

ELATION®



PIXEL DRIVER 4000 V3

User Manual

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DOCUMENT VERSION



Due to additional product features and/or enhancements, an updated version of this document may be available online. Please scan the QR Code with your mobile device or visit www.elationlighting.com for the latest revision/update of this manual, before installation and/or programming.

Date	Document Version	Software Version	DMX Channel Mode	Notes
04/07/23	1.0	3.0	Not Applicable	Initial Release.
06/29/23	1.1	N/C	No Change	Updated Specifications.
10/10/23	1.2	N/C	No Change	Correct LED TAPE specs.
03/14/24	1.3	3.1	No Change	Updated System Menu, Specifications; added Max Patch

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GENERAL INFORMATION

INTRODUCTION

Please read and understand the instructions in this manual carefully and thoroughly before attempting to operate this device. These instructions contain important safety and use information.

UNPACKING

Every device has been thoroughly tested and has been shipped in perfect operating condition. Carefully check the shipping carton for damage that may have occurred during shipping. If the carton is damaged, carefully inspect the device for damage, and be sure all accessories necessary to install and operate the device have arrived intact. In the event damage has been found or parts are missing, please contact our customer support team for further instructions. Please do not return this device to your dealer without first contacting customer support. Please do not discard the shipping carton in the trash. Please recycle whenever possible.

BOX CONTENTS

Twist-Lock Power Cable (x1)
4-pin Data Cable (x1)
Rack Mount Brackets w/ Hardware (x2)
IP65 Power Cable Connector Kit (x1)

CUSTOMER SUPPORT

Contact ELATION Service for any product related service and support needs. Also visit forums.elationlighting.com with questions, comments or suggestions.

ELATION SERVICE USA - Monday - Friday 8:00am to 4:30pm PST
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REPLACEMENT PARTS please visit parts.elationlighting.com

IMPORTANT NOTICE!

**THERE ARE NO USER SERVICEABLE PARTS INSIDE THIS UNIT.
DO NOT ATTEMPT ANY REPAIRS YOURSELF; DOING SO WILL VOID YOUR
MANUFACTURER'S WARRANTY. DAMAGES RESULTING FROM MODIFICATIONS TO THIS
FIXTURE AND/OR THE DISREGARD OF SAFETY INSTRUCTIONS AND GUIDELINES IN THIS
MANUAL VOID THE MANUFACTURER'S WARRANTY AND ARE NOT SUBJECT TO ANY
WARRANTY CLAIMS AND/OR REPAIRS.**

LIMITED WARRANTY (USA ONLY)

- A. Elation Professional hereby warrants, to the original purchaser, Elation Professional products to be free of manufacturing defects in material and workmanship for a period of two years (730 days), and Elation Professional product rechargeable batteries to be free of manufacturing defects in material and workmanship for a period of six months (180 days), from the original date of purchase. This warranty excludes discharge lamps and all product accessories. This warranty shall be valid only if the product is purchased within the United States of America, including possessions and territories. It is the owner's responsibility to establish the date and place of purchase by acceptable evidence, at the time service is sought.
- B. For warranty service, send the product only to the Elation Professional factory. All shipping charges must be pre-paid. If the requested repairs or service (including parts replacement) are within the terms of this warranty, Elation Professional will pay return shipping charges only to a designated point within the United States. If any product is sent, it must be shipped in its original package and packaging material. No accessories should be shipped with the product. If any accessories are shipped with the product, Elation Professional shall have no liability what so ever for loss and/or or damage to any such accessories, nor for the safe return thereof.
- C. This warranty is void if the product serial number and/or labels are altered or removed; if the product is modified in any manner which Elation Professional concludes, after inspection, affects the reliability of the product; if the product has been repaired or serviced by anyone other than the Elation Professional factory unless prior written authorization was issued to purchaser by Elation Professional; if the product is damaged because not properly maintained as set forth in the product instructions, guidelines and/or user manual.
- D. This is not a service contract, and this warranty does not include any maintenance, cleaning or periodic check-up. During the periods as specified above, Elation Professional will replace defective parts at its expense, and will absorb all expenses for warranty service and repair labor by reason of defects in material or workmanship. The sole responsibility of Elation Professional under this warranty shall be limited to the repair of the product, or replacement thereof, including parts, at the sole discretion of Elation Professional. All products covered by this warranty were manufactured after January 1, 1990, and bare identifying marks to that effect.
- E. Elation Professional reserves the right to make changes in design and/or performance improvements upon its products without any obligation to include these changes in any products theretofore manufactured.
- F. No warranty, whether expressed or implied, is given or made with respect to any accessory supplied with the products described above. Except to the extent prohibited by applicable law, all implied warranties made by Elation Professional in connection with this product, including warranties of merchantability or fitness, are limited in duration to the warranty periods set forth above. And no warranties, whether expressed or implied, including warranties of merchantability or fitness, shall apply to this product after said periods have expired. The consumer's and/or dealer's sole remedy shall be such repair or replacement as is expressly provided above; and under no circumstances shall Elation Professional be liable for any loss and/or damage, direct and/or consequential, arising out of the use of, and/or the inability to use, this product.
- G. This warranty is the only written warranty applicable to Elation Professional products and supersedes all prior warranties and written descriptions of warranty terms and conditions heretofore published.

WARRANTY RETURNS

All returned service items whether under warranty or not, must be freight pre-paid and accompany a return authorization (R.A.) number. The R.A. number must be clearly written on the outside of the return package. A brief description of the problem as well as the R.A. number must also be written down on a piece of paper and included in the shipping container. If the unit is under warranty, you must provide a copy of your proof of purchase invoice. Items returned without a R.A. number clearly marked on the outside of the package will be refused and returned at customer's expense. You may obtain a R.A. number by contacting customer support.

SAFETY GUIDELINES

This fixture is a sophisticated piece of electronic equipment. To guarantee smooth operation, it is important to follow all instructions and guidelines in this manual. Elation Professional is not responsible for injury and/or damages resulting from the misuse of this fixture due to the disregard of the information printed in this manual. Only qualified and/or certified personnel should perform installation of this fixture and only the original rigging parts included with this fixture should be used for installation. Any modifications to the fixture and/or the included mounting hardware will void the original manufacturer's warranty and increase the risk of damage and/or personal injury.



PROTECTION CLASS 1 - FIXTURE MUST BE PROPERLY GROUNDED.



THERE ARE NO USER SERVICEABLE PARTS INSIDE THIS UNIT. DO NOT ATTEMPT ANY REPAIRS YOURSELF. DOING SO WILL VOID YOUR MANUFACTURER'S WARRANTY. DAMAGES RESULTING FROM MODIFICATIONS TO THIS DEVICE AND/OR THE DISREGARD OF SAFETY INSTRUCTIONS AND GUIDELINES IN THIS MANUAL VOID THE MANUFACTURER'S WARRANTY AND ARE NOT SUBJECT TO ANY WARRANTY CLAIMS AND/OR REPAIRS.



