

### 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

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

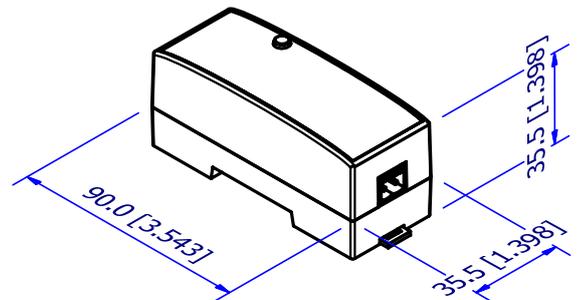
## Protocols

<b>SDI Protocols</b>	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

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



## Order Code & Variants

<b>SDI (10PK)</b>	Serial Data Interface 10 Pack (EDN Accessory, RS485 in, DC Power in, SPI Out)
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Pharos Controller and Pharos EDN required