VDO Sceptron Guide

V3 - Q1 2024

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Introduction

Since the introduction of P3 Software V5.3, new modes have been introduced which allow us to control the Sceptron in more ways than previously possible.

For any queries or technical support, please speak to your account handler or contact hiredesk@tsllighting.com

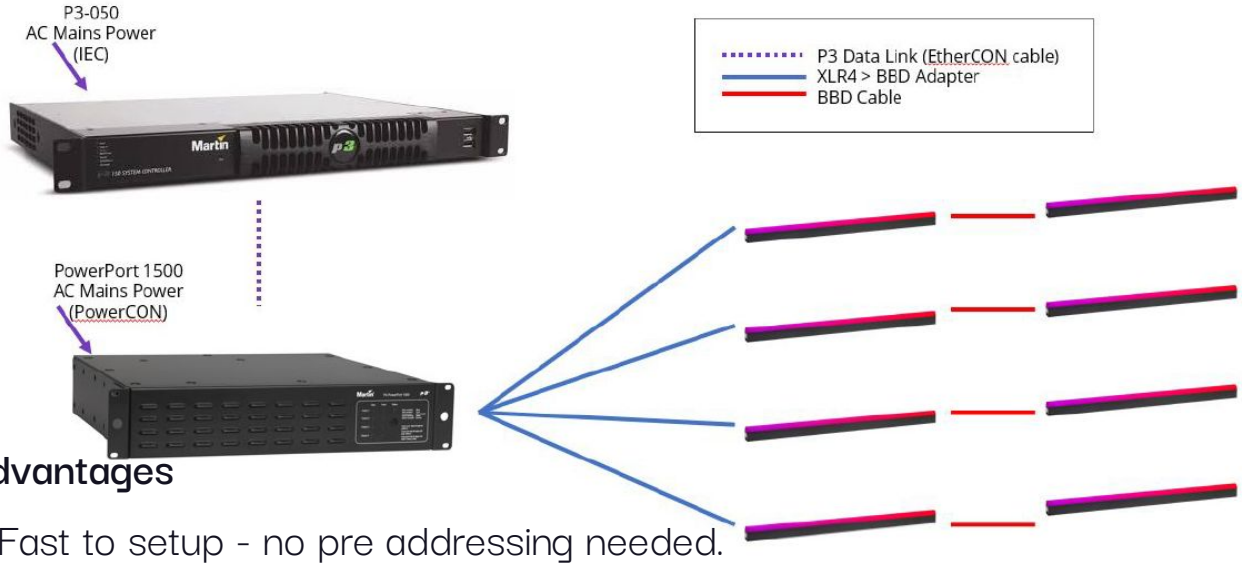
Products stocked at TSL are:

- PowerPort 1500
- PowerPort 1000 IP
- P3-050 System Processor
- Laptop Computer running P3-PC
- VDO Sceptron 10 1000mm
- VDO Sceptron 10 320mm

There are now 4 main configurations of a Sceptron System:

i. Traditional Video
ii. Traditional DMX
iii. P3 Pixel Map
iv. P3 Hybrid Mode

Traditional Video



Advantages

- Fast to setup - no pre addressing needed.
- Video content can be fed directly into the P3-050 (1920 X 1080 Max resolution).

