



WHICH CONTROLLER DO I NEED?

 = included

←→ = supported with seamless integration using a Remote Device or another Pharos controller in the same project.

— = Not available.

* = Split between contact closure, digital and analog.

** = 2nd output of LPC 1 can be used for TPC output.

Multiple Pharos controllers and remote devices will operate as a single system via Ethernet.
All inputs and outputs can be used across the Pharos system (unless stated otherwise).

OVERVIEW & INTERFACES

Key Features	LPC 1	LPC 2	LPC 4	LPC X	TPC	TPC + EXT	VLC	VLC+
Channels of DMX/ eDMX output	512	1024	2048	5120 - 51200	512	512	25600 - 768000	25600 - 1536000
Equivalent universe count	1	2	4	10-100	1	1	50-1500	50-3000
Controller family	LPC family	LPC family	LPC family	LPC family	LPC family	LPC family	VLC family	VLC family
Control concept	Fully flexible	Fully flexible	Fully flexible	Fully flexible	Fully flexible	Fully flexible	Single canvas	Single canvas
Built-in touch panel interface	-	-	-	-	★	★	-	-
Scalability	LPC 1	LPC 2	LPC 4	LPC X	TPC	TPC + EXT	VLC	VLC+
Add extra controllers for increased capacity	★	★	★	★	★	★	★	★
Add extra controllers for extra interfaces/features	★	★	★	★	★	★	★	★
Add Pharos remote devices for extra interfaces/features	★	★	★	★	★	★	★	★
Add Pharos wall stations for human interfaces	★	★	★	★	★	★	★	★
Number of remote devices supported	16	32	64	100	16	16	100	100
DMX512 output	LPC 1	LPC 2	LPC 4	LPC X	TPC	TPC + EXT	VLC	VLC+
Built-in DMX512/RDM output ports	2 (mirrored)	2	2	-	-	1	-	-
Additional DMX512 output ports with RIO and EDN 20	★	★	★	★	★	★	★	★
Ethernet and eDMX output	LPC 1	LPC 2	LPC 4	LPC X	TPC	TPC + EXT	VLC	VLC+
Dedicated eDMX output ports	-	-	-	1	-	-	1	2
Dedicated management Ethernet ports	-	-	-	1	-	-	1	1

Ethernet and eDMX output	LPC 1	LPC 2	LPC 4	LPC X	TPC	TPC + EXT	VLC	VLC+
Shared management Ethernet/eDMX ports	1	1	1	-	1	1	-	-
Multi-protocol eDMX output	*	*	*	*	*	*	*	*
UDP/TCP/Multicast send/receive	*	*	*	*	*	*	*	*
DMX512/eDMX input	LPC 1	LPC 2	LPC 4	LPC X	TPC	TPC + EXT	VLC	VLC+
Built-in DMX512 input port	*	*	*	-	-	-	-	-
eDMX Input via the Data port	*	*	*	*	*	*	*	*
eDMX to DMX512 pass-through	1 universe	2 universes	2 universes	-	-	1 universe	-	-
DALI	LPC 1	LPC 2	LPC 4	LPC X	TPC	TPC + EXT	VLC	VLC+
Built-in DALI control buses	-	-	-	-	-	1	-	-
Support for input triggering on DALI bus	*	*	*	*	*	*	*	*
Additional DALI buses with RIO D	*	*	*	*	*	*	*	*
Video	LPC 1	LPC 2	LPC 4	LPC X	TPC	TPC + EXT	VLC	VLC+
Live video input via DVI-D	-	-	-	Optional	-	-	*	*
Confidence monitor video output via DVI-I	-	-	-	*	-	-	-	*
Relay outputs	LPC 1	LPC 2	LPC 4	LPC X	TPC	TPC + EXT	VLC	VLC+
Built-in relay output	-	-	-	-	-	-	-	-
Additional relay outputs with RIO 44/08	*	*	*	*	*	*	*	*

