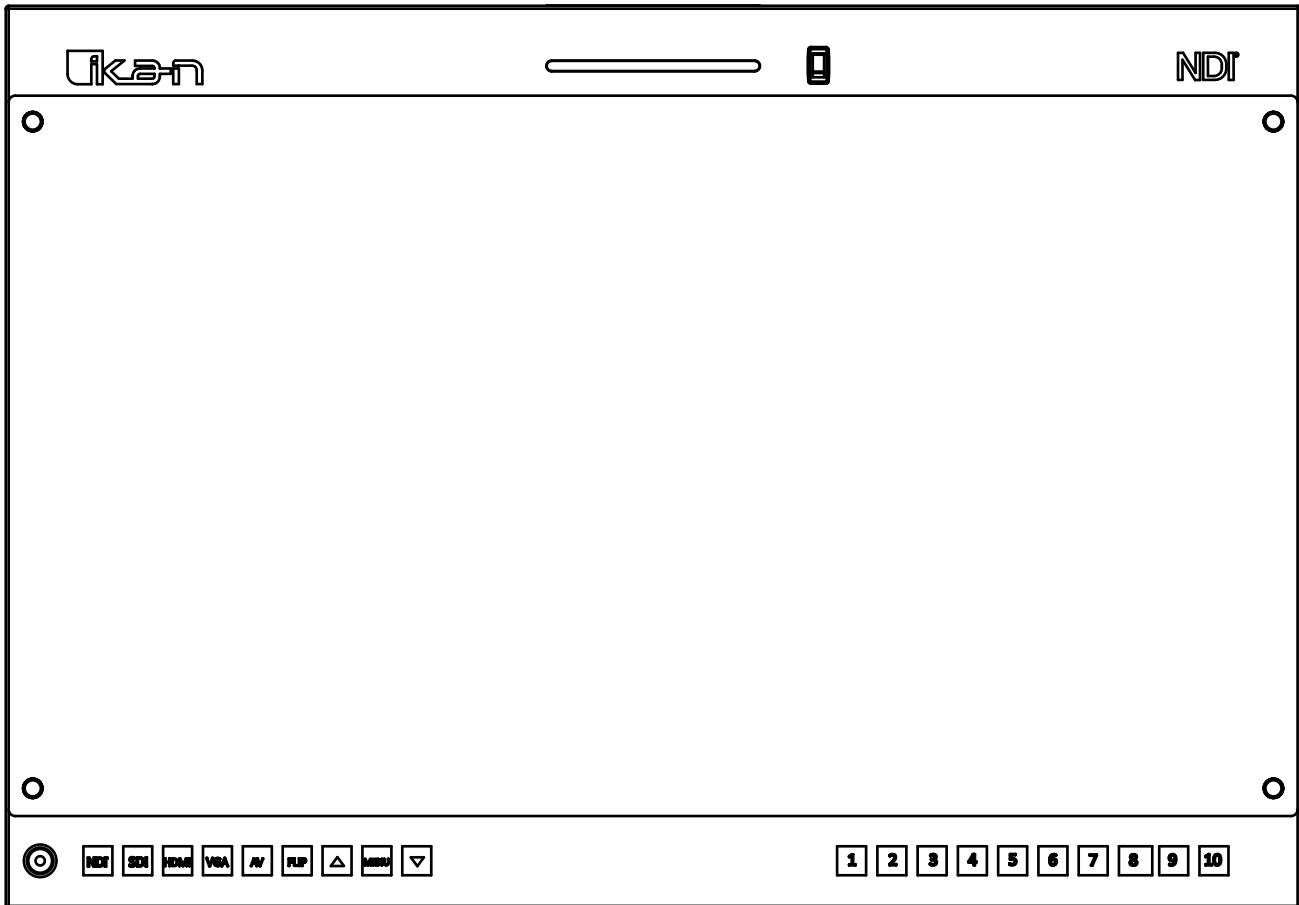




M19W-NDI

19" PoE++ Monitor w/ Full NDI Encoding/Decoding & NDI Tally Light



User Manual

Read this manual carefully before using
the monitor

Version 1.0

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Safety Precautions

On Installation

Make sure there is enough airflow to prevent internal overheating. Do not place the device near heat sources such as radiators or air ducts, or in areas exposed to excessive dust, mechanical vibrations, or shocks. Keep at least 40 cm of space behind the unit to maintain a safe operating area.

Transporting the Unit

Avoid exposing the unit to severe vibrations or high-impact conditions while transporting it. Such conditions can deform the internal or external structure of the unit, cause internal components to malfunction, or lead to other types of damage.

When transporting the unit as cargo by truck, ship, or air, or when carrying it as luggage in a rolling bag, take care not to subject it to strong vibrations or heavy impacts.