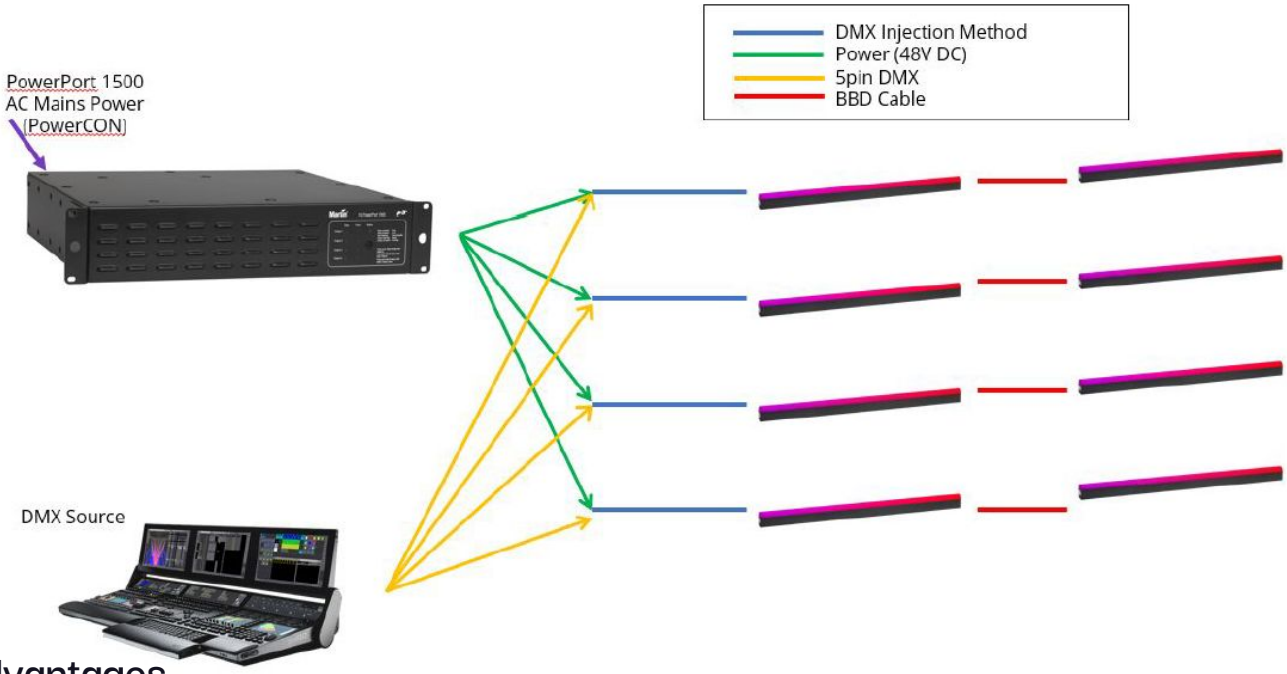
Disadvantages

- Media server or video source required, Video content cannot be directly uploaded to the P3 System controller.
- May warp video content if the shape of the fixtures does not match the shape of the content.

Suggested Use Case

- Sceptron are surrounding a video wall and external content needs to be played to match.
- Corporate party where hi-res dynamic content is required but there is nor the time nor budget for pixel mapping.