**DO NOT PLUG THIS UNIT INTO A DIMMER PACK!
DO NOT REMOVE THE COVER FOR ANY REASON!
NEVER OPERATE THIS UNIT WITH THE CASING REMOVED!
UNPLUG FROM POWER DURING LONG PERIODS OF NON-USE.
KEEP FLAMMABLE MATERIALS AWAY FROM DEVICE!
DISCONNECT POWER BEFORE PERFORMING MAINTENANCE.**



**THIS DEVICE IS INTENDED FOR INDOOR USE ONLY!
USE OF THE DEVICE OUTDOORS VOIDS ALL MANUFACTURER'S WARRANTIES!
DO NOT EXPOSE THE DEVICE TO RAIN OR MOISTURE!**

SAFETY GUIDELINES

- **DO NOT** shake device, and avoid brute force when installing and operating.
- **DO NOT** operate device if the power cord has been frayed, crimped, damaged, and/or if any of the power cord connectors are damaged and do not insert easily into the device.
- **NEVER** force a power cord connector into the device. If the power cord or any of its connectors are damaged, it must immediately be replaced with a new cord or connector of the same power rating.
- **DO NOT** block any air ventilation slots.
- All fan and air inlets must remain clean and never blocked.
- For proper cooling, allow approx. 6" (15cm) between the device and other devices or a wall.
- When installing the device in a suspended environment, always use mounting hardware that is at least M10x25mm, and always install the device with an appropriately rated safety cable.
- Always disconnect the device from its main power source before performing any type of service or cleaning procedure.
- Handle the cord only by the plug end. NEVER pull out the plug by tugging on the wire portion of the cord.
- Consistent operational breaks will ensure that the device functions properly for many years.
- Use **ONLY** the original packaging and materials to transport the device in the event that service or repair is required.

MAINTENANCE GUIDELINES



DISCONNECT POWER BEFORE PERFORMING ANY MAINTENANCE!

CLEANING

Frequent cleaning is recommended to ensure proper function and extended life. The frequency of cleaning depends on the environment in which the device operates: damp, smoky, or particularly dirty environments can cause greater accumulation of dirt on the device and air vents. Clean the external surface regularly with a soft cloth to avoid dirt/debris accumulation.

NEVER use alcohol, solvents, or ammonia-based cleaners.

MAINTENANCE

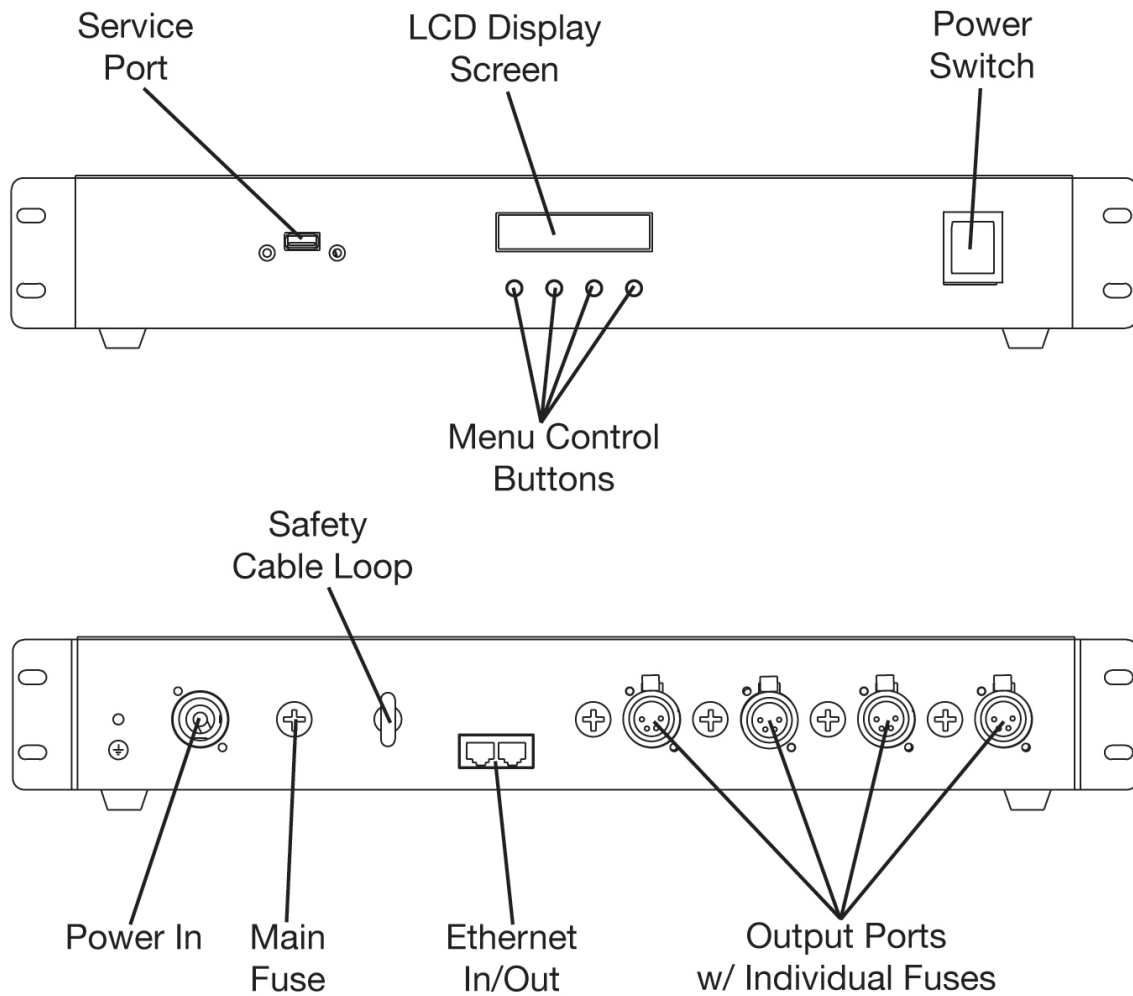
Regular inspections are recommended to ensure proper function and extended life. There are no user serviceable parts inside this device. Please refer all other service issues to an authorized Elation service technician. Should you need any spare parts, please order genuine parts from your local Elation dealer.

Please refer to the following points during routine inspections:

- A detailed electrical check by an approved electrical engineer every three months, in order to make sure the circuit contacts are in good condition and prevent overheating.
- Be sure all screws and fasteners are securely tightened at all times. Loose screws may fall out during normal operation, resulting in damage or injury as larger parts could fall.
- Check for any deformations on the housing, rigging hardware, and rigging points (ceiling, suspension, trussing). Deformations in the housing could allow for dust to enter into the device. Damaged rigging points or unsecured rigging could cause the device to fall and seriously injure a person(s).
- Electrical power supply cables must not show any damage, material fatigue, or sediments.

NEVER remove the ground prong from the power cable.

OVERVIEW



INCLUDED ITEMS

- 19" Rack Mount Kit
- 1.7m (5.6 ft) Power Cable
- 2.8m (9.25ft) 4pin 16AWG Power/Data Cable

INSTALLATION GUIDELINES



FLAMMABLE MATERIAL WARNING!

Keep drive a minimum of 5.0 feet (1.5m) away from flammable material and/or pyrotechnics.



ELECTRICAL CONNECTIONS

A qualified electrician should be used for all electrical connections and/or devices.



FOR USE IN INDOOR OR DRY LOCATIONS ONLY! DO NOT EXPOSE TO RAIN OR MOISTURE!



DO NOT INSTALL THE DEVICE IF YOU ARE NOT QUALIFIED TO DO SO!

Device **MUST** be installed following all local, national, and country commercial electrical and construction codes and regulations.

Before rigging/mounting the device to any metal truss/structure or placing the device on any surface, a professional equipment installer **MUST** be consulted to determine if the metal truss/structure or surface is properly certified to safely hold the combined weight of the device, clamps, cables, and accessories. Overhead device installation must always be secured with a secondary safety attachment, such as an appropriately rated safety cable that meets all local, national, and country codes and regulations.

Device ambient operating temperature range is **14° to 113°F (-10° to 45°C)**. Do not use the device when the ambient temperature falls outside of this range.

