfaces

Serial In	RS485 connector to EDN
Power	5-28V DC Power connector
Serial Out	3-pin AD and SC/SD connectors *(Asynchronous Data, Synchronous Clock, Synchronous Data)*

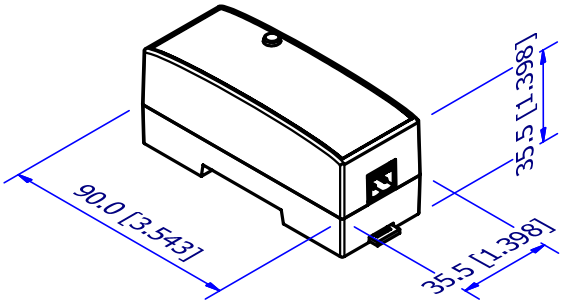
Protocols

SDI Protocols	APA102	UCS1903
	APA104	WS2801
	LPD6803	WS2811
	SK6812	WS2812
	SK9822	WS2813

Please see our website for a full, up-to-date list of supported Protocols

Specifications

Certifications	CE compliant, ETL/cETL (pending)
Power	5V to 28V DC 0.3W typical (0.6W maximum)
Required Configuration	Any Pharos Controller and Pharos EDN Pharos Designer 2.8 or later
Temperature	0°C to 50°C (32°F to 122°F)
Humidity	10-50% relative, non-condensing
Ingress	IP40
Isolation	1kV
Physical	2 unit wide DIN rail mounting enclosure (DIN43880 / EN60715 (35/7.5 rail))
Weight Shipping	0.05kg (0.11 lb) (tbd)
Warranty	5 years



Order Code & Variants

SDI (10PK)	Serial Data Interface 10 Pack (EDN Accessory, RS485 in, DC Power in, SPI Out)

Pharos Controller and Pharos EDN required

BPS

Button Panel Station

Overview

The Pharos BPS (Button Panel Station) is a versatile 8-button station with integrated button LEDs that works with any Pharos Controller. The stylish BPS is available in a range of finishes and there are two variants for compatibility with either US or UK back boxes. Install is easy and convenient as the BPS only requires a single Power-over-Ethernet (PoE) network connection.

Features

Pharos Trigger

Timing is everything. Whatever the stimulus, Pharos Trigger can handle it. You can control your lighting with responsive, reactive programming. Pharos 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.

Sleek Design

An embossed magnetic overlay sits within a low-profile bezel that is only 5.5mm thick to give a sleek finish with no visible fixings. Both the bezel and the overlay are available in a variety of colours. There are two variants for compatibility with either US or UK back boxes.

Scalable

Up to 200 Remote Devices can be combined with one or more Pharos Controllers on the same network to build the ideal system for your installation. Each Remote Device is easily addressed using a convenient thumb wheel. Whether one Controller or many, it's all easily programmed using our Designer software.

Buttons

The function of each of the 8 buttons is freely programmable and the system can detect press, hold, repeat and release events.

LEDs

Each button has a white LED indicator with fully user-controllable brightness and a choice of visual effects such as fades, fast or slow flashing or ramps.

PoE Powered

As a Power-over-Ethernet (PoE) device, the RIO can be placed at any remote location and only needs a single Cat5 cable that provides both power and data.

Learning IR

The BPS may be taught to recognise up to 8 different IR codes from a standard infra-red remote control. When one of these keys on the remote control is pressed the BPS will treat that as a press on its own button.

Pharos Designer

Programmed and configured using the free Pharos Designer software – available for Windows or Mac OS X – with upload over Ethernet.

Network

Works with any Pharos Controller and links to it using standard protocols over an Ethernet network.

5 Year Warranty

Designed and manufactured in the UK, with quality and reliability our top priority.

Certifications

CE compliant, ETL/cETL listed, and California Title 20/24 compliant.

Capabilities

Buttons	8 high-reliability, tactile buttons with detection of press, held, repeat and release Security (PIN) and multi-key features supported
LEDs	Each button has an individual white LED indicator with variable brightness and flash effect options
Infra-red	Learning IR allows any standard remote control to be used to activate button presses

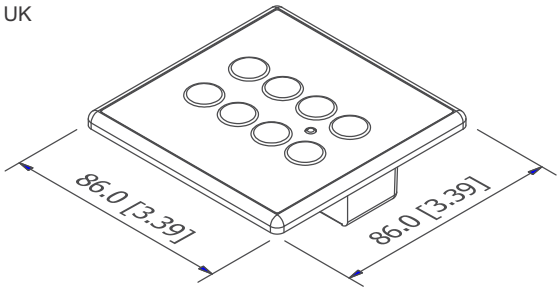
Interfaces

Ethernet	RJ45 socket for 10/100Base-TX Ethernet with Link/Data LEDs; Static IP or DHCP; Power-over-Ethernet (PoE)