Traditional DMX



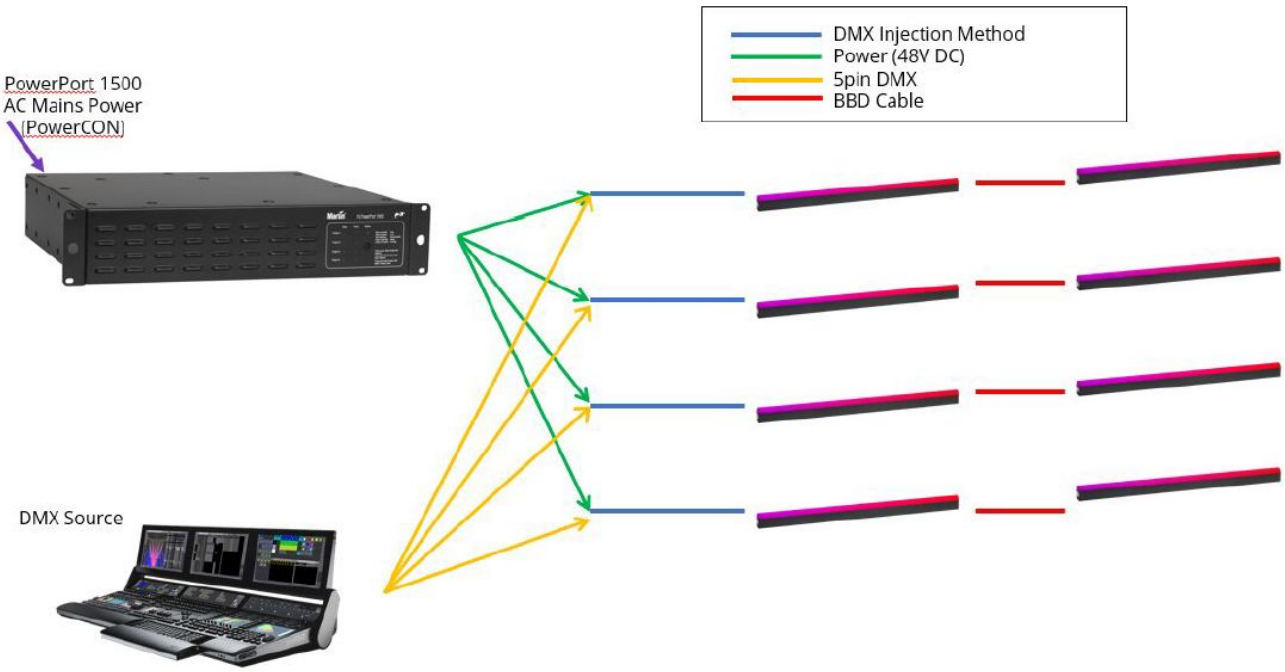
Advantages

- Full Pixel control via DMX
- No need for video content, Media Servers or P3-050
- Quick to setup on site
- Allows for more 'traditional' control
- Combine with a PowerPort 1000IP for a fully IP68 outdoor solution

Disadvantages

- In full pixel mode the units are very channel hungry - only one Sceptron 1000mm per universe! (Each unit requires 307 DMX channels)
- All fixtures need to be DMX addressed via RDM
- Each line from the PowerPort can only be one universe
- DMX Injection must be physical 5pin so often requires many ArtNet Nodes

Traditional DMX



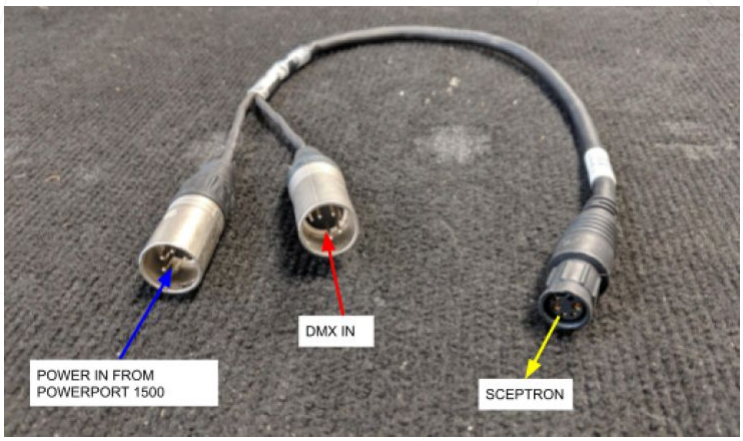
Suggested Use Case

- Event with limited time for load-in and fixtures will only ever be a static colour
- Full pixel control of few units required but no budget or requirement for Media Server
- Fixtures are designed to replicate traditional LED battens
- Macro channels and FX channels required