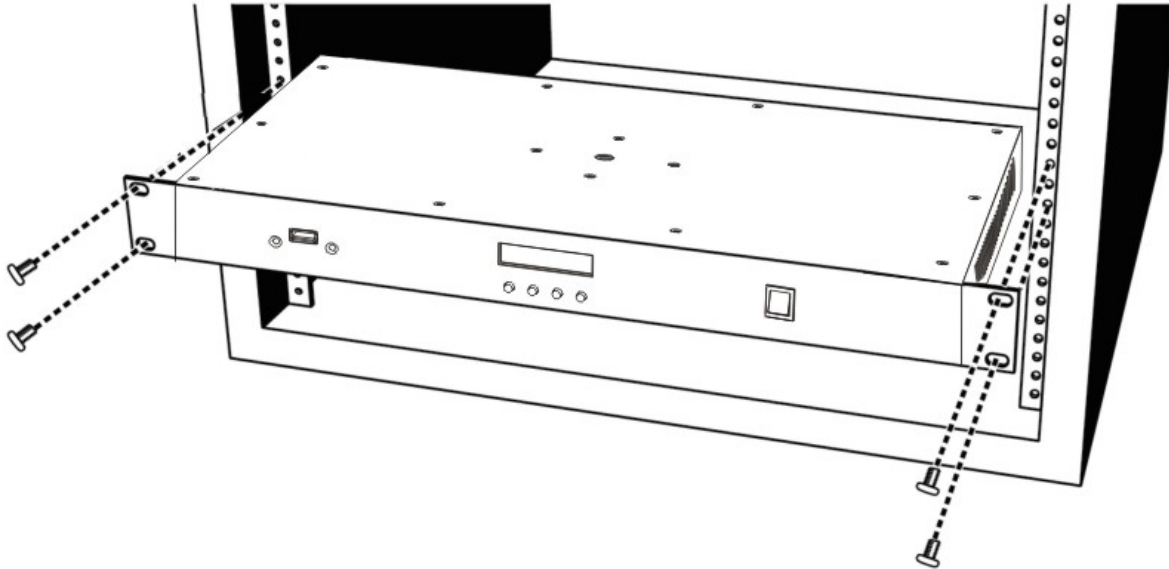
Device should be installed in areas outside walking paths, seating areas, or away from areas where unauthorized personnel might reach the fixture by hand.

NEVER stand directly below the device when rigging, removing, or servicing.

INSTALLATION GUIDELINES

RACK MOUNTING

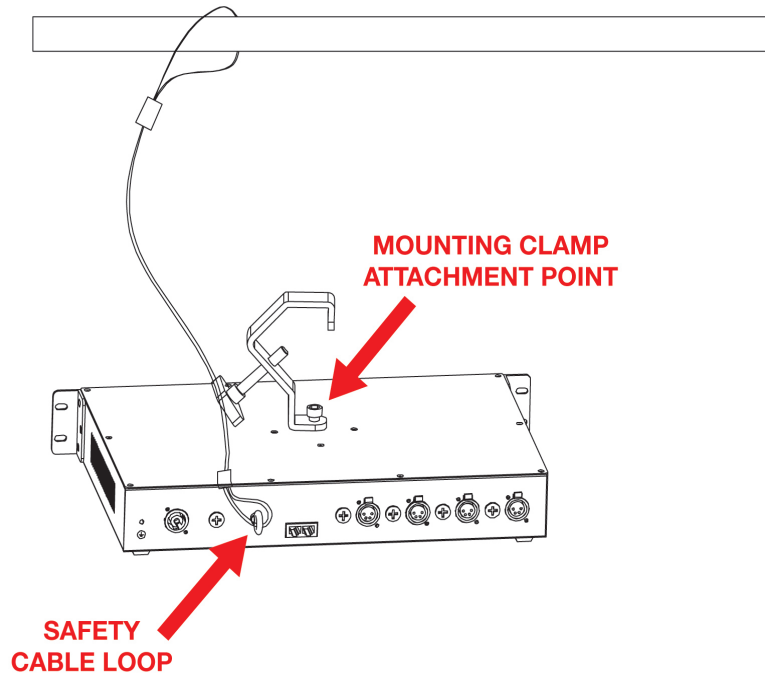
The device can be rack mounted in a standard 19-inch rack space. Attach the included rack ears to both sides of the device using the included screws. Tighten rack ear screws securely but do NOT over tighten. Use careful planning when rack mounting the device to allow ample space for the power/data cables.



INSTALLATION GUIDELINES

TRUSS MOUNTING

The device can be attached to truss or a like structure using an appropriated truss clamp (not included) and an M10 screw (not included).



SAFETY CABLE

ALWAYS ATTACH A SAFETY CABLE TO THE SAFETY CABLE LOOP ON THE BACK OF THE DEVICE WHENEVER INSTALLING THIS DEVICE IN A SUSPENDED ENVIRONMENT TO ENSURE THE FIXTURE WILL NOT DROP IF THE CLAMP FAILS.

RIGGING

Overhead rigging requires extensive experience, including calculating working load limits, installation material being used, and periodic safety inspection of all installation material and the device, among other requirements. If you lack these qualifications, do not attempt the installation yourself. Improper installation can result in bodily injury.



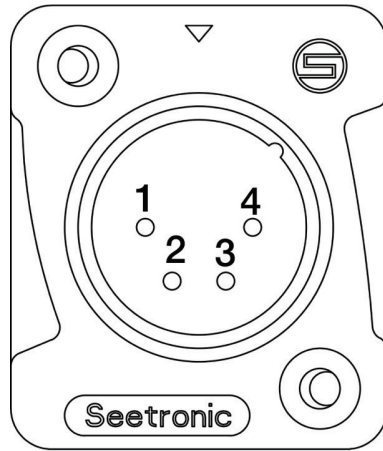
INSTALLATION LOCATION PLANNING

Use careful planning to select the installation location of the PIXEL DRIVER 4000 V3 unit(s). The maximum distance from the driver to the first pixel bar should not exceed 50 feet (18m).

CONNECTIONS AND CABLES

CONNECTIONS

The device features RJ45 Ethernet in/out and 4pin power/data combination output connections. The wiring diagram below provides the pin details for the power/data outputs.



PIN #1 - (+) Power

PIN #2 - Data

PIN #3 - CLK (clock pin)

PIN #4 - (-) Power

CABLES

Power/data cables are available in various lengths. See the **Optional Accessories** section of this manual for details.



MAXIMUM CABLE DISTANCES - 12AWG

The following maximum cable distances apply when using 12AWG cables.

- **PIXEL DRIVER 4000 V3 to 1st PIXEL BAR IP = Maximum 50 feet (18 meters)**
- **PIXEL BAR IP to PIXEL BAR IP = Maximum 32 feet (10 meters)**
- **Total combined length of cables can NOT exceed = Maximum 213 feet (65meters) including the lengths of the fixtures**

SYSTEM CONFIGURATION

LINKING

Maximum number pixels/bars each PIXEL DRIVER 4000 V3 supports is listed in charts below. Multiple combinations of PIXEL BAR IP models can be linked (daisy-chained) together to a single driver port, as long as the maximum number of pixels/bars is NOT exceeded.

KLING-NET/Art-Net/sACN = 1,020 Max Pixels per PIXEL DRIVER 4000 V3 Port

PIXEL BAR IP FIXTURES:

MODEL	TOTAL PIXELS	TOTAL CONTROL CHANNELS	KLING-NET/Art-Net/sACN 1,020 Max Pixels per Driver Port 4,080 Max Pixels per Driver Unit			
			MAX UNITS per DRIVER PORT	MAX PIXELS per DRIVER PORT	MAX UNITS per DRIVER UNIT	MAX PIXELS per DRIVER UNIT
Pixel Bar 30 IP	30	90	34	1020	136	4080
Pixel Bar 60 IP	60	180	17	1020	68	4080
Pixel Bar 120 IP	120	360	8	960	32	3840

LED TAPE:

MODEL	TOTAL PIXELS	TOTAL CONTROL CHANNELS	KLING-NET/Art-Net/sACN 850 Max Pixels per Driver Port 3,400 Max Pixels per Driver Unit			
			MAX TAPES per DRIVER PORT	MAX PIXELS per DRIVER PORT	MAX TAPES per DRIVER UNIT	MAX PIXELS per DRIVER UNIT
LED Tape	170	510	3	510	12	2040

SYSTEM CONFIGURATION

PIXEL WASH 40IP:

20pcs Max can be driven when HiPower Mode is set to ON and 32pcs Max can be driven when HiPower Mode is set to OFF.

