

# OBSEIDIAN™

CONTROL SYSTEMS



## NX<sup>2</sup> / NX WING Installation Guide

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**OBSIDIAN CONTROL SYSTEMS B.V.**

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**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.

**Energy Saving Matters (EuP 2009/125/EC)**

Saving electric energy is a key to help protecting the environment. Please turn off all electrical products when they are not in use. To avoid power consumption in idle mode, disconnect all electrical equipment from power when not in use. Thank you!

Document Version: An updated version of this document may be available online. Please check [www.obsidiancontrol.com](http://www.obsidiancontrol.com) for the latest revision/update of this document before beginning installation and use.

Date	Document Version	Notes
12/12/18	1	Initial release.
03/14/19	2	Updated Information
06/23/19	3	Updated Warranty
08/26/19	4	Updated Specs

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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.

## CUSTOMER SUPPORT

Contact your local Obsidian Controls Systems dealer or distributor for any product related service and support needs. Also visit [forums.obsidiancontrol.com](https://forums.obsidiancontrol.com) with questions, comments or suggestions.

OBSIDIAN CONTROL SERVICE EUROPE - Monday - Friday 08:30 to 17:00 CET  
+31 45 546 85 63 | [support@obsidiancontrol.com](mailto:support@obsidiancontrol.com)

OBSIDIAN CONTROL SERVICE USA - Monday - Friday 08:30 to 17:00 PST  
(866) 245-6726 | [support@obsidiancontrol.com](mailto:support@obsidiancontrol.com)

# LIMITED WARRANTY

1. Obsidian Control Systems hereby warrants, to the original purchaser, Obsidian Control Systems products to be free of manufacturing defects in material and workmanship for a period of two years (730 days).
2. For warranty service, send the product only to the Obsidian Control Systems service center. All shipping charges must be pre-paid. If the requested repairs or service (including parts replacement) are within the terms of this warranty, Obsidian Control Systems 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, Obsidian Control Systems shall have no liability what so ever for loss and/or or damage to any such accessories, nor for the safe return thereof.
3. 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 Obsidian Control Systems concludes, after inspection, affects the reliability of the product; if the product has been repaired or serviced by anyone other than the Obsidian Control Systems factory unless prior written authorization was issued to purchaser by Obsidian Control Systems; if the product is damaged because not properly maintained as set forth in the product instructions, guidelines and/or user manual.
4. 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, Obsidian Control Systems 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 Obsidian Control Systems under this warranty shall be limited to the repair of the product, or replacement thereof, including parts, at the sole discretion of Obsidian Control Systems. All products covered by this warranty were manufactured after January 1, 1990, and bare identifying marks to that effect.
5. Obsidian Control Systems 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.
6. 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 Obsidian Control Systems 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 Obsidian Control Systems 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.
7. This warranty is the only written warranty applicable to Obsidian Control Systems products and supersedes all prior warranties and written descriptions of warranty terms and conditions heretofore published.
8. Use of software and firmware:  
To the maximum extent permitted by applicable law, in no event shall Elation or Obsidian Control Systems or its suppliers be liable for any damages whatsoever (including, but not limited to, damages for loss of profits or data, for business interruption, for personal injury or other loss whatsoever) arising out of or in any way related to the use of or inability to use firmware or software, the provision of or failure to provide support or other services, information, firmware, software, and related content through the software or otherwise arising out of the use of any software or firmware, even in the event of the fault, tort (including negligence), misrepresentation, strict liability, breach of warranty of Elation or Obsidian Control Systems or any supplier, and even if Elation or Obsidian Control Systems or any supplier has been advised of the possibility of such damages.

**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 device is a sophisticated piece of electronic equipment. To guarantee a smooth operation, it is important to follow all instructions and guidelines in this manual. OBSIDIAN CONTROL SYSTEMS is not responsible for injury and/or damages resulting from the misuse of this device due to the disregard of the information printed in this manual. Only the original included parts and/or accessories for this device should be used. Any modifications to the device, included and/or accessories will void the original manufactures warranty and increase the risk of damage and/or personal injury.