DMX Injection

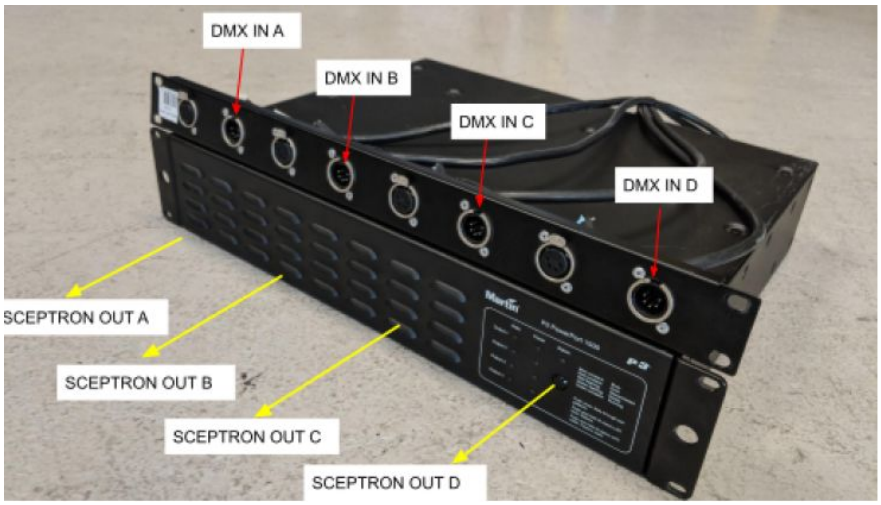
This can be done one of two ways. Both achieve the same outcome.

DMX Injection Cable(s) - Useful in small amounts, can become messy when in racks

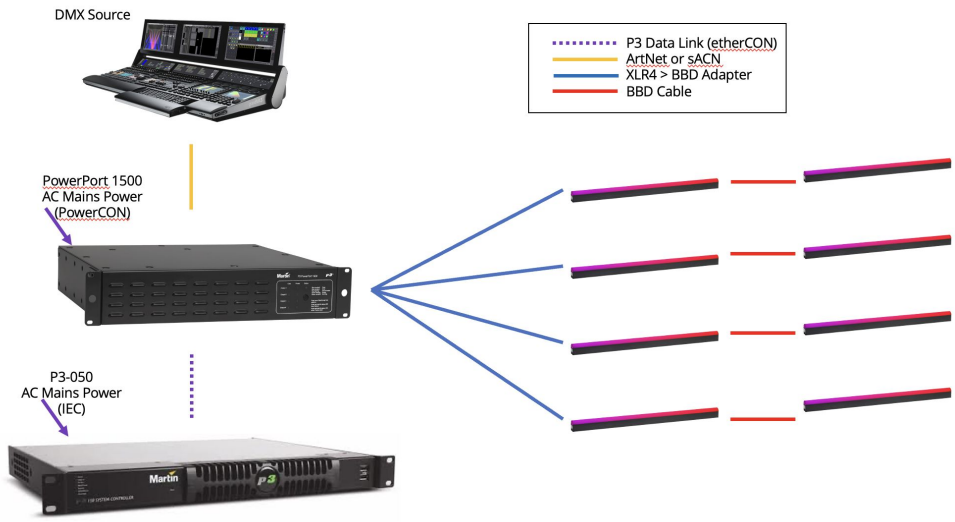


DMX Adapter Panel - Requires an additional 4x XLR4 > BBD for output but better suited for racks.

We own two types, the one pictured below and a second variant that also has a True1 input (converted to PowerCON for PowerPort) and an EtherCON input (this is for a Sneak Snake and is paralleled with the DMX ports, NOT ArtNet!).