When incorporating up to 16 Pixel Amp 200's (**sold separately**), 100pcs Max can be driven when HiPower Mode is set to ON and 160pcs Max can be driven when HiPower Mode is set to OFF.

Output limitations to control Pixel Wash 40IP's per port:

MODE	Pixel Amp 200's per Port	Pixel Amp 200's per Driver	Total Pixel Wash 40IP's per Port	Total Pixel Wash 40IP's per Driver
HiPower Mode ON	0	0	5	20
	1	4	10	40
	2	8	15	60
	3	12	20	80
	4	16	25	100
HiPower Mode OFF	0	0	8	32
	1	4	16	64
	2	8	24	96
	3	12	32	128
	4	16	40	160

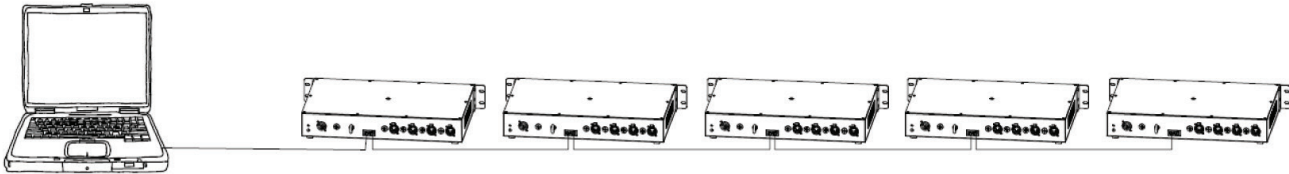
SYSTEM CONFIGURATION

CONTROL

PIXEL DRIVER 4000 V3 supports Kling-NET, Art-NET, and sACN control protocols. It can be controlled by an Art-NET compatible controller/console and for advanced pixel programming, or it can be controlled via a computer with media software such as ArKaos Media Master. The driver also includes 16 internal programs for easy stand-alone demo proposes, which can be accessed manually from the 4-button LCD control menu display.

PC – DRIVER DIRECT CONNECTION

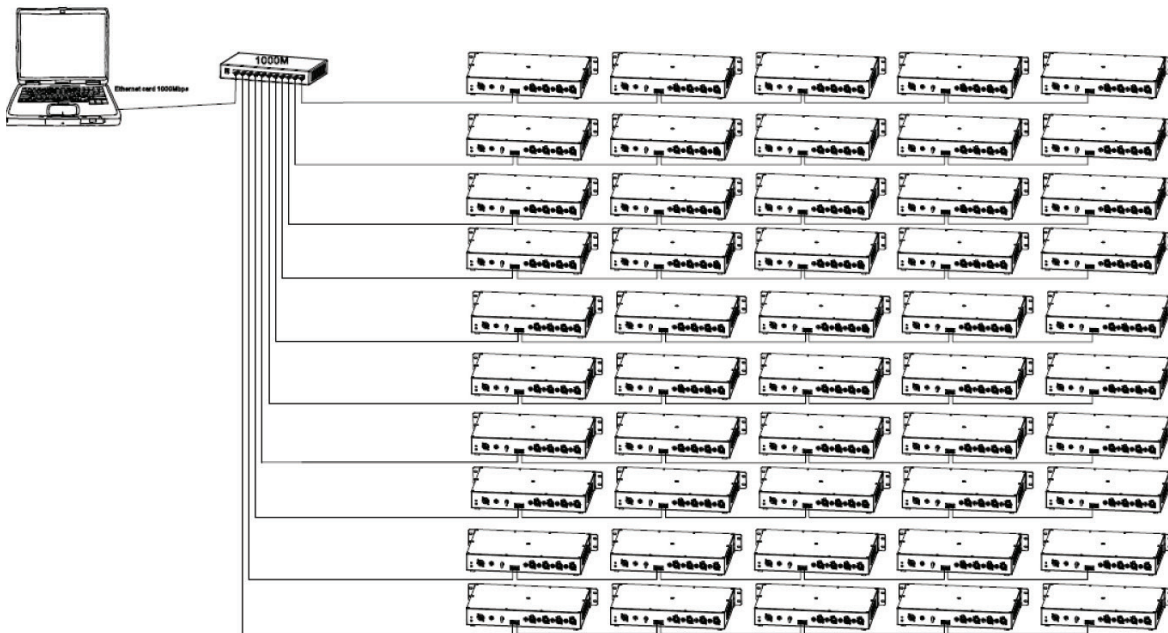
Up to 5 PIXEL DRIVER 4000 V3 units can be linked (daisy-chained) from a computer. For systems requiring more than 5 drivers, see the next section for more information.



PC – NETWORK SWITCH CONNECTION

Up to 50 PIXEL DRIVER 4000 V3 units can be linked (daisy-chained) from a computer and a Gigabit Ethernet Switch (not included) that supports IGMP (Internet Group Management Protocol). Using a Gigabit Ethernet Switch that does not support IGMP can cause erratic behavior of all connected devices to the switch. Up to 5 PIXEL DRIVER 4000 V3 units can be connected per ethernet switch port and up to 10 total ethernet switch ports can be used in a system. Click link below for more information about IGMP.

https://en.wikipedia.org/wiki/Internet_Group_Management_Protocol https://en.wikipedia.org/wiki/Internet_Group_Management_Protocol



REMOTE DEVICE MANAGEMENT (RDM)

NOTE: In order for RDM to work properly, RDM enabled equipment must be used throughout the entire system, including DMX data splitters and wireless systems.

Remote Device Management (RDM) is a protocol that sits on top of the DMX512 data standard for lighting, allowing the DMX systems of the device to be managed, modified, and monitored remotely (hence, remote device management). This protocol is ideal for fixtures installed in locations that are not easily accessible.

With RDM, the DMX512 system becomes bi-directional, allowing a compatible RDM enabled controller to send out a signal to devices on the wire, as well as allowing the fixture to respond (known as a GET command). The controller can then use it's SET command to modify settings that would typically have to be changed or viewed directly via the unit's display screen, including the DMX Address, DMX Channel Mode, and Temperature Sensors.

FIXTURE RDM INFORMATION:

RDM Code	Device ID	Device Model ID
22A6	0000-FFFF	9702

Please be aware that not all RDM devices support all RDM features, and therefore it is important to check beforehand to ensure that the equipment that you are considering includes all of the features that you require.

The following parameters are accessible in RDM on this device:

[0x0001] Disc Unique Branch
[0x0002] Disc Mute
[0x0003] Disc Unmute
[0x0050] Supported Parameters
[0x0060] Device Info
[0x0081] Manufacturer Label
[0x0082] Device Label
[0x00C0] Software Version Label
[0x00E0] DMX Personality
[0x00F0] DMX Start Address