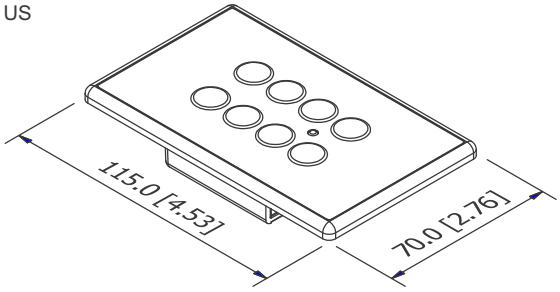
Specifications

Certifications	CE compliant, ETL/cETL listed
Power	PoE (IEEE802.3af, Class 1) 1.5W typical
Required	Any Pharos Controller
Addressing	By rotary selector switch
Temperature	0°C to 50°C (32°F to 122°F)
Humidity	10-50% relative, non-condensing
Ingress	IP40
Physical	Flush-mounting wall panel with variants suitable for standard single-gang UK or US backboxes 0.3 kg (0.7 lbs)
Shipping	20 x 15 x 12 cm (8″ x 6″ x 5″) 0.5 kg (1.1 lbs)
Recovery	Hardware watchdog and recessed reset button
Warranty	5 years

UK



US



Order Code & Variants

BPS UK BB	Button Panel Station UK Black-on-Black (Magnetic Overlay)
BPS UK CC	Button Panel Station UK Cream-on-Cream (Magnetic Overlay)
BPS UK WW	Button Panel Station UK White-on-White (Magnetic Overlay)
BPS US BB	Button Panel Station US Black-on-Black (Magnetic Overlay)
BPS US CC	Button Panel Station US Cream-on-Cream (Magnetic Overlay)
BPS US WW	Button Panel Station US White-on-White (Magnetic Overlay)

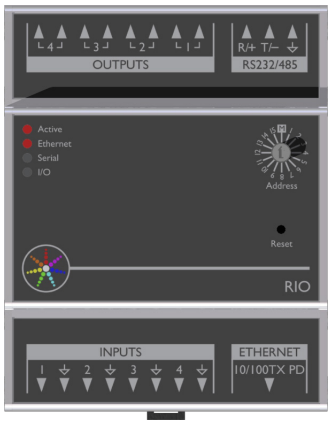
Pharos Controller required

RIO

Remote Input Output

Overview

The Pharos RIO 80, 44 and 08 (Remote Input Output) devices provide a convenient and scalable way to add inputs and outputs to a Pharos system for show control and integration. Each device can be placed where it is needed and connected to the Controllers over an Ethernet network. Each RIO has a multiprotocol serial port, supporting DMX output, and a combination of multi-functional digital/analog inputs and relay outputs.



Features

Pharos Trigger

Timing is everything. Whatever the stimulus, Pharos Trigger can handle it. You can control your lighting with responsive, reactive programming. Pharos 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.

Scalable

Up to 200 Remote Devices can be combined with one or more Pharos Controllers on the same network to build the ideal system for your installation. Each Remote Device is easily addressed using a convenient thumb wheel. Whether one Controller or many, it's all easily programmed using our Designer software.

Flexible Inputs

Each input is individually configurable in one of three modes. As a Contact Closure an external volt-free switch may be connected across the input. As a Digital Input an external voltage source (up to 24V) can be connected across the input and thresholds for 'high' and 'low' triggering can be set. As an Analog Input a variable external voltage can be measured within a configurable range.

Multi-Protocol

Every RIO has a multi-protocol serial port, whose protocol (RS232 or RS485), data rate and format settings (baud, parity, stop bits, etc.) are configurable in software. The port can also be configured to output up to 96 channels of DMX512.

PoE Powered

As a Power-over-Ethernet (PoE) device, the RIO can be placed at any remote location and only needs a single Cat5 cable that provides both power and data.

Relay Outputs

Our outputs use solid-state relays to ensure silent operation and long-term reliability. They are designed for low voltage, low current switching (48V, 0.25A) and are also fully isolated. Where necessary they enable higher currents to be controlled from Pharos by integration with commonly available third-party contactors.

Installer Friendly

Made for permanent installation, with installer-friendly 0.200" (5.08mm) plug-in rising clamp terminals, a rugged, compact enclosure, and easy DIN rail mounting.

Pharos Designer

Programmed and configured using the free Pharos Designer software – available for Windows or Mac OS X – with upload over Ethernet.

Network

Works with any Pharos Controller and links to it using standard protocols over an Ethernet network.

5 Year Warranty

Designed and manufactured in the UK, with quality and reliability our top priority.

Certifications

CE compliant, ETL/cETL listed, and California Title 20/24 compliant.