P3 Pixel Map



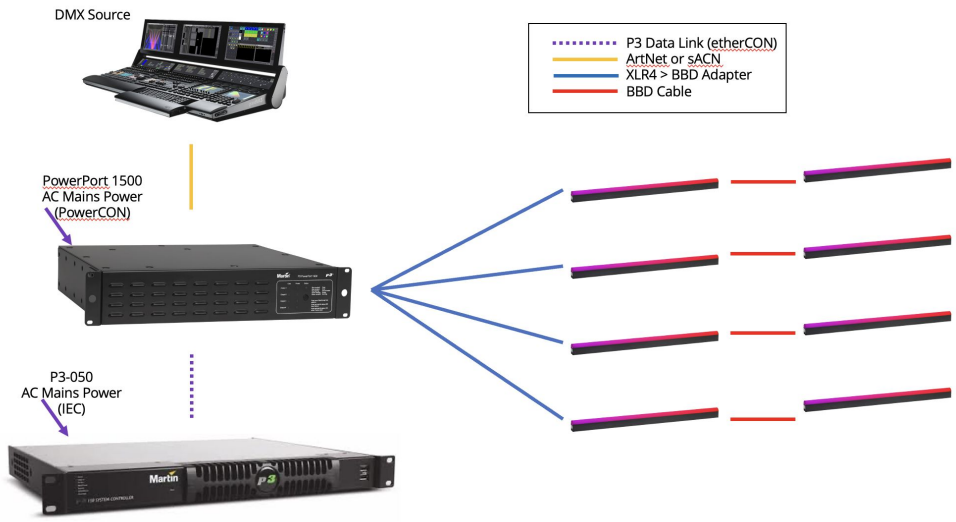
Advantages

- Does not require DMX Injection
- P3-050 acts as an “ArtNet/sACN to P3 converter”
- Fixtures can be split into more segments (1-15/17/20/25/34/50/100)
- Fixtures’ DMX addresses can span multiple Universes
- Easy to program, Sceptron appears to the console operator just as RGB fixtures!

Disadvantages

- Requires P3 Show File to be made
- No video content can be shown on the fixtures
- ArtNet or sACN only, proprietary (MA-Net2, ChamsysNet, HogNet etc) not supported.

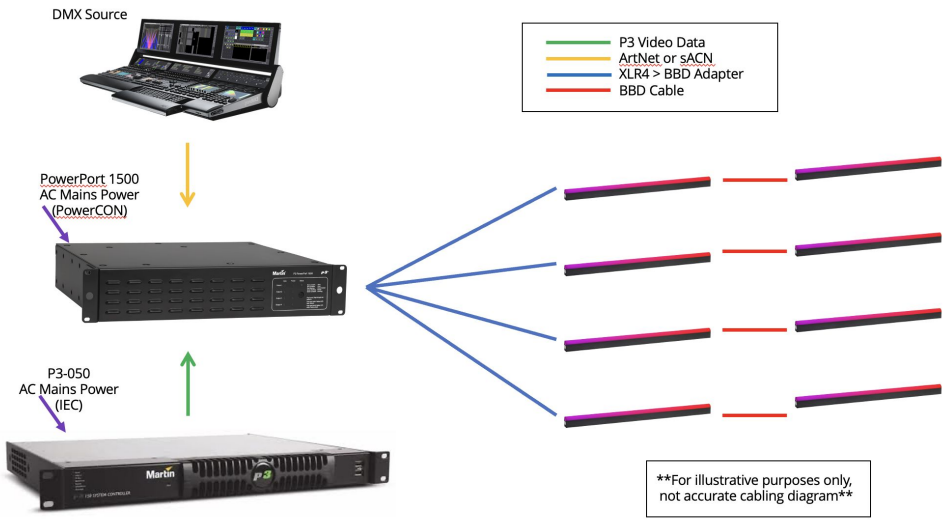
P3 Pixel Map



Suggested Use Case

- Full pixel control is required for a large number of fixtures.
- Varying fixtures are required to be split into varying numbers of segments.