SYSTEM MENU

MODE	SET UP	UP/DOWN	DESCRIPTION	
DIMMER MODE	Red Dimmer	Manual Control Red: xxx	Adjust the intensity of the red color.	
	Green Dimmer	Manual Control Green: xxx	Adjust the intensity of the green color.	
	Blue Dimmer	Manual Control Blue: xxx	Adjust the intensity of the blue color.	
	White Dimmer	Manual Control White: xxx	Adjust the intensity of the white color (Pixel Wash 40IP only)	
	Output enable or disable	Manual Control Out1: Enable/Disable	Enable or disable output 1.	
		Manual Control Out2: Enable/Disable	Enable or disable output 2.	
		Manual Control Out3: Enable/Disable	Enable or disable output 3.	
		Manual Control Out4: Enable/Disable	Enable or disable output 4.	
KLINGNET MODE	Pixel Bar Setup	Klingnet Out x Pixel Bar xxx IP	Select the pixel bar model that will be connected to each output. <ul style="list-style-type: none"> x = output port # xxx = pixel bar model 	
		Klingnet Out x xxx IP Number xx	Select the number of pixel bar units that will be connected to each output. <ul style="list-style-type: none"> x = output port # xx = number of units xxx = pixel bar model 	
		Klingnet Out x xx X xx RGB Pixels	Set RGB Channel mode, see Pixel Modes section of this manual for details.	
	LED Tape Setup	Klingnet Out x LED Tape 170	Select the output x.	
		Klingnet Out x LED Tape 170 Numer xx	Select the number of LED Tapes (xx) that will be controlled by the output.	
		Klingnet Out x xx X xx RGB Pixels	Set RGB Channel mode, see Pixel Modes section of this manual for details.	
	Pixel Wash 40IP Setup	Klingnet Out x Pixel Wash 40IP	Select the output x.	
		Klingnet Out x 40IP Number xx	Select the number of pixel wash units that will be connected to each output. <ul style="list-style-type: none"> x = output port # xx = number of units 	

SYSTEM MENU

MODE	SET UP	UP/DOWN	DESCRIPTION
IP ADDRESS	IP Address Set	IP Address Out1 xxx:xxx:xxx:xxx	Set IP address of each output
		IP Address Out2 xxx:xxx:xxx:xxx	
		IP Address Out3 xxx:xxx:xxx:xxx	
		IP Address Out4 xxx:xxx:xxx:xxx	
ARTNET MODE	Max Patch EN/DIS	ArtnetOutx Enable/Disable	Enable: Max Patch Disable: Pixel Bar, LED Tape, Pixel WASH 40IP
	DMX Universe Set	Universe Out x U:xxxxx	Set DMX universe of each output.
	Pixel Bar Setup	Artnet Out x Pixel Bar xxx IP	Select the pixel bar model that will be connected to each output. <ul style="list-style-type: none"> x = output port # xxx = pixel bar model
		Artnet Out x xxx IP Number xx	Select the number of pixel bar units that will be connected to each output. <ul style="list-style-type: none"> x = output port # xx = number of units xxx = pixel bar model
		Artnet Out x xx X xx RGB Pixels	Set RGB Channel mode, see Pixel Modes section of this manual for details.
		Artnet Out x DMX Address xxx	Set DMX start address
		LED Tape Setup	Artnet Out x LED Tape 170
	Artnet Out x Pixel Count: xxx		Select the number of pixels (xxx) that each output will control.
	Artnet Out x Groups: xxx X xxx		Set RGB Channel mode, see Pixel Modes section of this manual for details.
	Artnet Out x DMX Address xxx		Set DMX start address

SYSTEM MENU

MODE	SET UP	UP/DOWN	DESCRIPTION
ARTNET MODE (continued)	Pixel Wash 40IP Setup	Artnet Out x Pixel Wash 40IP	Select the output x.
		Artnet Out x 40IP Number xx	Select the number of pixel wash units that will be connected to each output. • x = output port # • xx = number of units
		Artnet Out x xx X xx RGBW Pixels	Set RGB Channel mode, see Pixel Modes section of this manual for details.
		Artnet Out x DMX Address xxx	Set DMX start address
	Max Patch	Artnet Outx X:XXXX Y:XXXX	Set patch length and width
sACN CONTROL MODE	DMX Universe Set	sACN Out x u:xxxxx	Set DMX universe of each output.
	Pixel Bar Setup	sACN Out x Pixel Bar xxx IP	Select the pixel bar model that will be connected to each output. • x = output port # • xxx = pixel bar model
		sACN Out x xxx IP Number xx	Select the number of pixel bar units that will be connected to each output. • x = output port # • xx = number of units • xxx = pixel bar model
		sACN Out x xx X xx RGB Pixels	Set RGB Channel mode, see Pixel Modes section of this manual for details.
		sACN Out x DMX Address xxx	Set DMX start address
	LED Tape Setup	sACN Out x LED Tape 170	Select the output x.
		sACN Out x Pixel Count: xxx	Set the number of pixels (xxx) that the output will control.
		sACN Out x Groups: xxx X xxx	Set RGB Channel mode, see Pixel Modes section of this manual for details.
		sACN Out x DMX Address xxx	Set DMX start address

SYSTEM MENU

MODE	SET UP	UP/DOWN	DESCRIPTION
sACN CONTROL MODE (continued)	Pixel Wash 40IP Setup	sACN Out x Pixel Wash 40IP	Select the output x.
		sACN Out x 40IP Number xx	Select the number of pixel wash units that will be connected to each output. • x = output port # • xx = number of units
		sACN Out x xx X xx RGBW Pixels	Set RGB Channel mode, see Pixel Modes section of this manual for details.
		sACN Out x DMX Address xxx	Set DMX start address
	Max Patch En/Dis	sACN Out x Enable / Disable	Enable: Max Patch Disable: Pixel Bar, LED Tape, Pixel Wash 40IP
	Max Patch	sACN Out x X:XXXX Y:XXXX	Set patch length and width
BUILT IN PROGRAM MODE	Program Play Set	Programs Program xx	Select a built in program
		Programs Speed xx	Set program speed
		Programs Fade xx	Set fade time speed
		Programs Phase Time xx	Set phase time
	Pixel Bar Setup	Program Out x Pixel Bar xxx IP	Select the pixel bar model that will be connected to each output. • x = output port # • xxx = pixel bar model
		Program Out x xxx IP Number xx	Select the number of pixel bar units that will be connected to each output. • x = output port # • xx = number of units • xxx = pixel bar model
	Pixel Wash 40IP Setup	Program Out x Pixel Wash 40IP	Select the output x.
		Program Out x 40IP Number xx	Select the number of pixel wash units that will be connected to each output. • x = output port # • xx = number of units
	LED Tape Setup	Klingnet Out x LED Tape 170	Select the output x.
		Klingnet Out x LED Tape 170 Number xx	Set the number xx of LED tape units that the port x will control

SYSTEM MENU

MODE	SET UP	UP/DOWN	DESCRIPTION
SETUP OPTIONS	LCD Backlight On/Off	Setup Options BLGT: on	LED backlight always on
		Setup Options BLGT: off	LED backlight turns off after 20 sec of inactivity
	LCD Backlight Brightness	Setup Options BRCO: xxx	Adjust brightness of backlight
	HiPower Mode	Setup Options HiPower Mode: Off / On	With Pixel Wash 40IP only
	System Reset	Setup Options Sys Reset	Return the unit the factory default settings
OUTPUT CONTROL	Output Type Set	Output Control Out x : Pixel Bar	Set output x to control a Pixel Bar series unit
		Output Control Out x : LED Tape	Set output x to control LED Tape
		Output Control Out x : Pixel Wash 40IP	Set output x to control a Pixel Wash 40IP unit
SOFTWARE VERSION	Software Version Display	Software Version Port1 Vx.x	Port 1 software version
		Software Version Port2 Vx.x	Port 2 software version
		Software Version Port3 Vx.x	Port 3 software version
		Software Version Port4 Vx.x	Port 4 software version
SERVICE	Software Update	Service Passcode = xxx	Passcode = 011, then press SETUP to enter into software update menu
		Update Software Yes / No	Update software version



*SYSTEM RESET

ONLY QUALIFIED TECHNICIANS SHOULD PERFORM THIS FUNCTION. PLEASE NOTE THAT ALL SAVED SETTINGS ARE ERASED AFTER A SYSTEM RESET IS PERFORMED.