## PROTECTION CLASS 1 - DEVICE MUST BE PROPERLY GROUNDED

DO NOT ATTEMPT TO USE THIS DEVICE WITHOUT BEING FULLY TRAINED ON HOW TO USE IT. ANY DAMAGES OR REPAIRS TO THIS DEVICE OR ANY LIGHTING FIXTURES CONTROLLED BY THIS DEVICE RESULTING FROM IMPROPER USE, AND/OR THE DISREGARD OF THE SAFETY AND OPERATION GUIDELINES IN THIS DOCUMENT VOIDS THE OBSIDIAN CONTROL SYSTEMS WARRANTY, AND ARE NOT SUBJECT TO ANY WARRANTY CLAIMS AND/OR REPAIRS, AND MAY ALSO VOID THE WARRANTY FOR ANY NON-OBSIDIAN CONTROL SYSTEMS DEVICES.

KEEP FLAMMABLE MATERIALS AWAY FROM DEVICE.



## DRY LOCATIONS USE ONLY!

DO NOT EXPOSE DEVICE TO RAIN, MOISTURE, AND/OR SEVERE ENVIRONMENTS!

DO NOT SPILL WATER AND/OR LIQUIDS ON OR INTO THE DEVICE!

**AVOID** brute force handling when transporting or operating.

**DO NOT** expose any part of the device to open flame or smoke. Keep device away from heat sources such as radiators, heat registers, stoves, or other appliances (including amplifiers) that produce heat.

**DO NOT** use device in extreme and/or severe environments.

**DO NOT** operate device if power cord is frayed, crimped, damaged and/or if any of the power cord connectors are damaged, and does not insert into the device securely with ease. NEVER force a power cord connector into device. If the power cord or any of its connectors are damaged, replace it immediately with a new one of similar power rating.

Strictly use a source of AC power that complies with local building and electrical codes and has both overload and ground-fault protection. Use only the provided AC power supply and power cords and the correct connector for the country of operation. Use of the factory provided power cable is mandatory for operation in the US and Canada.

Allow free unobstructed airflow to the bottom and back of the product. Do not block the ventilation slots.

Operate the console only on a stable and solid surface.

**DO NOT** use the product if the ambient temperature exceeds 40°C (104° F)

Transport the product only in suitable packaging or a custom fitted road case. Transportation damage is not covered under warranty.

Protect the internal touch screen from sharp objects and operate the screen using only a finger.

**CAUTION:** Risk of explosion if CMOS battery is replaced by an incorrect type. Dispose of used batteries according to local environmental regulations.

**CAUTION:** Do not expose CMOS battery to excessive heat such as sun or fire.

# OVERVIEW

## NX 2

The NX 2 is the ultimate compact, yet powerful, fully integrated lighting controller. As a member of the innovative ONYX platform from Obsidian Control Systems, the NX 2 is feature rich and never restricted in its capabilities. NX 2 includes a high brightness Full HD multi touch screen, 8 assignable parameter encoders, an assistive mini touch screen, full keypad and command section, a dedicated grand master, and 10 full playbacks with four freely assignable buttons.

Utilizing the latest in industrial components, the NX 2 contains a powerful new Intel Hexa-Core processor, high speed NVMe SSD drive, and 16GB of DDR4 RAM, which allows fast boot times, instant operation, and the ability to process 64 Universes right inside the console without the need for costly external processing networks.

The NX 2 is ergonomic with its compact footprint, full ONYX command and keypad section, and the bright adjustable HD touch screen.

With four DMX ports, Timecode, Midi, and dual Gigabit ports for up to 64 Universes of Art-Net, sACN, plus the ONYX X-Net protocol, the NX 2 has all the connectivity and power the ever-increasing sizes of shows demand. Two additional 4K touch monitors are supported for even more direct access at any time.

### Key Features

- Portable and compact fully featured lighting console
- Adjustable 15.6" Full HD multi touch screen, 2x external 4K Touch Displays
- 64 Universe integrated processing
- 10 Playbacks, 8 Encoders, Keypad and internal 3.5" touchscreen
- Network, DMX, Timecode, and Midi Connectivity

## NX WING

NX Wing is the complementary USB control surface to Obsidian Control Systems ONYX platform. Based on the NX 2 console, the NX Wing utilizes the same rugged design and components with an identical footprint and layout. Through its USB connection, the NX Wing provides a responsive professional hardware surface to operate ONYX on any PC system. Any user of ONYX will feel instantly familiar with the NX Wing, and no setup or additional installation is required.

NX Wing provides extensive connectivity with 4 DMX Ports, MIDI and Timecode ports while unlocking 128 Universes of control when connected to ONYX on a PC.