Handling and Maintenance of the Screen

The screen's surface is coated to minimize reflections. Follow these guidelines carefully to avoid damaging the screen or impairing its performance:

- Before cleaning, always unplug the power cord or Ethernet cable from the monitor.
- The screen's special coating can be damaged by adhesive materials like stickers; avoid placing any on it.
- Avoid touching the screen directly due to its delicate coating.
- Gently clean the screen with the provided cleaning cloth or a soft, dry cloth to remove dust and dirt.
- For more stubborn stains, use the cleaning cloth or a soft cloth moistened with a mild detergent solution.
- Ensure the cleaning cloth is free from dust to prevent scratching the screen.
- Do not use harsh chemicals like alcohol, benzene, thinners, acidic or alkaline solutions, abrasive cleaners, or chemical wipes, as these can damage the screen.
- Use a blower to remove dust from the screen surface without making contact.

On Repacking

Do not throw away the carton and packing materials. They make an ideal container which to transport the unit.

General Warning

- Avoid placing the monitor in a rainy or wet environment to prevent the risk of fire or electrical shock.
- Keep the monitor away from devices that emit strong magnetic fields.

Power Connection Warning

Use the original power adapter to prevent damage. Ensure that any alternative DC power source matches the voltage, output power, and polarity requirements of the monitor.

- Disconnect the power, including the AC power cable or battery, in the following situations:
- If the monitor will not be used for an extended period.
- If the power cable or power socket is damaged.
- If the monitor's housing is damaged due to impact or a fall.

Usage Warning

- Avoid touching the screen directly to prevent damage and fingerprints, which are difficult to clean.
- Do not apply pressure to the LCD screen as it is fragile.
- Ensure the monitor is placed on a stable surface to prevent it from falling.

Product Overview

What's in the box

Quantity	Item
1x	Monitor
1x	Power Supply & Cable
1x	User Manual & Warranty Card

Overview

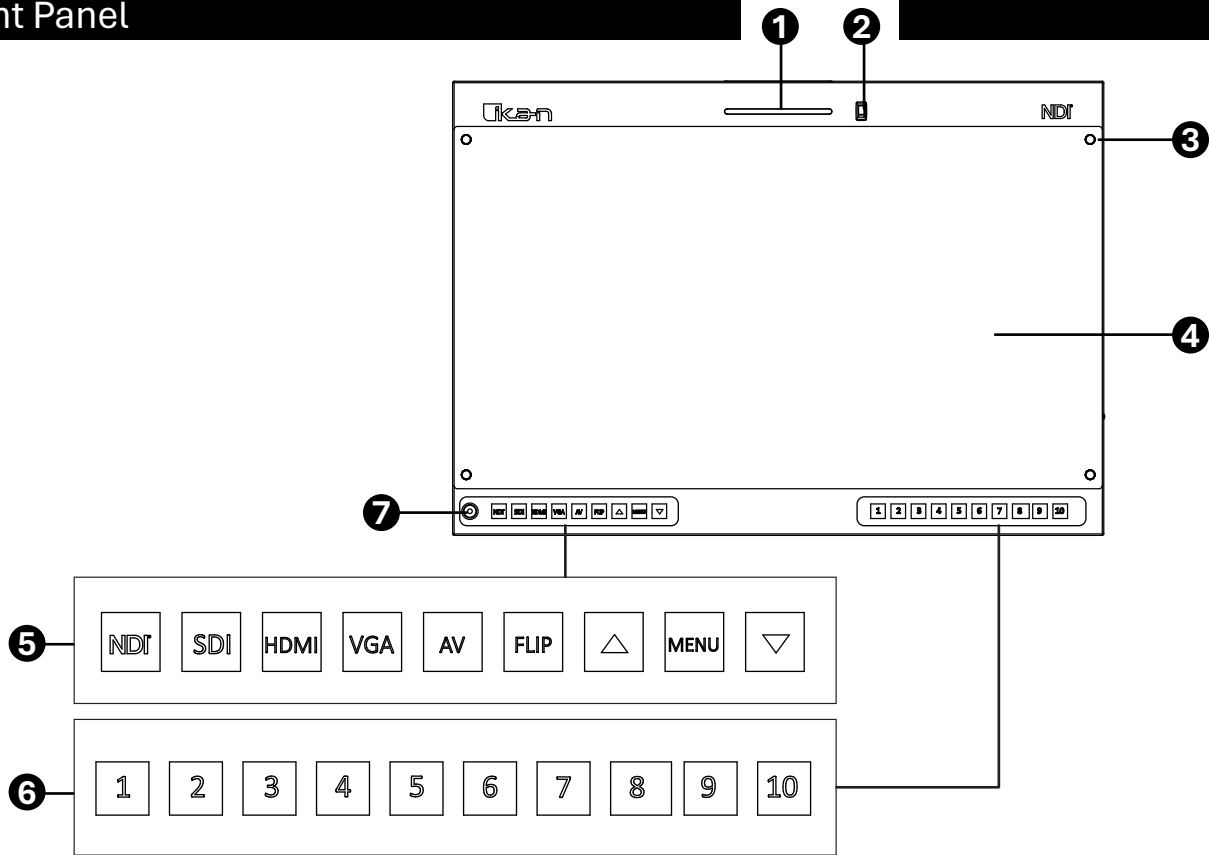
The M19W-NDI High-Bright Monitor features NDI-HB video encoding/decoding, as well as traditional 3G-SDI, HDMI, and VGA, inputs. The M19W-NDI monitor can be connected to a network and powered using a single Ethernet cable, eliminating the need for dedicated video and power cables. This is possible because the monitor utilizes PoE++ technology that allows both power and NDI data to be transmitted through a single Ethernet cable. By using a single cable for power and data transmission, you can reduce the overall cost of materials, as well as the cost of installation and maintenance. Since POE++ provides high wattage, the monitor is able to run at 1000 nits.