Capabilities

Contact Closure	Connect an external volt-free switch between input and ground (internal 2.2kohm pull-up to 5V)
Digital In	Connect an external voltage source between input and ground (24V maximum; internal 2MOhm pull-down to 0V); softwareconfigurable low/high threshold
Analog In	Connect an external voltage source between input and ground (24V maximum); software-configurable range
Relay Outs	Individually isolated (1KV) relay outputs (48V 250mA)
Serial Data	RS232, RS485; configurable port; send/receive free syntax in ASCII, HEX or decimal
DMX Out	96 channels (USITT E1.11-2008)

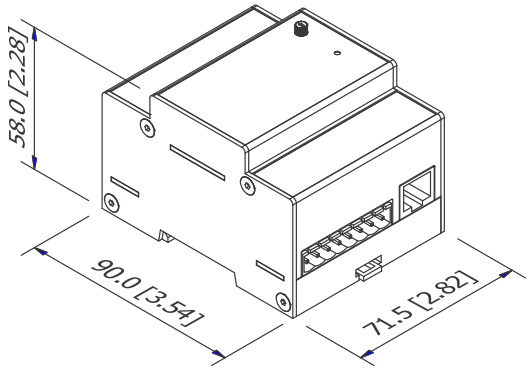
Interfaces

Ethernet	RJ45 socket for 10/100Base-TX Ethernet with Link/Data LEDs; Static IP or DHCP; Power-over-Ethernet (PoE)
Serial Inputs	RS232 / RS485 / DMX out * Individually selectable operating mode for contact closure, digital or analog input (24V maximum) *
Relay Outs	Individually isolated (1KV) solid-state relay outputs rated at 48V 0.25A* (AC/DC). An external PSU is required to power the relay outputs.

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

Specifications

Certifications	CE compliant, ETL/cETL listed
Power	PoE (IEEE802.3af, Class 1) 1.5W typical
Required	Any Pharos Controller
Addressing	By rotary selector switch
Temperature	0°C to 50°C (32°F to 122°F)
Humidity	10-50% relative, non-condensing
Ingress	IP40
Physical	4 unit wide DIN rail mounting enclosure (DIN43880 / EN60715 (35/7.5 rail)) 0.3 kg (0.7 lbs) 0.25 kg (0.55 lbs)
Shipping	20 x 15 x 12 cm (8″ x 6″ x 5″) 0.5 kg (1.1 lbs)
Recovery	Hardware watchdog and recessed reset button
Warranty	5 years



Order Code & Variants

RIO 80	Remote Input Output Device 80 (8 input, 0 output, Serial/DMX)
RIO 44	Remote Input Output Device 44 (4 input, 4 output, Serial/DMX)
RIO 08	Remote Input Output Device 08 (0 input, 8 output, Serial/DMX)

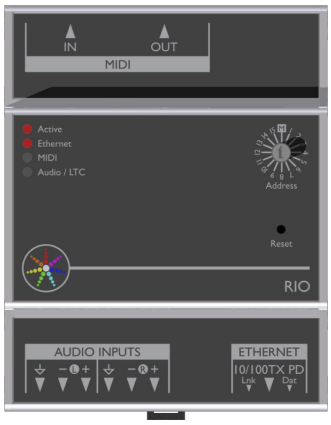
Pharos Controller required

RIO A

Remote Input Output Audio

Overview

The Pharos RIO A (Remote Input Output Audio) device provides a convenient and scalable way to add audio integration to your Pharos system. The RIO A has an audio input, supporting linear timecode or up to 30 band spectrum analysis, as well as a MIDI input and output. Each device can be placed where it is needed and connected to the Controllers over an Ethernet network.



Features

Pharos Trigger

Timing is everything. Whatever the stimulus, Pharos Trigger can handle it. You can control your lighting with responsive, reactive programming. Pharos 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.

Audio Response

The stereo balanced line level audio input supports auto or manual gain (adjustable in software). The spectrum analysis is configurable from 3 to 30 bands on each channel, and triggers can be set on the instantaneous or peak level of any band or the overall volume. Up to 4 simultaneous audio inputs are supported with multiple RIO A units.

Timecode

The audio input can also be configured to receive linear timecode on either channel. The format is auto-detected and supported formats are 24fps (film), 25fps (EBU), 29.97fps (NTSC) & 30fps (SMPTE). MIDI Time Code (MTC) can also be received via the MIDI Input. A software flywheel with error correction and jump support ensures smooth but responsive timecode playback. Up to 6 simultaneous Timecode inputs are supported with multiple RIO A units.

Scalable

Up to 200 Remote Devices can be combined with one or more Pharos Controllers on the same network to build the ideal system for your installation. Each Remote Device is easily addressed using a convenient thumb wheel. Whether one Controller or many, it's all easily programmed using our Designer software.