### Key Features

- Fully featured control surface, portable and lightweight
- 10 Playbacks, Encoders, Keypad and internal 3.5" touchscreen
- DMX, Timecode and Midi Connectivity
- 128 Universe License for ONYX included
- Plug and Play USB device for any PC with ONYX

# SOFTWARE

The software for NX 2 and NX WING is available from the support website <http://support.obsidiancontrol.com>.

You must update your controller to the latest version of ONYX before using it for the first time, and periodically check the website for updates.

## PC SYSTEM REQUIREMENTS FOR NX WING

Onyx is designed to be operated on PC systems that utilizes a multi-touch touch screen.

Without the touchscreen the system will provide a poor user experience and may be difficult to use.

The PC should meet these minimum recommendations; higher universe counts may require more powerful systems:

- Windows 10
- Intel Core i3 processor 6th Generation+
- 4 GB RAM
- 2 GB available disk space (SSD recommended)
- Widescreen monitor, minimum 1280 wide, 768 high (capacitive multi-touchscreen recommended)
- USB 2.0 port
- 10/100 Ethernet port for Art-Net DMX output
- 100/1000 Ethernet port for X-Net, remote operation and sACN



# POWER CONNECTIONS



The Obsidian Control Systems NX 2 and NX WING accept AC mains power at 100-240V 50/60Hz. Do not connect it to power outside this range. Damage resulting from incorrect connection is not covered under warranty.

North America: A cable with a NEMA 15-5P plug is provided for use with the NX 2 and/or NX WING in the USA and Canada. This approved cable must be used in North America.

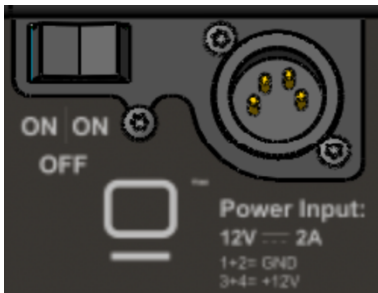
Rest of the world: The provided IEC cable is not fitted with a country-specific plug. Install only a plug that meets local and or national electrical codes and is suitable for the country's specific requirements.

A 3-prong grounded-type (earthed type) plug must be installed following the plug manufacturer's instructions. The table below shows some possible pin identification schemes; if the pins are not clearly identified, or if you have any doubts about proper installation, consult a qualified electrician.

Wire color (standard EU code)	Pin	Symbol
brown	live	L
blue	neutral	N
yellow/green	ground	

To apply power to the product:

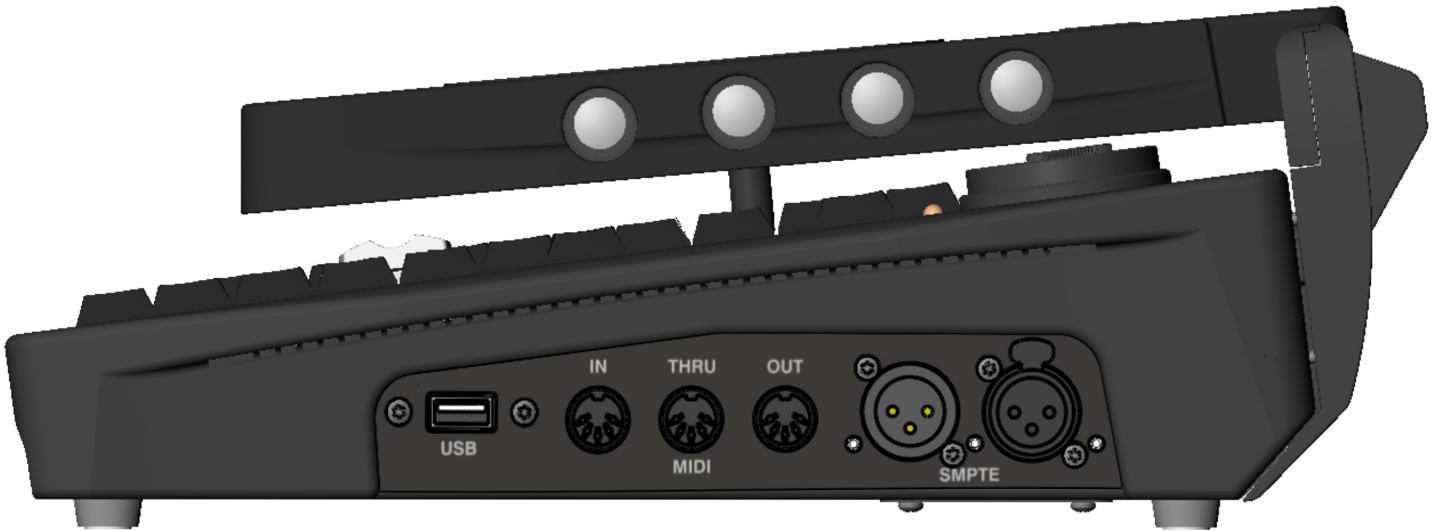
1. Set the power switch to the center OFF position.