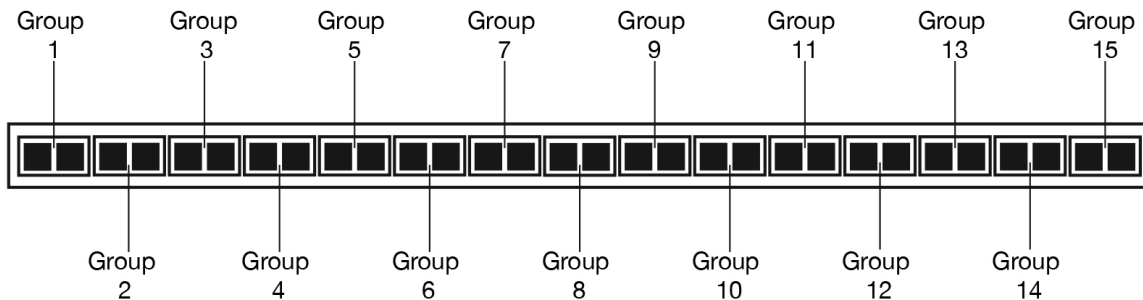
PIXEL GROUPING

Each pixel requires three channels (red, green, and blue) to operate, and therefore the number of pixels (and consequently, the number of devices) that the driver can control is limited by the total number of control channels available on the driver.

However, this driver also gives the user the ability to adjust the pixel grouping configuration. In the standard configuration, individual pixels are controlled independently for finer control over the resolution of the lighting display. Alternately, multiple individual pixels may be grouped together under a common set of control channels in order to reduce the number of required control channels. This also reduces the effective pixel count for each fixture. The downside to this is the reduced resolution of the lighting display.

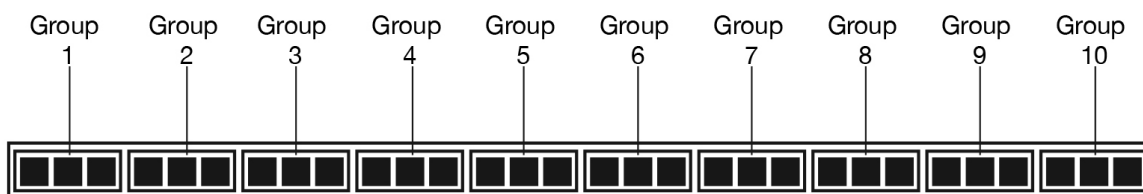
In each pixel control mode, the first number denotes the number of individual pixels that make up each control group, while the second number denotes the number of control groups. Each control group will always occupy 3 DMX channels (for red, green, and blue control). This means that within each control group, all pixels will be controlled by the same set of 3 DMX channels.

For example, let us examine a 30-pixel strip, as shown below. Selecting **2x15** mode means that the pixels will be divided into 15 control groups, with each group containing 2 LEDs.



In this mode, a total of 45 DMX channels are used: 3 DMX channels (for Red, Green, Blue) per group multiplied by 15 groups.

If we want to reduce the number of control groups required, one possible solution is to select a different pixel grouping mode. For instance, selecting **3x10** mode will result in the LED display being divided into 10 control groups each containing 3 pixels. Therefore, the number of DMX channels required drops to 30: 10 control groups multiplied by 3 DMX channels (for Red, Green, and Blue) per group.



Available pixel grouping modes are shown in the tables on the following pages.

PIXEL MODES

Pixel Count	Pixel Group Options
1	1x1
2	1x2, 2x1
3	1x3, 3x1
4	1x4, 2x2, 4x1
5	1x5, 5x1
6	1x6, 2x3, 3x2, 6x1
7	1x7
8	1x8, 2x4, 4x2, 8x1
9	1x9, 3x3, 9x1
10	1x10, 2x5, 5x2, 10x1
11	1x11
12	1x12, 2x6, 3x4, 4x3, 6x2, 21x1
13	1x13
14	1x14, 2x7, 7x2, 14x1
15	1x15, 3x5, 5x3, 15x1
16	1x16, 2x8, 4x4, 8x2, 16x1
17	1x17
18	1x18, 2x9, 3x6, 6x3, 9x2, 18x1
19	1x19
20	1x20, 2x10, 4x5, 5x4, 10x2, 20x1
21	1x21, 3x7, 7x3, 21x1
22	1x22, 2x11, 11x2, 22x1
23	1x23
24	1x24, 2x12, 3x8, 4x6, 6x4, 8x3, 12x2, 24x1
25	1x25, 5x5, 25x1
26	1x26, 2x13, 13x2, 26x1
27	1x27, 3x9, 9x3, 27x1
28	1x28, 2x14, 4x7, 7x4, 14x2, 28x1
29	1x29
30	1x30, 2x15, 3x10, 5x6, 6x5, 10x3, 15x2, 30x1
31	1x31
32	1x32, 2x16, 4x8, 8x4, 16x2, 32x1

Pixel Count	Pixel Group Options
33	1x33, 3x11, 11x3, 33x1
34	1x34, 2x17, 17x2, 34x1
35	1x35, 5x7, 7x5, 35x1
36	1x36, 2x18, 3x12, 4x9, 6x6, 9x4, 12x3, 18x2, 36x1
37	1x37
38	1x38, 2x19, 19x2, 38x1
39	1x39, 3x13, 13x3, 39x1
40	1x40, 2x20, 4x10, 5x8, 8x5, 10x4, 20x2, 40x1
41	1x41
42	1x42, 2x21, 3x14, 6x7, 7x6, 14x3, 21x2, 42x1
43	1x43
44	1x44, 2x22, 4x11, 11x4, 22x2, 44x1
45	1x45, 3x15, 5x9, 9x5, 15x3, 45x1
46	1x46, 2x23, 32x2, 46x1
47	1x47
48	1x48, 2x24, 3x16, 4x12, 6x8, 8x6, 12x4, 16x3, 24x2, 48x1
49	1x49, 7x7, 49x1
50	1x50, 2x25, 5x10, 10x5, 25x2, 50x1
51	1x51, 3x17, 17x3, 51x1
52	1x52, 2x26, 4x13, 13x4, 26x2, 52x1
53	1x53
54	1x54, 2x27, 3x18, 6x9, 9x6, 18x3, 27x2, 54x1
55	1x55, 5x11, 11x5, 55x1
56	1x56, 2x28, 4x14, 7x8, 8x7, 14x4, 28x2, 56x1
57	1x57, 3x19, 19x3, 57x1
58	1x58, 2x29, 29x2, 58x1
59	1x59
60	1x60, 2x30, 3x20, 4x15, 5x12, 6x10, 10x6, 12x5, 15x4, 20x3, 30x2, 60x1
61	1x61

PIXEL MODES

Pixel Count	Pixel Group Options
62	1x62, 2x31, 31x2, 62x1
63	1x63, 3x21, 7x9, 9x7, 21x3, 63x1
64	1x64, 2x32, 4x16, 8x8, 16x4, 32x2, 64x1
65	1x65, 5x13, 13x5, 65x1
66	1x66, 2x33, 3x22, 6x11, 11x6, 22x3, 33x2, 66x1
67	1x67
68	1x68, 2x34, 4x17, 17x4, 34x2, 68x1
69	1x69, 3x23, 23x3, 69x1
70	1x70, 2x35, 5x14, 7x10, 10x7, 14x5, 35x2, 70x1
71	1x71
72	1x72, 2x36, 3x24, 4x18, 6x12, 8x9, 9x8, 12x6, 18x4, 24x3, 36x2, 72x1
73	1x73
74	1x74, 2x37, 37x2, 74x1
75	1x75, 3x25, 5x15, 15x5, 25x3, 75x1
76	1x76, 2x38, 4x19, 19x4, 38x2, 76x1
77	1x77, 7x11, 11x7, 77x1
78	1x78, 2x39, 3x26, 6x13, 13x6, 26x3, 39x2, 78x1
79	1x79
80	1x80, 2x40, 4x20, 5x16, 8x10, 10x8, 16x5, 20x4, 40x2, 80x1
81	1x81, 3x27, 9x9, 27x3, 81x1
82	1x82, 2x41, 41x2, 82x1
83	1x83
84	1x84, 2x42, 3x28, 4x21, 6x14, 7x12, 12x7, 14x6, 21x4, 28x3, 42x2, 84x1
85	1x85, 5x17, 17x5, 85x1
86	1x86, 2x43, 43x2, 86x1
87	1x87, 3x29, 29x3, 87x1
88	1x88, 2x44, 4x22, 8x11, 11x8, 22x4, 44x2, 88x1
89	1x89
90	1x90, 2x45, 3x30, 5x18, 6x15, 9x10, 10x9, 15x6, 18x5, 30x3, 45x2, 90x1