Inputs	LPC 1	LPC 2	LPC 4	LPC X	TPC	TPC + EXT	VLC	VLC+
Built-in input pins	8*	8*	8*	-	-	8*	-	-
Additional input pins with RIO 80/44	*	*	*	*	*	*	*	*
Supports contact closure mode	*	*	*	*	*	*	*	*
Supports digital input mode up to 24V	*	*	*	*	*	*	*	*
Supports analogue input mode up to 24V	*	*	*	*	*	*	*	*
MIDI	LPC 1	LPC 2	LPC 4	LPC X	TPC	TPC + EXT	VLC	VLC+
Built-in MIDI input	*	*	*	-	-	-	-	-
Additional MIDI inputs with RIO A	*	*	*	*	*	*	*	*
Built-in MIDI output	*	*	*	-	-	-	-	-
Additional MIDI outputs with RIO A	*	*	*	*	*	*	*	*
Audio	LPC 1	LPC 2	LPC 4	LPC X	TPC	TPC + EXT	VLC	VLC+
Built-in audio/timecode input	-	-	-	-	-	-	-	-
Additional audio/timecode inputs with RIO A	*	*	*	*	*	*	*	*
Built-in analog audio output	-	-	-	*	-	-	*	*
Built-in digital audio output	-	-	-	*	-	-	*	*
Serial	LPC 1	LPC 2	LPC 4	LPC X	TPC	TPC + EXT	VLC	VLC+
Built-in RS232 port	*	*	*	*	-	*	*	*

INTERFACES & LAYOUT PLAYBACKS

Serial	LPC 1	LPC 2	LPC 4	LPC X	TPC	TPC + EXT	VLC	VLC+
Additional RS232 ports with RIO	*	*	*	*	*	*	*	*
Built-in RS485 port	*	*	*	-	-	-	-	-
Additional RS485 ports with RIO	*	*	*	*	*	*	*	*
Supports any syntax send/receive	*	*	*	*	*	*	*	*
Infrared	LPC 1	LPC 2	LPC 4	LPC X	TPC	TPC + EXT	VLC	VLC+
Built-in infrared receiver	-	-	-	-	*	*	-	-
Additional infrared receivers with BPS/TPC/TPS	*	*	*	*	*	*	*	*
Learning infrared codes per TPC/TPS receiver	16	16	16	16	16	16	16	16
Learning infrared codes per BPS receiver	8	8	8	8	8	8	8	8
Fully flexible layout/ programming (LPC family)	LPC 1	LPC 2	LPC 4	LPC X	TPC	TPC + EXT		
Fully flexible fixture grouping and layout	*	*	*	*	*	*		
Fixtures may appear in multiple groups	*	*	*	*	*	*		
Fixtures may appear in multiple layouts	*	*	*	*	*	*		
Fixture template support	*	*	*	*	*	*		
Single canvas layout/ programming (VLC family)							VLC	VLC+
Fixtures positioned freely on canvas							*	*
Number of canvases							1	1

Single canvas layout/ programming (VLC family)		VLC	VLC+					
Fixture grouping for patch		*	*					
Fixture template support		*	*					
Video composition (VLC family)		VLC	VLC+					
Full HD video clip playback with cross-fading		1	2					
Multiple video clip instances		*	*					
Maximum number of simultaneous video playbacks		2	8					
Colour gains with definable mask regions		-	*					
Video clip transparency with user-definable masks		-	*					
Video clip movement and rotation		-	*					
Playback	LPC 1	LPC 2	LPC 4	LPC X	TPC	TPC + EXT	VLC	VLC+
Scenes for recalling static looks	*	*	*	*	*	*	-	-
Timelines for programming dynamic effects	*	*	*	*	*	*	*	*
Simultaneous playback of scenes/timelines (as applicable)	*	*	*	*	*	*	*	*
User-definable timeline priorities	*	*	*	*	*	*	*	*
Stacking last-action- takes-precedence playback	*	*	*	*	*	*	*	*
Timeline loop or hold at end	*	*	*	*	*	*	*	*
Real-time and astronomical timelines	*	*	*	*	*	*	*	*