MIDI

Musical Instrument Digital Interface (MIDI) is a standard serial protocol commonly used to link musical instruments and synthesizers – but it is also used for show control and timecode. The RIO A provides both an input and output on standard 5-pin DIN connectors.

PoE Powered

As a Power-over-Ethernet (PoE) device, the RIO can be placed at any remote location and only needs a single Cat5 cable that provides both power and data.

Installer Friendly

Made for permanent installation, with installer-friendly 0.200" (5.08mm) plug-in rising clamp terminals, a rugged, compact enclosure, and easy DIN rail mounting.

Pharos Designer

Programmed and configured using the free Pharos Designer software – available for Windows or Mac OS X – with upload over Ethernet.

Network

Works with any Pharos Controller and links to it using standard protocols over an Ethernet network.

5 Year Warranty

Designed and manufactured in the UK, with quality and reliability our top priority.

Certifications

CE compliant, ETL/cETL listed, and California Title 20/24 compliant.

Capabilities

Audio In	Volume level and up to 30 band spectrum analysis per channel, including peak decay rate control and manual or automatic gain Maximum 4 audio inputs per system
Timecode	Timecode support via MIDI (MTC) or either audio channel (LTC) User configurable fly-wheel, error correction routines and jump support Maximum 6 Timecode inputs per system LTC format auto-detection with support for 24fps (film), 25fps (EBU), 29.97fps (NTSC) & 30fps (SMPTE)
MIDI	Input and Output of freely configurable Short messages (Notes), MIDI Show Control or Extended Messages using convenient message composer or MIDI Time Code (MTC) input

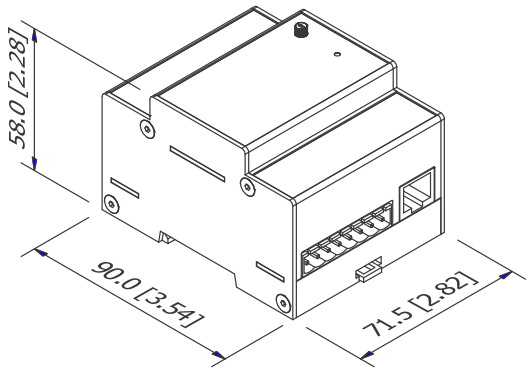
Interfaces

Ethernet	RJ45 socket for 10/100Base-TX Ethernet with Link/Data LEDs; Static IP or DHCP; Power-over-Ethernet (PoE)
Audio In	Stereo balanced line level (0dBV) *
MIDI In & Out	Standard 5-pin DIN

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

Specifications

Certifications	CE compliant, ETL/cETL listed
Power	PoE (IEEE802.3af, Class 1) 1.5W typical
Required	Any Pharos Controller
Addressing	By rotary selector switch
Temperature	0°C to 50°C (32°F to 122°F)
Humidity	10-50% relative, non-condensing
Ingress	IP40
Physical	4 unit wide DIN rail mounting enclosure (DIN43880 / EN60715 (35/7.5 rail)) 0.3 kg (0.7 lbs)
Shipping	20 x 15 x 12 cm (8″ x 6″ x 5″) 0.5 kg (1.1 lbs)
Recovery	Hardware watchdog and recessed reset button
Warranty	5 years



Order Code & Variants

RIO A	Remote Audio Input Device (Stereo Audio in, LTC, MIDI in and out)

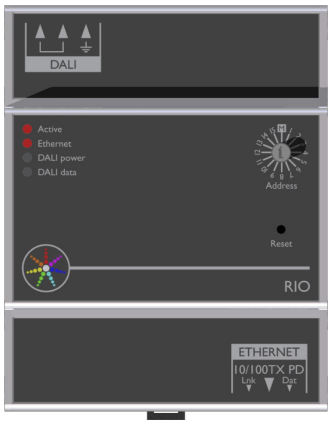
Pharos Controller required

RIO D

Remote Input Output DALI

Overview

The Pharos RIO D (Remote Input Output DALI) device provides a convenient and scalable way to control DALI fixtures and ballasts from Pharos Controllers. Each RIO D supports a single DALI bus, which can be used as an output for control and as an input for triggering. Each device can be placed where it is needed and connected to a Pharos Controller over an Ethernet network.



Features

DALI Control

Control up to 64 DALI devices from each RIO D, with support for commissioning with DALI discovery and configuration commands. Pharos Designer includes a convenient drag-and-drop interface for DALI patching and timeline programming. Multiple RIO D units can be used together as part of a single Pharos system to provide distributed DALI control over an Ethernet network.

