eDMX4 MAX

USER MANUAL

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1. INTRODUCTION

Thanks for purchasing a DMXking product. Our aim is to bring you high quality products with great features we know you'll appreciate. DMXking MAX series devices are Art-Net and sACN/E1.31 protocol compatible designed for use with computer based show control software or expansion of lighting console outputs. There are many free and commercial software packages available. http://dmxking.com/control-software

HARDWARE AND FIRMWARE VERSIONS

From time-to-time minor hardware changes occur in our products usually small feature additions or unseen optimizations. The table below lists eDMX4 MAX product variants. Check the product label for P/N details.

Part Number	Feature addition
0134-1.0-3	Initial product release. 3pin XLR
0134-1.0-5	Initial product release. 5pin XLR

Firmware updates are released on a semi-regular basis. We recommend updating to the latest available firmware version so all product features are available. Please take note the user manual reflects latest firmware version features unless otherwise noted.

Firmware Version	Comments
V4.2	Initial release. RDM support disabled.
V4.3	Initial release with USB DMX support.
V4.5	Extensions to DMXking USB DMX protocol. Required update for USB DMX functionality.
V4.6	Art-Net TimeSync. ArtPollReply changed to single universe per message. Art-Net RDM functionality enabled. DMX512 timing parameters adjustable. Art-Net UDP Port adjustable. Art-Net RDM Controller optional fixed IP and adjustable UDP Port. Diagnostics messages priority enhancements.
V4.7	SD card detection improvements.
V4.8	Version consistency release.
*V4.9	Static scene recording function added. Incoming Universe List option added. USB DMX source for show recording. User configurable USB DMX and Art-Net internal Priority. sACN Priority re-write for scene/show stream playback. Soft reset to defaults through configuration utility.
V4.10	sACN Universe Discovery message added when DMX-IN ports configured. Basic USB DMX port configuration message added. ArtPollReply changes for mixed DMX-IN/OUT port configurations. Fixed issue with show playback of recorded ArtNet when initiated with network link down.

*Firmware version has been withdrawn from distribution and upgrade to higher version is recommended.

- Power over Ethernet 802.3af/at compliant. Alternative power via USB-C
- Tough metal enclosure with multiple mounting options
- Available with 3 pin or 5 pin XLR socket options
- Static or DHCP IPv4 network addressing
- USB DMX functionality in addition to Network ArtNet/sACN
- Supported operating systems: Windows, MacOS, Linux, iOS, Android
- eDMX4 MAX - 4x DMX512 OUT or DMX512 IN with Art-Net, sACN E1.31 and E1.20 RDM support
- Art-Net broadcast, Art-Net II,3 & 4 unicast, sACN/E1.31 Multicast and sACN Unicast support
- Merge 2 incoming Art-Net/sACN streams per output channel with both HTP and LTP options
- Merge Art-Net/sACN + DMX input -> DMX output(s)
- Merge 2x DMX input -> DMX output(s)
- Split 1x DMX input -> 3x DMX outputs
- sACN Priority takeover for multi-tier controller arrangements
- Mix and match ArtNet with sACN merge/priority sources
- DMX-IN and DMX-OUT channel offset re-mapping
- User configuration of Art-Net Node short and long names
- Fully compatible with all software and hardware that supports Art-Net I, II, 3 & 4 and sACN protocols
- Works with your existing console if Art-Net or sACN external nodes are supported
- Universe Sync Art-Net, sACN and Madrix Post Sync
- Recording and playback show streams to microSD card (not included). See eDMX MAX Record / Playback manual
- Static scene recording and playback without requiring SD card. See eDMX MAX Record / Playback manual
- Standalone scene/show playback without computer or network connection
- Internal clock with optional battery backup for timed playback. NTP time sync
- Configuration utility with basic Art-Net output/input test functionality

eDMX MAX translates Art-Net 00:0:0 to Universe 1 (i.e. offset by 1) so there is an easy mapping between sACN/E1.31 and Art-Net.

2. EXTERIOR VIEW

FRONT VIEW

Power over Ethernet 802.3af / network 10/100Mbps RJ45 Ethercon socket. USB-C socket for DC power input alternative to PoE. SD card push-push socket for microSD. Four Neutrik XLR connectors for DMX512 3pin or 5pin options available.

STATUS LED TABLE

LED	Indication
Protocol	Protocol activity. Flash Red = Art-Net/sACN. Solid Red = Bootloader mode
Link/Act	Network activity. Green = Link, Flash = Traffic
Power	Incoming power good
SD Card	SD card activity
Port A	DMX512 Port A TX/RX activity
Port B	DMX512 Port B TX/RX activity
Port C	DMX512 Port C TX/RX activity
Port D	DMX512 Port D TX/RX activity

3. USB DMX OPERATION

DMXking MAX series devices include USB DMX functionality alongside Ethernet lighting protocols ArtNet/sACN.

DRIVER INSTALLATION

There is no driver to install. It is included with your operating system already.