Product features

- 19-inch POE++ Widescreen Teleprompter Monitor w/ Full NDI Encoding/Decoding
- Power Monitor and Decode NDI Video through One RJ45 Cable
- Built-in NDI-Compatible Tally Light
- 9 NDI Preset Buttons
- 1080p Resolution
- 1000-nit high-bright monitor
- RJ45, 3G-SDI, HDMI, Composite
- and VGA inputs

Location and Function of Parts and Controls

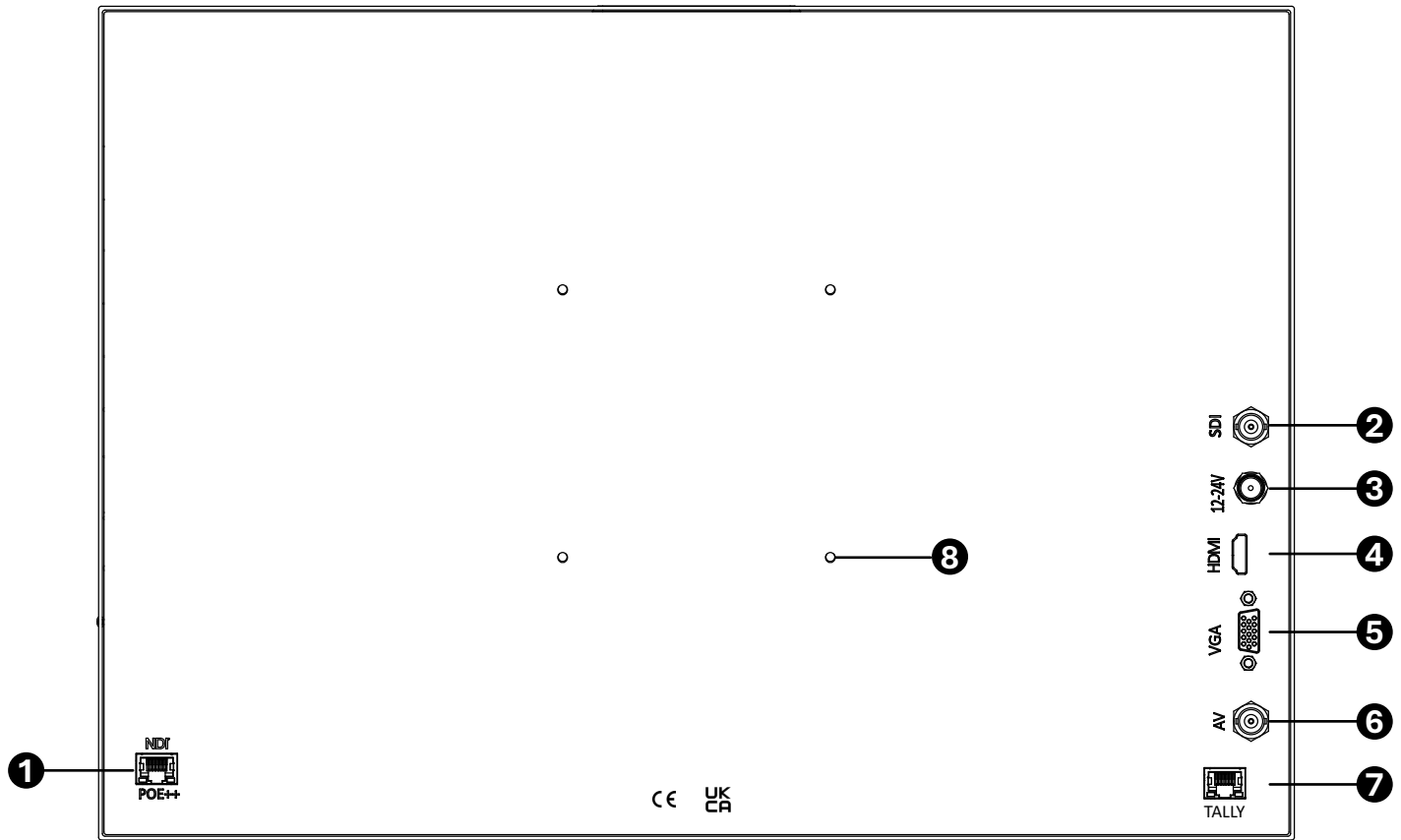
Front Panel



- ❶ **Tally light:** Turns red, green, or yellow
- ❷ **Tally light switcher:** Switches between front facing tally light or top tally light
- ❸ **Screw for acrylic screen protector:** If you do not want to use the acrylic screen protector, unfasten these screws to remove it.
- ❹ **Acrylic screen protector:** Used to protect the LCD panel from damage
- ❺ **Video Inputs:**
 - **NDI:** Displays NDI Streams on the LCD
 - **SDI:** Displays SDI video on the LCD
 - **HDMI:** Displays HDMI video on the LCD
 - **AV:** Displays Composite BNC video on the LCD
- Menu Buttons:**
 - **FLIP:** Flip the image orientation. Can be set to Horizontal, Vertical or both
 - **UP:** Navigate up in the menu
 - **MENU:** Open the menu
 - **DOWN:** Navigate down in the menu
- ❻ **NDI Presets 1-10:** Used to switch between NDI presets. To use this feature In the Web GUI, select an NDI stream and assign a preset number.
- ❼ **Power button**

Location and Function of Parts and Controls

Rear Panel



- 1** NDI/PoE++ Input: RJ45 Connector | This port is used for both PoE and NDI
- 2** SDI Input: BNC 3G-SDI Connector
- 3** 12V~24V Power Input: Threaded barrel power connector
- 4** HDMI Input:
- 5** VGA Input: DE-15 Connector
- 6** AV Input: BNC Composite Connector
- 7** Tally Input: RJ45 Connector | Contact closure GPIO tally interface (Do not use this Port for PoE or NDI)
- 8** 100mm VESA Mount

On Screen Display