INTERFACES & LAYOUT PLAYBACKS

Playback	LPC 1	LPC 2	LPC 4	LPC X	TPC	TPC + EXT	VLC	VLC+
Timeline flags	*	*	*	*	*	*	*	*
Media clip playback from internal memory	*	*	*	*	*	*	*	*
Parameterisable 2D effects	*	*	*	*	*	*	*	*
Output override	LPC 1	LPC 2	LPC 4	LPC X	TPC	TPC + EXT	VLC	VLC+
Manual colour override	Any group	Any group	Any group	Any group	Any group	Any group	Any content target	Any content target
Manual intensity mastering	Any group	Any group	Any group	Any group	Any group	Any group	Any content target	Any content target
Fixture Support	LPC 1	LPC 2	LPC 4	LPC X	TPC	TPC + EXT	VLC	VLC+
LED fixtures (RGB, RGBA, RGBW, RGBAW, 8-bit, 16-bit, white)	*	*	*	*	*	*	*	*
Tuneable white	*	*	*	*	*	*	-	-
Intensity channels (RGBI etc)	*	*	*	*	*	*	-	-
Single channel fixtures	*	*	*	*	*	*	-	-
Automated/moving fixtures	*	*	*	*	*	*	-	-
Media servers	*	*	*	*	*	*	-	-
Fountain jets	*	*	*	*	*	*	-	-

TRIGGERING & HUMAN INTERACTION

Triggering logic	LPC 1	LPC 2	LPC 4	LPC X	TPC	TPC + EXT	VLC	VLC+
Trigger / condition / action logic	*	*	*	*	*	*	*	*
Variables	*	*	*	*	*	*	*	*
Scripting	*	*	*	*	*	*	*	*
Built-in real-time clock for time based triggers	*	*	*	*	*	*	*	*
3rd party integrations	LPC 1	LPC 2	LPC 4	LPC X	TPC	TPC + EXT	VLC	VLC+
Full IO module library support	*	*	*	*	*	*	*	*
Custom IO module support	*	*	*	*	*	*	*	*
Touch panel interfaces	LPC 1	LPC 2	LPC 4	LPC X	TPC	TPC + EXT	VLC	VLC+
Built-in touch panel interface	-	-	-	-	*	*	-	-
Additional touch panel interfaces with TPS/TPC	*	*	*	*	*	*	*	*
Selectable user interface styles	*	*	*	*	*	*	*	*
Fully customisable interface design	*	*	*	*	*	*	*	*
Fully customisable interface logic	*	*	*	*	*	*	*	*
Buttons	LPC 1	LPC 2	LPC 4	LPC X	TPC	TPC + EXT	VLC	VLC+
Support for BPS button panels	*	*	*	*	*	*	*	*
Fully customisable logic/triggering	*	*	*	*	*	*	*	*

Web interfaces	LPC 1	LPC 2	LPC 4	LPC X	TPC	TPC + EXT	VLC	VLC+
Built-in web server	*	*	*	*	*	*	*	*
PC and mobile device support	*	*	*	*	*	*	*	*
Supplied with Pharos-designed web interface	*	*	*	*	*	*	*	*
Fully customisable web interface	*	*	*	*	*	*	*	*
PC and mobile device support	*	*	*	*	*	*	*	*
Comissioning	LPC 1	LPC 2	LPC 4	LPC X	TPC	TPC + EXT	VLC	VLC+
Comissioned with Pharos Designer	*	*	*	*	*	*	*	*
Remote management	LPC 1	LPC 2	LPC 4	LPC X	TPC	TPC + EXT	VLC	VLC+
Support for Pharos Cloud	*	*	*	*	*	*	*	*
Support for Pharos Director	*	*	*	*	*	*	*	*