Pixel Count	Pixel Group Options
91	1x91, 7x13, 13x7, 91x1
92	1x92, 2x46, 4x23, 23x4, 46x2, 92x1
93	1x93, 3x31, 31x3, 93x1
94	1x94, 2x47, 47x2, 94x1
95	1x95, 5x19, 19x5, 95x1
96	1x96, 2x48, 3x32, 4x24, 6x16, 8x12, 12x8, 16x6, 24x4, 32x4, 48x2, 96x1
97	1x97
98	1x98, 2x49, 7x14, 14x7, 49x2, 98x1
99	1x99, 3x33, 9x11, 11x9, 33x3, 99x1
100	1x100, 2x50, 4x25, 5x20, 10x10, 20x5, 25x4, 50x2, 100x1
101	1x101
102	1x102, 2x51, 3x34, 6x17, 17x6, 34x3, 51x2, 102x1
103	1x103
104	1x104, 2x52, 4x26, 8x13, 13x8, 26x4, 52x2, 104x1
105	1x105, 3x35, 5x21, 7x15, 15x7, 21x5, 35x3, 105x1
106	1x106, 2x53, 53x2, 106x1
107	1x107
108	1x108, 2x54, 3x36, 4x27, 6x18, 9x12, 12x9, 18x6, 27x4, 36x3, 54x2, 108x1
109	1x109
110	1x110, 2x55, 5x22, 10x11, 11x10, 22x5, 55x2, 110x1
111	1x111, 3x37, 37x3, 111x1
112	1x112, 2x56, 4x28, 7x16, 8x14, 14x8, 16x7, 28x4, 56x2, 112x1
113	1x113
114	1x114, 2x57, 3x38, 6x19, 19x6, 38x3, 57x2, 114x1
115	1x115, 5x23, 23x5, 115x1
116	1x116, 2x58, 4x29, 29x4, 58x2, 116x1
117	1x117, 3x39, 9x13, 13x9, 39x3, 117x1
118	1x118, 2x59, 59x2, 118x1

PIXEL MODES

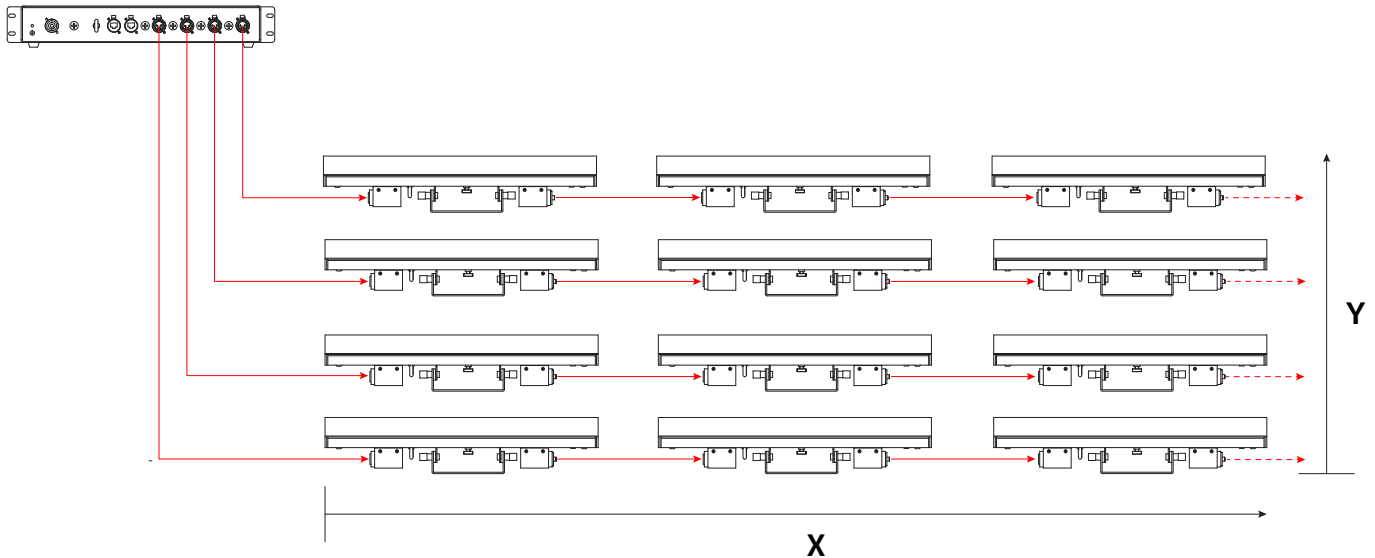
Pixel Count	Pixel Group Options
119	1x119, 7x17, 17x7, 119x1
120	1x120, 2x60, 3x40, 4x30, 5x24, 6x20, 8x15, 10x12, 12x10, 15x8, 20x6, 24x5, 30x4, 40x3, 60x2, 120x1
121	1x121, 11x11, 121x1
122	1x122, 2x61, 61x2, 122x1
123	1x123, 3x41, 41x3, 123x1
124	1x124, 2x62, 4x31, 31x4, 62x2, 124x1
125	1x125, 5x25, 25x5, 125x1
126	1x126, 2x63, 3x42, 6x21, 7x18, 9x14, 14x9, 18x7, 21x6, 42x3, 63x2, 126x1
127	1x127
128	1x128, 2x64, 4x32, 8x16, 16x8, 32x4, 64x2, 128x1
129	1x129, 3x43, 43x3, 129x1
130	1x130, 2x65, 5x26, 10x13, 13x10, 26x5, 65x2, 130x1
131	1x131
132	1x132, 2x66, 3x44, 4x33, 6x22, 11x12, 12x11, 22x6, 33x4, 44x3, 66x2, 132x1
133	1x133, 7x19, 19x7, 133x1
134	1x134, 2x67, 67x2, 134x1
135	1x135, 3x45, 5x27, 9x15, 15x9, 27x5, 45x3, 135x1
136	1x136, 2x68, 4x34, 8x17, 17x8, 34x4, 68x2, 136x1
137	1x137
138	1x138, 2x69, 3x46, 6x23, 23x6, 46x3, 69x2, 138x1
139	1x139
140	1x140, 2x70, 4x35, 5x28, 7x20, 10x14, 14x10, 20x7, 28x5, 35x4, 70x2, 140x1
141	1x141, 3x47, 47x3, 141x1
142	1x142, 2x71, 71x2, 142x1
143	1x143, 11x13, 13x11, 143x1
144	1x144, 2x72, 3x48, 6x36, 8x24, 9x18, 12x16, 16x12, 18x9, 24x8, 36x6, 48x3, 72x2, 144x1
145	1x145, 5x29, 29x5, 145x1