Emergency Lighting

DALI Ballasts for emergency lighting have special requirements for regular testing, error detection and fault reporting. Pharos supports this with the ability to schedule automatic Function and Duration tests, automatic querying for battery level and lamp hours, and a full test result and error reporting web page.

Scalable

Up to 200 Remote Devices can be combined with one or more Pharos Controllers on the same network to build the ideal system for your installation. Each Remote Device is easily addressed using a convenient thumb wheel. Whether one Controller or many, it's all easily programmed using our Designer software.

DALI Triggering

Pharos can also integrate with an existing DALI installation by listening in to DALI control messages sent by another control system or a DALI wall panel and using these as triggers for actions within the Pharos system.

Pharos Trigger

Timing is everything. Whatever the stimulus, Pharos Trigger can handle it. You can control your lighting with responsive, reactive software. Pharos 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.

PoE Powered

As a Power-over-Ethernet (PoE) device, the RIO can be placed at any remote location and only needs a single Cat5 cable that provides both power and data.

Installer Friendly

Made for permanent installation, with installer-friendly 0.200" (5.08mm) plug-in rising clamp terminals, a rugged, compact enclosure, and easy DIN rail mounting.

Pharos Designer

Programmed and configured using the free Pharos Designer software – available for Windows or Mac OS X – with upload over Ethernet.

Network

Works with any Pharos Controller and links to it using standard protocols over an Ethernet network.

5 Year Warranty

Designed and manufactured in the UK, with quality and reliability our top priority.

Certifications

CE compliant, ETL/cETL listed, and California Title 20/24 compliant.

Capabilities

DALI Master	Control for up to 64 DALI devices; DALI discovery and configuration commands
DALI Slave	Use DALI messages from other systems or wall panels as triggers in Pharos
Emergency Lighting	Schedule automatic Function and Duration tests; automatic querying for battery level and lamp hours; test result and error reporting web page
Bus Power Detection	A separate DALI bus power supply is required – but the RIO D can detect and report bus power errors
Scalable	Support for up to 200 RIO D units in a single system – with each Controller supporting up to 100 (LPC X), 64 (LPC 4), 32 (LPC 2), 16 (LPC 1/TPC) units

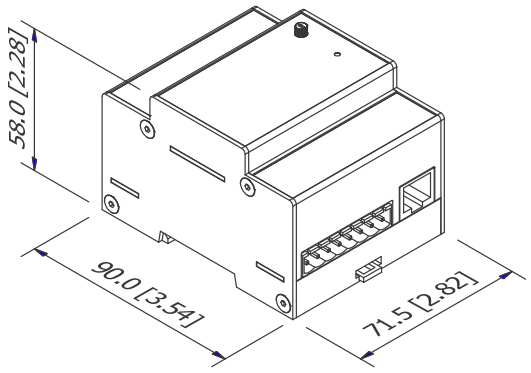
Interfaces

Ethernet	RJ45 socket for 10/100Base-TX Ethernet with Link/Data LEDs; Static IP or DHCP; Power-over-Ethernet (PoE)
DALI	Master (up to 64 devices) or Slave *

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

Specifications

Certifications	CE compliant, ETL/cETL listed
Power	PoE (IEEE802.3af, Class 1) 1.5W typical
Required	Any Pharos Controller
Addressing	By rotary selector switch
Temperature	0°C to 50°C (32°F to 122°F)
Humidity	10-50% relative, non-condensing
Ingress	IP40
Physical	4 unit wide DIN rail mounting enclosure (DIN43880 / EN60715 (35/7.5 rail)) 0.3 kg (0.7 lbs)
Shipping	20 x 15 x 12 cm (8″ x 6″ x 5″) 0.5 kg (1.1 lbs)
Recovery	Hardware watchdog and recessed reset button
Warranty	5 years



Order Code & Variants

RIO D	Remote DALI Device (DALI)

Pharos Controller required

EXT

TPC Extension

Overview

The Pharos EXT is an extension for the Pharos TPC and together they form a standalone, mainspowered lighting controller with versatile output and show control options. The TPC is a powerful lighting controller with Ethernet-based output and integration options. However, many DMX and DALI installations don't need the added complexity of network infrastructure. The EXT provides local DMX and DALI output for the TPC, as well as power and other hardware interfaces.

Features

Extend

The EXT is an optional extension for a single Pharos TPC. Together they can function as a standalone control system, or scale with other Pharos devices over a network. The EXT supplies power and data to the TPC via a single cable, and provides physical interfaces including both DMX and DALI.

Pharos Trigger

Timing is everything. Whatever the stimulus, Pharos Trigger can handle it. You can control your lighting with responsive, reactive programming. Pharos 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.