SOFTWARE COMPATIBILITY

Software packages for USB DMX use either a Virtual COM Port (VCP) driver or FTDI specific D2XX driver. DMXking MAX series uses VCP which is more universal than FTDI D2XX, especially across different operating systems, however this has created some compatibility issues with existing software packages using the later. We are working with software developers still using D2XX to encourage updating their code to utilize VCP instead and also leverage DMXking USB DMX protocol extensions that allow multiple universe operation.

Check https://dmxking.com/ for DMXking MAX series USB DMX compatible software list.

DEVICE CONFIGURATION

Previously DMXking USB DMX capable devices did not require DMX port configuration for DMX-IN mode as this was automatically selected by certain USB DMX messages. This has changed in DMXking MAX series devices which now require explicit DMX-OUT or DMX-IN port configuration along with selecting which port to forward over USB DMX to allow multi-port devices to function with complete flexibility.

DMX PORT MAPPING

Simple USB DMX protocol output messages are automatically mapped to the physical DMX512 ports regardless of configured universe.

USB DMX SERIAL NUMBER

For software compatibility reasons a BCD serial number is calculated from the MAX device hardware MAC address using the lower 3 hexadecimal bytes converted to a decimal number. Software that has been updated for MAX series devices will display the hardware MAC address.

4. DEFAULT CONFIGURATION

All eDMX4 MAX units ship with default IP address settings. Please reconfigure network settings as required before use.

Parameter	Default Setting
IP Address	192.168.0.112
Subnet Mask	255.255.255.0
Default Gateway	192.168.0.254
IGMPv2 Unsolicited Report	*Unchecked*
Network Mode	Static IP address

DMX512 Port configuration parameter defaults.

Parameter	Default Setting
Async Update Rate	40 [DMX512 frames per second]. Universe Sync will override.
Port Operation Mode	DMX-OUT
Timeout all sources	*Unchecked*
Channel Offset	0
Fixed IP	0.0.0.0 [Only for DMX IN – Unicast to 1 IP address only]
Merge Mode	HTP
Full DMX Frame	*Unchecked*
*Broadcast Threshold	10 [Art-Net II/3/4 unicasting up to 10 nodes]. Set to 0 for Art-Net I broadcast on DMX IN ports.
Unicast IP [DMX-IN]	0.0.0.0
sACN Priority [DMX-IN]	100
RDM Discovery Period [DMX-OUT]	0s / RDM Disabled
RDM Packet Spacing [DMX-OUT]	1/20s
DMX-OUT Failsafe Mode	Hold Last
Recall DMX Snapshot at startup	*Unchecked*
DMX512 Universe	1-4 [Net 00, Subnet 0, Universe 0-3] Note: sACN Universe 1 = Art-Net 00:0:0

*Global threshold for all DMX-IN ports, configured only in Port A settings tab.

5. CONFIGURATION UTILITY

Download eDMX MAX Configuration Utility from https://dmxking.com/downloads-list

User manual for the utility https://dmxking.com/downloads/eDMX MAX Configuration Utility User Manual (EN).pdf

6. TECHNICAL SPECIFICATIONS

- Dimensions: 250mm x 58mm x 43mm (WxHxD)
- Weight: 350 grams (0.77lbs)
- Power input: 802.3af/at Power over Ethernet. Maximum power budget 5W.
- USB-C power input. Any USB power source, only 5V supply is negotiated.
- DMX512 connector: 5pin or 3pin Neutrik XLR socket
- DMX512 ports electrically isolated.
- Ethernet 10/100Mbps Auto MDI-X port Neutrik Ethercon socket
- Internal DMX512-A line biasing termination as per ANSI E1.20 RDM requirements
- Art-Net, Art-Net II, Art-Net 3, Art-Net 4 and sACN/E1.31 support.
- ANSI E1.20 RDM compliant with RDM over Art-Net.
- Universe Sync Art-Net, sACN and Madrix Post Sync.
- Both HTP and LTP merging of 2 Art-Net streams per port
- sACN Priority
- Internal merging capability with DMX In and DMX Out ports on same Universe.
- IPv4 Addressing
- IGMPv2 for multicast network management
- DMX512 Frame Rate: Adjustable per port
- Operating temperature 0°C to 40°C non-condensing dry environment

7. WARRANTY

DMXKING HARDWARE LIMITED WARRANTY

What is covered

This warranty covers any defects in materials or workmanship with the exceptions stated below.

How long coverage lasts

This warranty runs for two years from the date of shipment from an authorized DMXking distributor.

What is not covered

Failure due to operator error or incorrect application of product.

What DMXking will do

DMXking will repair or replace, at its sole discretion, the defective hardware.

How to obtain service

Contact your local distributor https://dmxking.com/distributors

8. ACKNOWLEDGEMENTS

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9. DECLARATIONS

The eDMX4 MAX has been tested against applicable standards and certified compliant as below.

Standard	
IEC 62368-1	Audio/Video and ICTE Safety Requirements
IEC 55032	Radiated Emissions
IEC 55035	EMC Immunity Requirements
FCC Part 15	Radiated Emissions
RoHS 3	Restriction or Hazardous Substances

Certification	Country
CE	Europe
FCC	North America
RCM	New Zealand / Australia
UKCA	United Kingdom