P3 Hybrid Mode



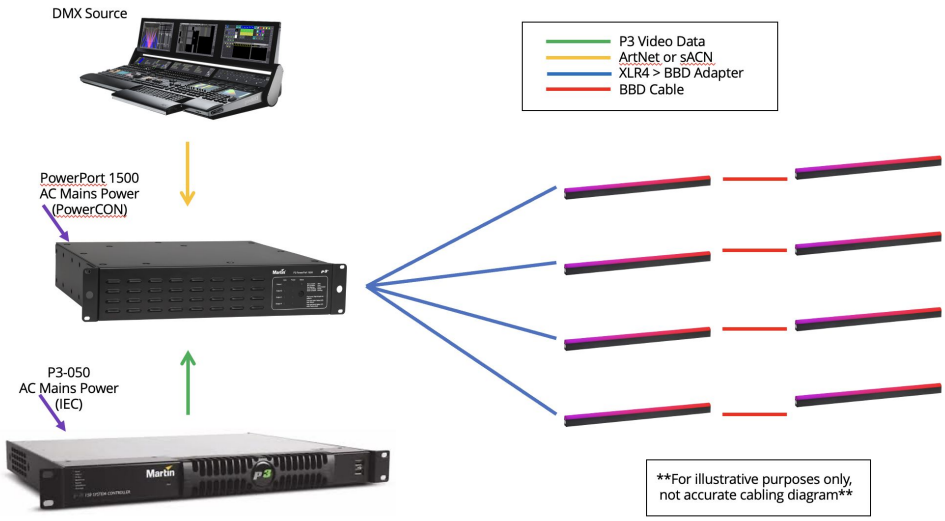
Advantages

- Fixtures can be switched on-the-fly between video content and DMX-Driven Content
- Lighting desk always retains master intensity control
- Allows for a greater variety of uses of the product on one single event

Disadvantages

- The most complex to setup, would almost certainly require an operator
- Requires the most hardware
- Requires video content (TSL provided or otherwise via additional hardware)
- Sceptron P3 switch is a hard switchover, not a crossfade

P3 Hybrid Mode



Suggested Use Case

- Large corporate event where fixtures can be used to their full potential
- Festival or concert touring where video content can be mixed in with DMX control

PowerPort Capacity

Each PowerPort has 4 outputs . Each output can run the following amounts of VDO Sceptron 10:

Fixture Type	Per Output (4 outputs per PowerPort)	Max Total Outputs per PortPort 1500
VDO Sceptron 10 – 1000mm	10	40
VDO Sceptron 10 – 320mm	30	120

NOTE:

- The maximum permitted cable length from PowerPort to the last fixture in the run is 50m.
- TSL also stock PowerPort 1000IP units as well as PowerPort 1500s. These are Truss-mountable, IP68 versions of the PowerPort; they output directly to BBD, have True1 input and a lower power capacity than the 1500 as shown below.

Fixture Type	Per Output (4 outputs per PowerPort)	Max Total Outputs per PortPort 1000IP
VDO Sceptron 10 – 1000mm	7	28
VDO Sceptron 10 – 320mm	20	80

DMX Modes

VDO Sceptron 10 1000mm	Channel Count	Information
RGB Mode	3 Channels per Fixture	
Basic Mode	10 Channels per fixture	FX Mode
Segment Mode	22 Channels per fixture	FX Modes + 5 RGB Segments
Pixel Mode	307 Channels per fixture	FX and RGB Every Pixel
Pixel Map Mode	3-300 Channels varying	Virtual Dimmer + RGB in segments as specified by user
Hybrid Mode	6-303 Channels varying	Intensity, P3 Switch then RGB in segments as specified by user