DALI Control

Control up to 64 DALI devices from the EXT, with support for commissioning with DALI discovery and configuration commands. Pharos Designer includes a convenient drag-and-drop interface for DALI patching and timeline programming. DALI emergency ballasts are also supported with the ability to schedule automatic Function and Duration tests, automatic querying for battery level and lamp hours, and a full test result and error reporting web page.

Flexible Inputs

Each input is individually configurable in one of three modes. As a Contact Closure an external volt-free switch may be connected across the input. As a Digital Input an external voltage source (up to 24V) can be connected across the input and thresholds for 'high' and 'low' triggering can be set. As an Analog Input a variable external voltage can be measured within a configurable range.

Serial Data

The EXT has an RS232 serial port, whose data rate and format settings (baud, parity, stop bits, etc.) are configurable in software.

Pharos Designer

Programmed and configured using the free Pharos Designer software – available for Windows or Mac OS X – with upload over Ethernet or USB.

Installer Friendly

Made for permanent installation, with installer-friendly 0.200" (5.08mm) plug-in rising clamp terminals, a rugged, compact enclosure, and easy DIN rail mounting.

Firmware

Microprocessor-based system supports firmware updates via the network from Designer software or the web interface.

5 Year Warranty

Designed and manufactured in the UK, with quality and reliability our top priority.

Certifications

CE compliant, ETL/cETL listed, and California Title 20/24 compliant.

Capabilities

Contact Closure	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); softwareconfigurable low/high threshold
Analog In	Connect an external voltage source between input and ground (24V maximum); software-configurable range
Serial Data	RS232; configurable port; send/receive free syntax in ASCII, HEX or decimal
DALI Master	Control for up to 64 DALI devices; DALI discovery and configuration commands
DALI Slave	Use DALI messages from other systems or wall panels as triggers in Pharos
Emergency Lighting	Schedule automatic Function and Duration tests; automatic querying for battery level and lamp hours; test result and error reporting web page
Bus Power Detection	A separate DALI bus power supply is required – but the EXT can detect and report bus power errors

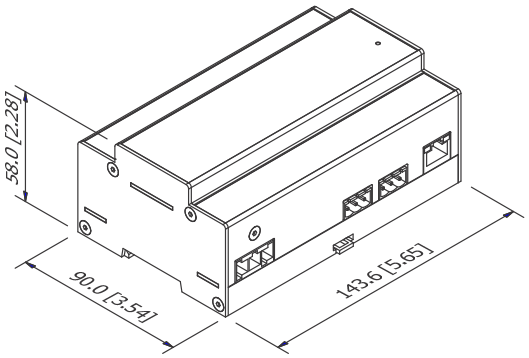
Interfaces

TPC PoE	RJ45 socket with Link/Data LEDs for direct connection to TPC only (100m max distance)
Ethernet	RJ45 socket for 10/100Base-TX Ethernet with Link/Data LEDs;- Fixed IP or DHCP; Power-over-Ethernet (PoE)
DMX512	Isolated DMX port, RDM compatible *
DALI	Master (up to 64 devices) or Slave *
Serial	RS232 *
Inputs	Individually selectable operating mode for contact closure, digital or analog input (24V maximum) *

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

Specifications

Certifications	CE compliant, ETL/cETL listed
Power	Mains-powered; 100-240VAC / 50-60Hz / 0.1A (10W typical)
Required	Pharos TPC
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)) 0.5 kg (1.1 lbs)
Shipping	20 x 15 x 12 cm (8″ x 6″ x 5″) 0.7 kg (1.6 lbs)
Recovery	Hardware watchdog and recessed reset button
Warranty	5 years



Order Code & Variants

EXT	Extension for TPC connectivity (DMX, DALI, IO, serial, mains-powered)

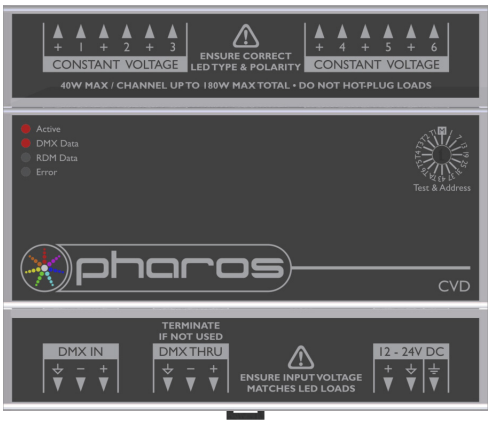
Pharos TPC required

CCD/CVD

Constant Current/Voltage LED Drivers

Overview

The Pharos CCD (Constant Current Driver) and the Pharos CVD (Constant Voltage Drivers) are both DMX LED drivers with manual/RDM addressing and test modes for luminaires and other devices.