Pixel Count	Pixel Group Options
146	1x146, 2x73, 73x2, 146x1
147	1x147, 3x49, 7x21, 21x7, 49x3, 147x1
148	1x148, 2x74, 4x37, 37x4, 74x2, 148x1
149	1x149
150	1x150, 2x75, 3x50, 5x30, 6x25, 10x15, 15x10, 25x6, 30x5, 50x3, 75x2, 150x1
151	1x151
152	1x152, 2x76, 4x38, 8x19, 19x8, 38x4, 76x2, 152x1
153	1x153, 3x51, 9x17, 17x9, 51x3, 153x1
154	1x154, 2x77, 7x22, 11x14, 14x11, 22x7, 77x2, 154x1
155	1x155, 5x31, 31x5, 155x1
156	1x156, 2x78, 3x52, 4x39, 6x26, 12x13, 13x12, 26x6, 39x4, 52x3, 78x2, 156x1
157	1x157
158	1x158, 2x79, 79x2, 158x1
159	1x159, 3x53, 53x3, 159x1
160	1x160, 2x80, 4x40, 5x32, 8x20, 10x16, 16x10, 20x8, 32x5, 40x4, 80x2, 160x1
161	1x161, 7x23, 23x7, 161x1
162	1x162, 2x81, 3x54, 6x27, 9x18, 18x9, 27x6, 54x3, 81x2, 162x1
163	1x163
164	1x164, 2x82, 4x41, 41x4, 82x2, 164x1
165	1x165, 3x55, 5x33, 11x15, 15x11, 33x5, 55x3, 165x1
166	1x166, 2x83, 83x2, 166x1
167	1x167
168	1x168, 2x84, 3x56, 4x42, 6x28, 7x24, 8x21, 12x14, 14x12, 21x8, 24x7, 28x6, 42x4, 56x3, 84x2, 168x1
169	1x169, 13x13, 169x1
170	1x170, 2x85, 5x34, 10x17, 17x10, 34x5, 85x2, 170x1

MAX PATCH

In Artnet or sACN mode, this driver features a Max Patch function, which allows the user to configure a group of fixtures into an assembly that resembles a large video panel. Follow the steps below:

1. Link your fixtures to the driver. A string of connected fixtures may be connected to each port, as long as the number of pixels per port conform to the limits listed in the KlingNet/Artnet/sACN table in the **System Configuration** section of this manual. Please note that the illustration below shows Pixel Bar fixtures, but Max Patch can be used with any fixture that is compatible with this driver.



2. In the system menu, navigate to either **Artnet > Max Patch En/Dis** or **sACN > Max Patch En/Dis**, depending on which mode is in use. Press the SET UP button, then use the UP and DOWN buttons to toggle this setting to "Enable".
3. Navigate to either Artnet > Max Patch or sACN > Max Patch, depending on which mode is in use. Press the SET UP button.
4. Use the UP and DOWN buttons to set values for X and Y. X and Y represent the number of pixels in the patch as defined in the illustration above. **Please note, the values for X and Y are in terms of individual lighting pixels**, and NOT whole lighting fixtures. For example, if the fixtures in the illustration above are Pixel Bar 30IPs (which have 30 pixels per fixture), then $X = 90$ pixels (3 units x 30 pixels per unit), and $Y = 4$ pixels.

SOFTWARE UPDATES

ONLY QUALIFIED TECHNICIANS SHOULD PERFORM THIS FUNCTION!
NOTE ALL MENU SETTINGS BEFORE UPDATING SOFTWARE!
FIXTURE SOFTWARE CAN NOT BE DOWNGRADED!
DOWNLOAD FIXTURE SOFTWARE TO PC ONLY! (NO MAC SUPPORT)
PLEASE CONTACT ELATION SERVICE FOR FURTHER INFORMATION.

To update the fixture software via the UPDATE/SERVICE PORT, follow steps below.

1. Copy fixture software update file from a PC computer to a compatible USB flash drive. Make sure the fixture software update file is the only file stored on the USB flash drive.
2. Disconnect DMX, Art-Net, and E-FLY connections and power the fixture ON.
3. Insert USB flash drive into the UPDATE/SERVICE PORT on the rear connection panel.
4. Navigate through the main menu to the Service menu. Select Software Update, then select Service and enter the passcode.
5. Select the software file name on the menu display and press SETUP.
6. Select YES to begin update process and Updating...% will show on the menu display.
7. After file is uploaded, the fixture will check the software which will take some time.
8. The fixture will perform a reset process when the software update process is complete.
9. Remove the USB flash drive and make necessary system menu setting adjustments.

SPECIFICATIONS

CONTROL / CONNECTIONS

Manual RGB Mode
Internal Programs
Art-NET | sACN | Kling-NET
2 RJ45 Ethernet Ports
4 4pin Power/Data Outputs
USB Port for Firmware Updates

SIZE / WEIGHT

Length: 11.8" (301mm)
Width: 18.9" (480mm)
Height: 2.9" (74mm)
Weight: 10.8 lbs. (4.9kg)

ELECTRICAL

AC 100-240V - 50/60HZ
800W Max Power Consumption
-4°F to 113°F (-20°C to 45°C)

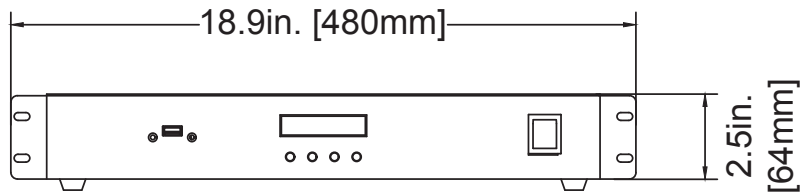
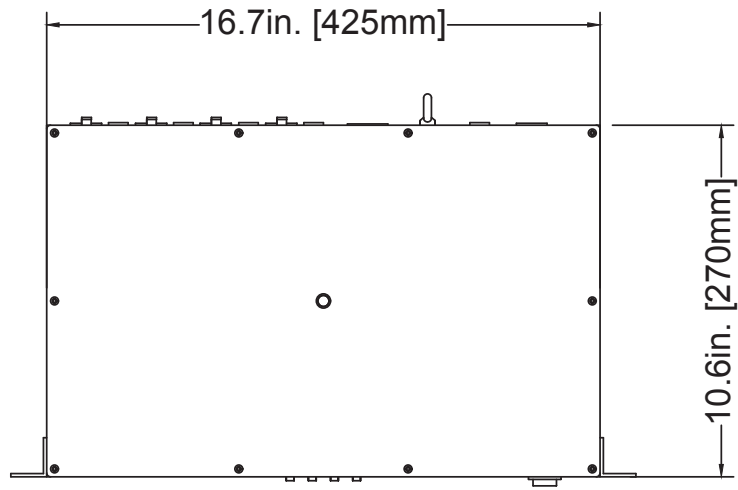
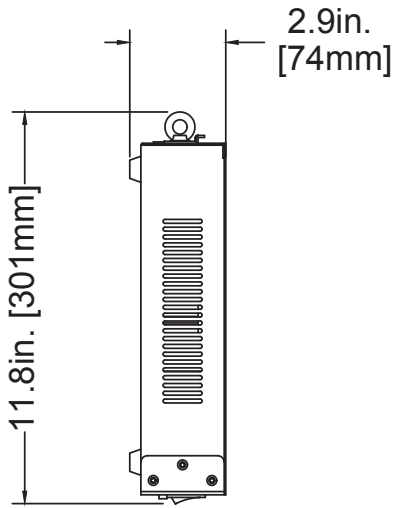
APPROVALS

CE | cETLus



Specifications and documentation subject to change without notice.

DIMENSIONAL DRAWINGS



Dimensions may not be drawn to scale.



FCC STATEMENT

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) this device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

FCC RADIO FREQUENCY INTERFERENCE WARNINGS & INSTRUCTIONS

This product has been tested and found to comply with the limits as per Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This device uses and can radiate radio frequency energy and, if not installed and used in accordance with the included instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this device does cause harmful interference to radio or television reception, which can be determined by turning the device off and on, the user is encouraged to try to correct the interference by one or more of the following methods:

- Reorient or relocate the device.
- Increase the separation between the device and the receiver.
- Connect the device to an electrical outlet on a circuit different from which the radio receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