Mechanical	LPC 1	LPC 2	LPC 4	LPC X	TPC	TPC + EXT	VLC	VLC+
DIN rail mountable	*	*	*	-	-	EXT	-	-
Wall mountable	-	-	-	-	*	TPC	-	-
19" rack mountable	-	-	-	1U	-	-	1U	2U
Electrical	LPC 1	LPC 2	LPC 4	LPC X	TPC	TPC + EXT	VLC	VLC+
PoE power input	*	*	*	-	*	-	-	-
DC power input	9-48V DC	9-48V DC	9-48V DC	-	-	-	-	-
AC power input	-	-	-	100-240VAC	-	100-240VAC	100-240VAC	100-240VAC
Power consumption	4W	4W	4W	40W	4W	10W	40W	40W
Warranty	LPC 1	LPC 2	LPC 4	LPC X	TPC	TPC + EXT	VLC	VLC+
Warranty period	5 years	5 years	5 years	5 years	5 years	5 years	5 years	5 years

CONTROLLERS, REMOTE DEVICES, SYSTEM

Controllers	LPC 1	LPC 2	LPC 4	LPC X	TPC	TPC + EXT	VLC	VLC+
Scalable with other Pharos Controllers	*	*	*	*	*	*	*	*
Scalable with remote devices (qty)	(16)	(32)	(64)	(100)	(16)	(16)	(100)	(100)
Commissioned with Pharos Designer 2	*	*	*	*	*	*	*	*
Pharos Engine (intelligent timeline control)	*	*	*	*	*	*	*	*
Pharos Trigger (including variables & scripting support)	*	*	*	*	*	*	*	*
Pharos Mapping (multiform 2D representations)	*	*	*	*	*	*	-	-
Pharos Render (optimised single large array playback)	-	-	-	-	-	-	*	*
Universes (x 512 for channels)	1	2	4	10-100	1	1	50-1500	50-3000
eDMX output (sACN, Art-Net, KiNET, Pathport)	*	*	*	*	*	*	*	*
DALI control	↔	↔	↔	↔	↔	(1bus)	↔	↔
LED fixtures (RGB, RGBA, RGBAW, 8-bit, 16-bit)	*	*	*	*	*	*	*	*
LED White, tuneable white, Intensity channels, Single channel fixtures, DALI ballasts, automated, fountain jets	*	*	*	*	*	*	-	-
Flexible grouping and zoning	*	*	*	*	*	*	-	-
Manual intensity and colour override	Any group	Any group	Any group	Any group	Any group	Any group	Any content target	Any content target
eDMX to DMX pass-through (local to a controller)	1 univ.	2 univ.	2 univ.	-	-	1 univ.	-	-

Controllers	LPC 1	LPC 2	LPC 4	LPC X	TPC	TPC + EXT	VLC	VLC+
Live video input (DVI-D, local to a controller)	-	-	-	Optional	-	-	*	*
DMX output (ports x channels)	1x512	2x512	2x512	-	↔ **	1x512	-	-
RS232 integration (any syntax)	*	*	*	*	↔	*	*	*
RS485 integration (any syntax)	*	*	*	*	↔	↔	↔	↔
DMX input (for triggering and mastering)	*	*	*	↔	↔	↔	↔	↔
eDMX input (sACN, Art-Net, triggering and mastering)	*	*	*	-	*	*	*	*
Ethernet integration (UDP/TCP, any syntax)	*	*	*	*	*	*	*	*
Touch panel interface	↔	↔	↔	↔	*	*	↔	↔
DALI integration	↔	↔	↔	↔	↔	*	↔	↔
Analog inputs	8*	8*	8*	↔	↔	8*	↔	↔
Digital inputs	8*	8*	8*	↔	↔	8*	↔	↔
Contact closure inputs	8*	8*	8*	↔	↔	8*	↔	↔
Solid state relay outputs	↔	↔	↔	↔	↔	↔	↔	↔
MIDI integration (Short, MSC, Extended)	*	*	*	↔	↔	↔	↔	↔
MIDI Time Code (MTC) input	*	*	*	↔	↔	↔	↔	↔
Linear Time Code (LTC) input	↔	↔	↔	↔	↔	↔	↔	↔