2. Insert the 4-pin XLR connector from the external power supply unit into the power input on the back of the console.
3. Insert the provided power cable into the IEC connector of the power supply unit and connect the cable to a properly protected and grounded outlet.
4. NX WING: Connect the USB cable to the PC system.
5. Turn the console on by toggling the power switch to the CPU position for the NX 2, or the ON position for the NX WING.

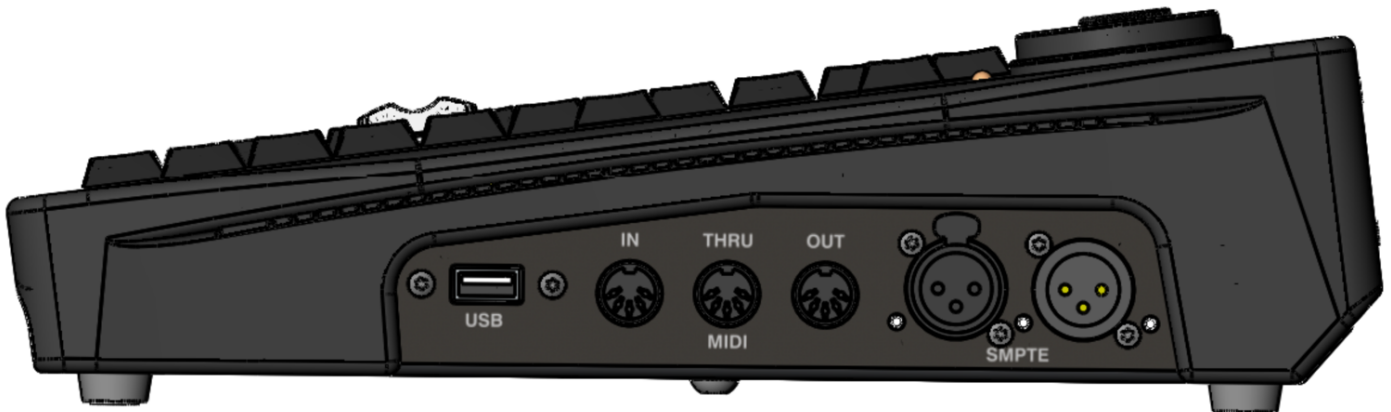
# CONNECTIONS: RIGHT SIDE PANEL

## NX 2



- USB device socket, suitable for USB flash drives or a keyboard. This connection is not suitable for boot operations. Use the USB connectors on the back of the console for this purpose. Do not exceed a 500mA current on any USB device port.
- The MIDI card provides MIDI In, Out, and Thru 5-pin DIN connectors. The software supports incoming MIDI Notes, MIDI Show Control, and MIDI Timecode signals.
- The SMPTE device offers 3-pin XLR connectors for SMPTE In and Out signals.

## NX WING



- USB device socket, suitable for USB flash drives or a keyboard. This connection is not suitable for boot operations. Use the USB connectors on the back of the console for this purpose. Do not exceed a 500mA current on any USB device port.
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- The SMPTE device offers 3-pin XLR connectors for SMPTE In and Out signals.