Features

Extend

Constant Current fixtures are supported by the Pharos CCD, which is available in three current levels. The Pharos CCD is a 6 channel DMX controlled LED driver and multiple LEDs may be connected in series to each channel. The power supply power rating must be sufficient for the total power of the connected LEDs. For maximum efficiency, the total LED forward voltage per channel should be approximately equal to the power supply voltage.

Constant Voltage

Constant Voltage fixtures are supported by the Pharos CVD. The Pharos CVD is a 6 channel DMX controlled LED driver and multiple LEDs may be connected in parallel to each channel. The power supply voltage must match the voltage rating of the LEDs and the power supply power rating must be sufficient for the total power of the connected LEDs.

Test Modes

Controlled by the hex wheel, test modes are available that will turn on each individual channel at 25% or all channels at 25%. DMX control data is ignored while in a test mode.

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.

5 Year Warranty

Designed and manufactured in the UK, with quality and reliability our top priority.

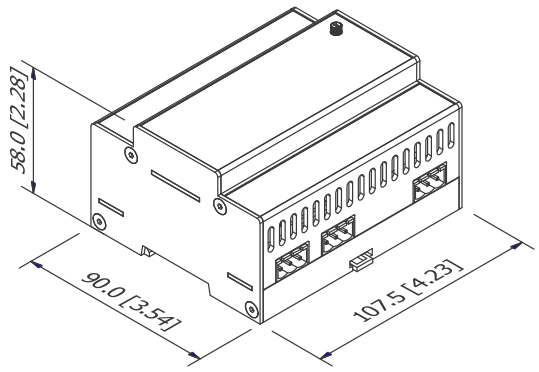
Certifications

CE compliant, ETL/cETL listed, and California Title 20/24 compliant.

Specifications

Certifications	CE compliant, ETL/cETL listed
Power	15V to 48V DC * (CCD), 12V to 24V DC * (CVD), power consumption dependant on load, 180W maximum
Addressing	By rotary selector switch
Temperature	0°C to 50°C (32°F to 122°F)
Humidity	10-50% relative, non-condensing
Ingress	IP40
Physical	6 unit wide DIN rail mounting enclosure (DIN43880 / EN60715 (35/7.5 rail)) 0.5 kg (1.1 lbs)
Shipping	20 x 15 x 12 cm (8″ x 6″ x 5″) 0.7 kg (1.6 lbs)
Recovery	Hardware watchdog and recessed reset button
Warranty	5 years

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



Order Code & Variants

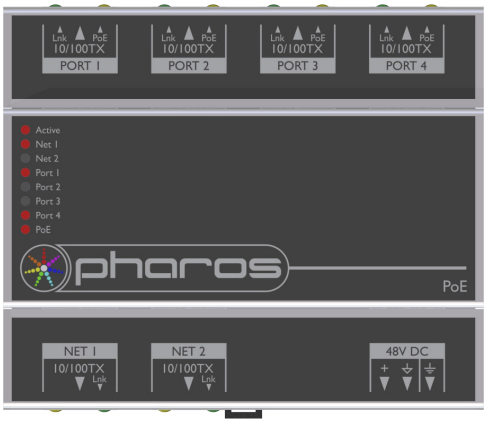
CCD 350	350mA Constant Current LED Driver (6 channels, DMX/RDM controlled)
CCD 500	500mA Constant Current LED Driver (6 channels, DMX/RDM controlled)
CCD 700	700mA Constant Current LED Driver (6 channels, DMX/RDM controlled)
CVD	Constant Voltage LED Driver (6 channels, DMX/RDM controlled)

PoE

Power-over-Ethernet Switch

Overview

The Pharos PoE provides a simple power and networking solution for four Power-over-Ethernet devices with two separate Ethernet uplink ports. It is perfect for connecting power and data between Pharos Controllers and Pharos Remote Devices.



Features

PoE Technology
Combine power and data in a single Ethernet cable using PoE (IEEE 802.3af and IEEE 802.3at) technology making it easy to locate your Pharos devices where you need them.

Multiple Ports
Use four ports to power and connect multiple Pharos Controllers or Remote Devices (or other IEEE 802.3af or IEEE 802.3at compliant devices). Two additional ports (without PoE) are available to connect to your computer, other networks or other devices not require Power-over-Ethernet.

No Commissioning
The simple un-managed switch operates out of the box, with no commissioning required.

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

Protected
Resettable fuses protect each port with the appropriate level of overcurrent protection for the Class of device that is attached.

Scalable
Compatible with all Pharos Devices, and can be used with other POEs to create larger networks.

Flexible
Automatically detects the requirements of the connected device/s to provide the correct power level.

Reliable
Rugged, compact 6 unit wide DIN rail unit with a solid-state design ensures unparalleled reliability.

