



## 96 UNIVERSE / 8-PORT ETHERNET TO SPI CONTROL SYSTEM (artnet/sACN)



The MX96 Master coupled with SX Sub-controllers, is a powerful and flexible control system developed specifically to control LED pixel protocols in a wide range of installation configurations.

The MX96 outputs the transmission of light data ("X-Data") to be sent through any standard network cable at distances in excess of 300m (1000'). The SX Sub-controllers decode this signal into pixel ready protocols and allows the distribution of a large number of pixels from a single, centralised pixel controller, bypassing common challenges of data degradation, crosstalk, signal reflections or voltage drop.

A whopping 96 Universes of Multicast/Unicast E1.31 or ART-NET data is transmitted via 8 outputs.

This incredible pixel volume when combined with our advanced and highly configurable feature-set ensures our MX96 and SX pixel control system is the perfect choice for your LED Pixel lighting projects.



## CONFIGURATION OPTIONS

### OPERATING SPECIFICATIONS:

- **Input:**
  - **Power:** 110-240v AC
  - **Connection:** Ethernet (RJ45)
  - **Protocol:** E1.31(sACN) / Artnet
- **Output:**
  - **Connection:** 8x Ethernet (RJ45)
  - **Protocol:** 8x X-Data
- **Output Protections:**
  - Electrostatic Discharge (ESD)
  - Overvoltage protection (up to 60vDC)
  - Short circuit
- **Operating Temperature:** -10°C - +60°C

- **Supported Chipsets:**  
TLS3001, SM16716, WS2801, WS2811/12/12B/14/15, MBI6020, TM1803/04/09, MY9221/31, APA102, SK6812, UCS1903, P9813, SK9822, DMX512, LPD6803, UCS2904, UCS9812, WS2813, SK6822, UCS8903, TM1814, MY9291, GS8208, UCS8904, APA104/09, TM1914, SM16703/04.  
(NB: One protocol per MX96)

### OPERATING MODES:

There are two operating modes, condensed and expanded for greater adaptability and allowing optimised configuration of pixels for different project requirements.

#### 1. SX2

Each SX2 sub-controller has two pixel data outputs. A maximum of 3,072 channels per output is available in this mode. (6,144 channels total). This mode allows control of all pixel protocols, either with or without a clock line.

#### 2. SX4

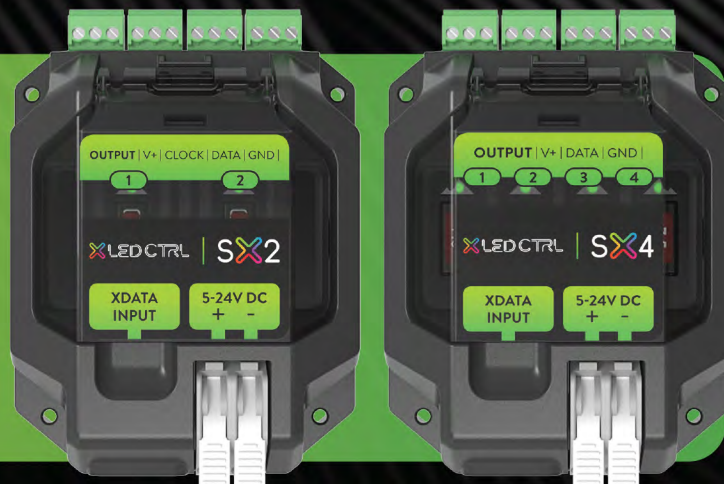
Each SX4 sub-controller has up to four pixel data outputs. A maximum of 1,536 channels per output. (6,144 channels total). This mode can only be used for pixel protocols without a clock line.







The SX Sub-controller is used in conjunction with the MX96 Master and receives X-Data through normal ethernet cable and RJ45 connectors. It converts X-Data into a pixel ready data stream that supports a huge amount of pixel protocols. The sub-controllers can be configured in a multitude of ways making them perfect for every pixel project.



## CONFIGURATION OPTIONS

### OPERATING SPECIFICATIONS:

- **Input:**
  - Power: 5v - 24vDC
  - Connection: Ethernet (RJ45)
  - Protocol: X-Data
- **Output:**
  - IP40 Connection: Screw Terminal
  - Protocol:
    - Pixel Data
    - TLS3001, SM16716, WS2801, LPD6803, WS2811/12/12B/14/15, MBI6020, TM1803/04/09, MY9221/31, APA102, SK6812, UCS1903, P9813, SK9822, DMX512, UCS2904, UCS9812, WS2813, SK6822, UCS8903, TM1814, MY9291, SM16703/04, GS8208, UCS8904, APA104/09, TM1914.
- 12 Universes of SPI (6,144 Channels)
- **Amps:**
  - SX2: 7.5A x 2 Outputs (total 15A)\* with optional clocked data outputs
  - SX4: 7.5A x 4 Outputs (total 30A)\* with 4 non-clocked data outputs  
\*Mini Blade - Fused Outputs
- **Operating Temperature:** -20°C - +55°C

## CONFIGURATION OPTIONS (MX/SX SYSTEM)

- One Pixel Protocol per MX96
- Configurable RGB/W Order
- Gamma Correction
- Clock Speed Adjustment
- Test Mode
  - None (Reads Live Data)
  - RGBW Cycle
  - Select Colours (Red / Green / Blue / White)
  - Select Custom Colour
  - Colour Fade
- Start Universe and Start Channels
- Number of Pixels / Output
- Null Pixels
- ZigZag Patch
- Pixel Buddying (Pixel Groups)
- Set Global Intensity Levels at Controller Level
- Reverse Patch



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