# CONNECTIONS: REAR PANEL

## NX 2



- 4xDMX/RDM Universe In/Out: 5-pin locking XLR
- External Display: 2x DisplayPort (up to 4k)
- Network: 2x Gigabit for Art-Net, sACN and ONYX X-Net
- Storage and Peripherals: 4x USB 3.0, 1x USB 2.0
- Audio Out, Mic In: 2x 3.5mm Jack
- MIDI in/out/thru (MIDI Showcontrol, MIDI notes, MIDI Timecode): 5pin DIN
- SMPTE Timecode In/Out: 3-pin XLR
- 12VDC power supply input: 4-pin XLR
- Desk lamp: XLR 12V
- USB In: USB 2.0 B

## NX WING



- 4xDMX/RDM Universe In/Out: 5-pin locking XLR
- MIDI in/out/thru (MIDI Showcontrol, MIDI notes, MIDI Timecode): 5pin DIN
- SMPTE Timecode In/Out: 3-pin XLR
- 12VDC power supply input: 4-pin XLR
- Desk lamp: XLR 12V
- USB In: USB 2.0 B

# MAINTENANCE

The Obsidian Control Systems NX 2 and NX WING are designed as rugged, roadworthy devices. The only required service is occasional cleaning. For other service related concerns, please contact your Obsidian Control Systems dealer, or visit [www.obsidiancontrol.com](http://www.obsidiancontrol.com).

Any service that is not described in this guide must be carried out by a trained and qualified Obsidian Control Systems technician.

As any computer, the NX 2 requires periodic cleaning. The schedule relies on the environment in which the controller is operated. An Obsidian Control Systems technician can provide recommendations if necessary.

Never spray cleaner directly onto the console surface; always spray into a lint-free cloth and wipe it clean. Consider using cleaning products designed for cellphone and tablet devices for cleaning a lighting console.



Important! Excessive dust, dirt, smoke, fluid build-up, and other materials can degrade the performance of the NX 2 and NX WING controllers, causing overheating and damage to the unit that is not covered by the warranty.

## **NX 2 SPECIFICATIONS**

### **Control Surface**

- 10x 60 mm playback faders, each with 4 x assignable buttons
- 8x customizable multi-function keys
- Playback Select button
- Master Go section with Go, Pause, Snap and Release
- 4x digital rotary encoders with push function and status LED for fixture parameter control
- 4x screen mounted digital rotary encoders with push
- 3.5" RGB touchscreen for parameter groups, effect parameters, fanning and global timings
- Grand master rotary fader and button
- Blind/HighLight/Last/Next buttons
- Full numerical keypad and command keys

### **Hardware**

- Industrial 15.6" TFT 16:9 touchscreen (1920x1080px)
- 250 GB NVMe M.2 storage drive
- Industrial motherboard with Intel i5 Hexa-Core CPU
- Quiet thermal design using advanced copper heat pipe coolers
- 16 GB DDR4 RAM
- Integrated graphics processor
- Windows 10 IoT Embedded Operating System
- OS installation by USB 3.0 storage device
- Supports Windows USB touchscreens

### **Connections**

- 4x DMX / RDM Universe In/Out: 5-pin locking XLR
- External Display: 2x DisplayPort (up to 4k)
- Network: 2x Gigabit for Art-Net, sACN and ONYX X-Net
- Storage and Peripherals: 4x USB 3.0, 1x USB 2.0
- Audio Out, Mic In: 2x 3.5mm Jack
- MIDI in/out/thru (MIDI show control, MIDI notes, MIDI timecode): 5pin DIN
- SMPTE Timecode In/Out: 3-pin XLR
- 12 VDC power supply input: 4-pin XLR
- Desk lamp: XLR 12V
- USB In: USB 2.0 B

### **Physical**

- Length: 11.9 in. (300mm)
- Width: 21.3 in. (540mm)
- Height: 4.8 in. (121mm)
- Weight: 10.2 lbs. (4.6 kg)

### **Electrical**

- AC mains power to 12VDC external PSU (included)
- 100-240V nominal, 50/60Hz
- Maximum current: 3A
- 12VDC output: 11A, 132W max.

### **Included Items**

- (1x) RGB LED desk lamp, angular XLR connector, 13"
- (1x) Dust Cover
- (1x) USB Cable
- (1x) External PSU (12V 11A)
- (1x) 1.5m power cable, 3-pin IEC

# NX WING SPECIFICATIONS

## Control Surface

- 10 x 60 mm playback faders, each with 4 x assignable buttons
- 8 x customizable multi-function keys
- Playback Select button
- Master Go section with Go, Pause, Snap and Release
- 4x digital rotary encoders with push function and status LED for fixture parameter control
- 3.5" RGB touchscreen for parameter groups, effect parameters, fanning and global timings
- Grand master rotary fader and button
- Blind/HighLight/Last/Next buttons
- Full numerical keypad and command keys