5 Year Warranty
Designed and manufactured in the UK, with quality and reliability our top priority.

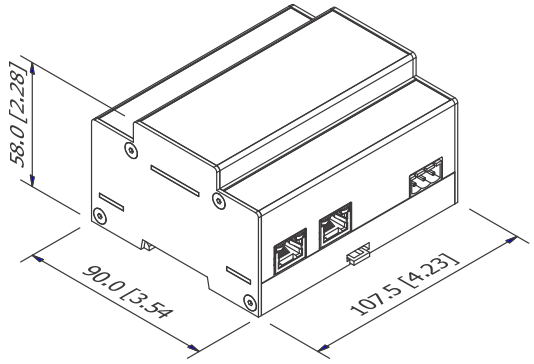
Certifications
CE compliant, ETL/cETL listed, and California Title 20/24 compliant.

Interfaces

PoE	Four RJ45 sockets for 10/100Base-TX Ethernet with Power-over-Ethernet Supports IEEE 802.3af Class 1, 2, and 3 and IEEE 802.3at Class 4 (Type 2) devices
Ethernet	Two RJ45 sockets for 10/100Base-TX Ethernet

Specifications

Certifications	CE compliant, ETL/cETL listed
Power	48V DC * power consumption dependant on load, 100W maximum
Temperature	0°C to 50°C (32°F to 122°F)
Humidity	10-50% relative, non-condensing
Ingress	IP40
Physical	6 unit wide DIN rail mounting enclosure (DIN43880 / EN60715 (35/7.5 rail)) 0.5 kg (1.1 lbs)
Shipping	20 x 15 x 12 cm (8″ x 6″ x 5″) 0.7 kg (1.6 lbs)
Warranty	5 years



Order Code & Variants

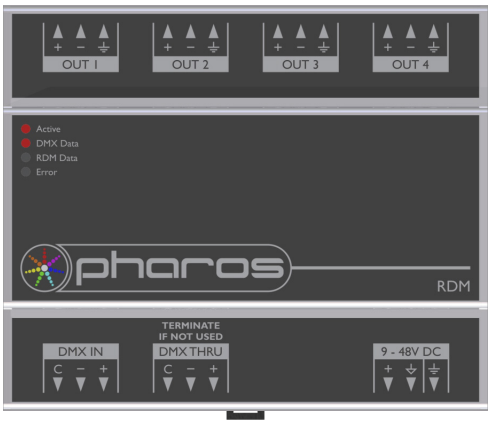
PoE	Unmanaged PoE Ethernet Switch (4+2 Port: 4 PoE, 2 non-PoE)

RDM

DMX Repeater

Overview

The Pharos RDM (Remote Device Management) is a 4 port DMX512 Splitter compatible with the RDM standard to provide DMX output to luminaires and other devices.



Features

RDM
Supports the Remote Device Management protocol (ANSI E1.20) allowing devices connected to any of the four outputs to communicate backto a Controller over the DMX link.

Four Outputs
Repeats a DMX signal to 4 outputs, each allowing for 32 DMX devices to be connected.

Isolated
Opto-isolated input and through connection for daisy-chaining the DMX connection.

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.

5 Year Warranty
Designed and manufactured in the UK, with quality and reliability our top priority.

Certifications
CE compliant, ETL/cETL listed, and California Title 20/24 compliant.

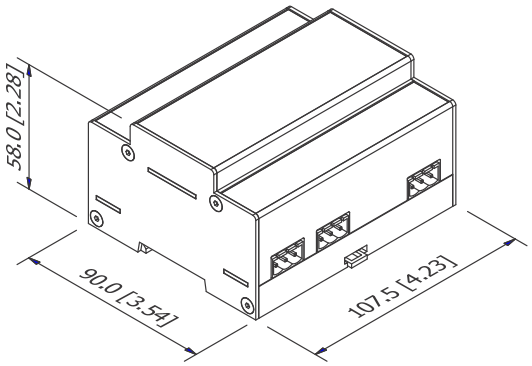
Interfaces

DMX/RDM input	DMX512 port, RDM compatible *
DMX/RDM thru	DMX512 port, RDM compatible *
DMX/RDM outputs	Four DMX512 ports, RDM compatible *

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

Specifications

Certifications	CE compliant, ETL/cETL listed
Power	9-48V DC (4W typical)
Temperature	0°C to 50°C (32°F to 122°F)
Humidity	10-50% relative, non-condensing
Ingress	IP40
Physical	6 unit wide DIN rail mounting enclosure (DIN43880 / EN60715 (35/7.5 rail)) 0.5 kg (1.1 lbs)
Shipping	20 x 15 x 12 cm (8″ x 6″ x 5″) 0.7 kg (1.6 lbs)
Warranty	5 years



Order Code & Variants

RDM	DMX/RDM Splitter (4+1 Port: 1 in, 1 thru, 4 out)