

Serial Data Interface for EDN

The Pharos SDI (Serial Data Interface) is an accessory to the Pharos EDN (Ethernet Data Node) and RIO G4 (Remote Gateway 4-Port) 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.

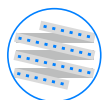
The SDI features fully isolated data inputs and a DC input range of 5-28V giving the flexibility to use the same power supply as the fixtures. Synchronous data transmission is usually restricted to very short cable lengths, but, with the Pharos EDN + SDI or Pharos RIO G4 + SDI combinations outputting synchronous data, you can conveniently locate your SDIs up to 40 metres from the EDN / RIO G4, 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.

SDI with EDN supported in Pharos Designer 2.8 or later.
SDI with RIO G4 supported in Pharos Designer 2.13 or later.



SDI Features



Protocols

The SDI will integrate with the EDN / RIO G4 remote devices 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.



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 / RIO G4. In Synchronous mode (data and clock signal), this range is 40m. As the RS485 connection from the EDN and RIO G4 does not require grounding, a single Ethernet 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.



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.



Refresh Rate

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



Isolation

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



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, 4 for RIO G4), 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.



Reliable

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



Interfaces

Serial In RS485 connector to EDN / RIO G4 *

Serial Out 3-pin AD and SC/SD connectors *
(Asynchronous Data, Synchronous Clock, Synchronous Data)

Protocols

SDI Protocols	APA102	UCS1903	WS2801
	APA104	UCS1912	WS2811
	GS8208	UCS2903	WS2812
	LPD6803	UCS2904	WS2813
	MBI6023	UCS2912	
	SK6812	UCS8903	
	SK9822	UCS8904	

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

Specifications

Power Required 5-28V DC *, 0.3W typical (0.6W maximum)
Any Pharos Designer Controller and Pharos EDN or Pharos RIO G4

Configuration Pharos Designer 2.8 or later (EDN)
Pharos Designer 2.13 or later (RIO G4)

Temperature 0°C to 50°C (32°F to 122°F)

Humidity 10-50% relative, non-condensing

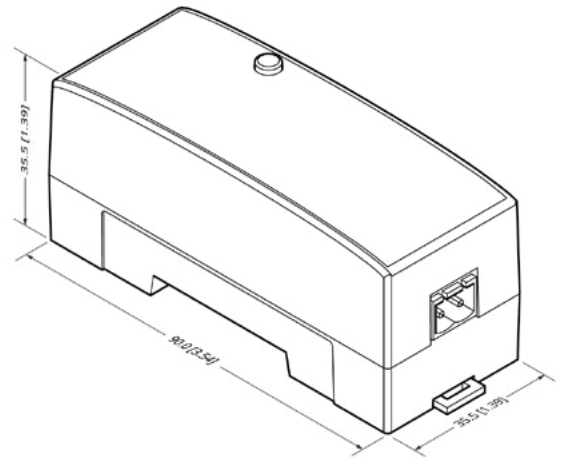
Ingress IP40

Isolation 1kV

Physical 2 unit wide DIN rail mounting enclosure
(35/7.5 rail)
3.6 x 9 x 3.6 cm (1.4 x 3.5 x 1.4 in)

Weight 0.05kg (0.11 lb)

Shipping 25 x 23 x 5.5 cm (9.8 x 9.1 x 2.2 in)
0.85kg (1.87 lb)
(pack of 10)



Order Code & Variants

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

Pharos Designer Controller and EDN / RIO G4 required

Warranty & Certifications

Warranty 5 years

Certifications CE compliant, UKCA compliant, ETL/cETL listed.



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