## Connections

- 4x DMX / RDM Universe In/Out: 5-pin locking XLR
- MIDI in/out/thru (MIDI Showcontrol, MIDI notes, MIDI timecode): 5-pin DIN
- SMPTE Timecode In/Out: 3-pin XLR
- 12VDC power supply input: 4-pin XLR
- Desk lamp: XLR 12V
- USB In: USB 2.0 B

## Physical

- Length: 11.9 in. (300mm)
- Width: 21.3 in. (540mm)
- Height: 3.9 in. (99mm)
- Weight: 10.2 lbs. (4.6 kg)

## Electrical

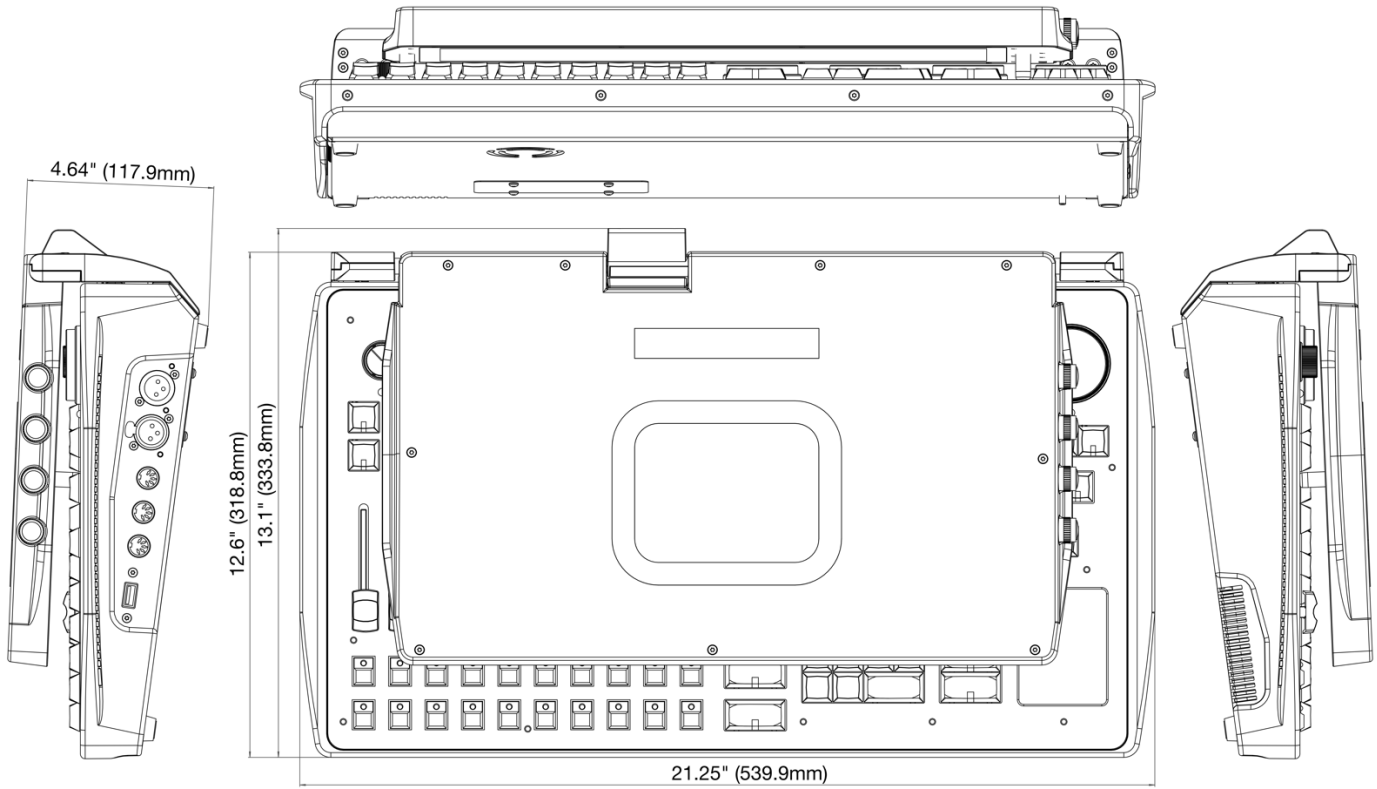
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- (1x) 1.5m power cable, 3-pin IEC

# DIMENSIONS

## NX 2



## NX WING