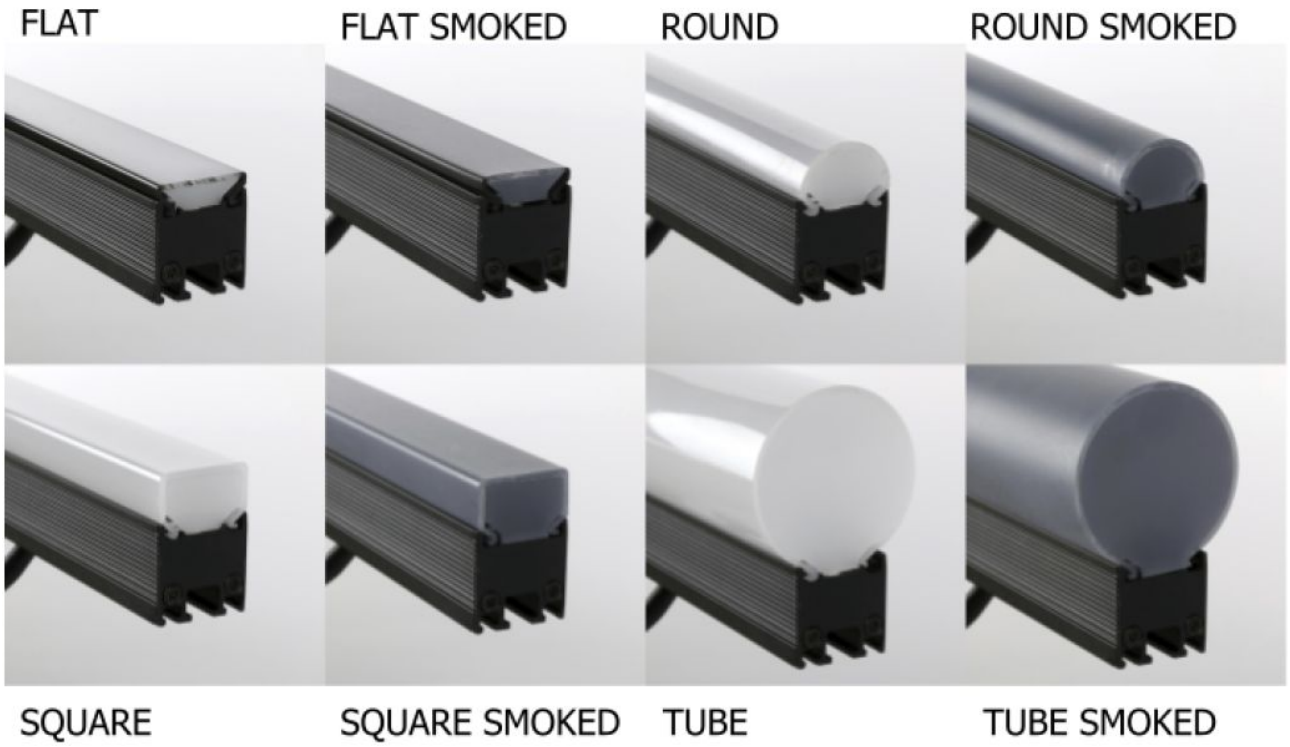
DMX Modes

VDO Sceptron 10 320mm	Channel Count	Information
RGB Mode	3 Channels per Fixture	
Basic Mode	10 Channels per fixture	FX Mode
Segment Mode	13 Channels per fixture	FX Modes + 2 RGB Segments
Pixel Mode	103 Channels per fixture	FX and RGB Every Pixel
Pixel Map Mode	3-96 Channels varying	Virtual Dimmer + RGB in segments as specified by user
Hybrid Mode	6-99 Channels varying	Intensity, P3 Switch then RGB in segments as specified by user

Diffuser Types

Each Sceptron at the point of rental is supplied with a ‘SQUARE’ diffuser and this should be considered the standard diffuser option. Units are also available with no diffuser at all

Other diffuser options available are shown below



NB. Smoked diffusers are less obvious when turned off allowing them more easily to blend into the background however this does have an impact on the total light output of the unit.

Feature comparison

Type	Video	DMX	Pixel Map	Hybrid
Requires P3	Yes	No	Yes	Yes
Requires Content Source	Yes	No	No	Yes
Requires DMX Source	No	Yes	Yes	Partially
Needs DMX Injection	No	Yes	No	No
XLR4 > BBD Adapter	Yes	Only with panel	Yes	Yes
Y-Split Cables	No	Yes, or panel	No	No
Can take ArtNet or sACN	No	No	Yes	Yes
Can take 5pin DMX	No	Yes	No	No
Set-up speed	Complex	Quickest	Quick	Complex
Usability	Intermediate	Novice	Intermediate	Advanced
Requires RDM	No	Yes	No	No
Requires Nodes	No	Yes	No	No
DMX Consumption	N/A	Low	High	Varying