CONTROLLERS, REMOTE DEVICES, SYSTEM

Controllers	LPC 1	LPC 2	LPC 4	LPC X	TPC	TPC + EXT	VLC	VLC+
Audio input (Stereo/ Mono, Volume, 3-30 bands)	↔	↔	↔	↔	↔	↔	↔	↔
Built in web server (customisable)	*	*	*	*	*	*	*	*
PC & Mobile device control interface	*	*	*	*	*	*	*	*
Button input	↔	↔	↔	↔	↔	↔	↔	↔
Learning IR codes	↔	↔	↔	↔	16	16	↔	↔
DIN-rail mount	*	*	*	-	-	EXT Only	-	-
Wall mount (surfaced and recessed)	-	-	-	-	*	*	-	-
19" mount	-	-	-	*	-	-	*	*
Power input	PoE or 9-48V DC	PoE or 9-48V DC	PoE or 9-48V DC	100- 240VAC	PoE	100- 240VAC	100- 240VAC	100- 240VAC
Power consumption	4W	4W	4W	40W	4W	10W	40W	40W
Warranty	5 years	5 years	5 years	5 years	5 years	5 years	5 years	5 years

CONTROLLERS, REMOTE DEVICES, SYSTEM

Scalable with Pharos Controllers	TPS	RIO 80	RIO 44	RIO 08	RIO A	RIO D	BPS	EDN 20
Scalable with other Pharos Controllers	Operates seamlessly in a system with a least one controller							
Scalable with remote devices (qty)	Operates seamlessly in a system with a least one controller							
Commissioned with Pharos Designer 2	*	*	*	*	*	*	*	*
DALI control	-	-	-	-	-	1 bus	-	-
DMX output	-	up to 96 channels DMX			-	-	-	20
RS232 integration (any syntax)	-	*	*	*	-	-	-	-
RS485 integration (any syntax)	-	*	*	*	-	-	-	-
Touch panel interface	*	-	-	-	-	-	-	-
DALI integration	-	-	-	-	-	*	-	-
Analog inputs	-	8*	4*	0	-	-	-	-
Digital inputs	-	8*	4*	0	-	-	-	-
Contact closure inputs	-	8*	4*	0	-	-	-	-
Solid state relay outputs	-	0	4	8	-	-	-	-
MIDI integration (Short, MSC, Extended)	-	-	-	-	*	-	-	-
MIDI Time Code (MTC) input	-	-	-	-	*	-	-	-
Linear Time Code (LTC) input	-	-	-	-	*	-	-	-

CONTROLLERS, REMOTE DEVICES, SYSTEM

Scalable with Pharos Controllers	TPS	RIO 80	RIO 44	RIO 08	RIO A	RIO D	BPS	EDN 20
Audio input (Stereo/Mono, Volume, 3-30 bands)	-	-	-	-	*	-	-	-
Button input	-	-	-	-	-	-	8	-
Integrated button LEDs for feedback (programmable)	-	-	-	-	-	-	*	-
Learning IR codes	16	-	-	-	-	-	8	-
DIN-rail mount	-	*	*	*	*	*	-	-
Rack Mounted	-	-	-	-	-	-	-	*
Wall mount (UK & US 1-Gang)	-	-	-	-	-	-	*	-
Wall mount (surfaced and recessed)	*	-	-	-	-	-	-	-
Power input	PoE	PoE	PoE	PoE	PoE	PoE	PoE	100-240VAC
Power consumption	4W	2W	2W	2W	2W	2W	2W	25W
Warranty	5 years	5 years	5 years	5 years	5 years	5 years	5 years	5 years

 = included

←→ = supported with seamless integration using a Remote Device or another Pharos controller in the same project.

— = Not available.

* = Split between contact closure, digital and analog.

** = 2nd output of LPC 1 can be used for TPC output.

Multiple Pharos controllers and remote devices will operate as a single system via Ethernet. All inputs and outputs can be used across the Pharos system (unless stated otherwise).