MAIN MENU ----- OUTPUT SETUP IMAGE H/V MIRROR SYSTEM OSD CONTROL EXIT	OUTPUT SETUP ----- TEST PATTERN COLOR SPACE RETURN	IMAGE ----- CONTRAST BRIGHTNESS SATURATION HUE GAMMA ADJUST COLOR TONE EDGE ENHANCE RETURN
H/V MIRROR ----- H - MIRROR V - MIRROR H - SHIFT V - SHIFT ASPECT RETURN	SYSTEM ----- INPUT FORMAT F/W VERSION FACTORY RESET LCD SLEEP NDI IP BUTTON LED RETURN	OSD CONTROL ----- OSD ENABLED RETURN

Access the OSD menu by pressing the Menu button on the front panel.
Navigate using the Up and Down buttons.

1 Output Setup

- Test Pattern: Cycle through various test patterns.
- Color Space: Select from YCbCr 422, RGB, or YCbCr 444.

2 Image

- Contrast: Adjust image contrast.
- Brightness: Adjust screen brightness.
- Saturation: Adjust color saturation.
- Hue: Adjust image hue.
- Gamma Adjust: Choose from Off, 0.7, 0.9, 1.1, 1.3.
- Color Tone: Select between Skin, Green, or Off.
- Edge Enhance: Set to Off, Min, Mid, or Max.

3 H/V Mirror

- H Mirror: Enable horizontal flip.
- V Mirror: Enable vertical flip.
- H Shift: Shift image horizontally.
- V Shift: Shift image vertically.
- Aspect: Choose aspect ratio: 16:9, 4:3, or Stretch.

4 System

- Input Format: Display current input resolution and refresh rate.
- F/W Version: Show firmware version.
- Factory Reset: Reset to default settings.
- LCD Sleep: Set inactivity timer for sleep mode.
- Button LED: Toggle LED lights on front panel buttons.
- NDI IP: Display current IP address.

5 OSD Control

- OSD Enabled: Enable or disable the OSD menu.

Powering the Monitor

Via PoE+ (Power over Ethernet)

1. Connect an Ethernet cable from the NDI PoE port to a PoE+ enabled network switch or injector.
2. This provides both power and network connectivity for NDI streaming.

Via 12-24V DC Power

1. Connect the supplied DC power adapter to the 12-24V threaded barrel connector.
2. Note: If both PoE+ and DC power are connected, the monitor prioritizes DC power.

Connecting Video Inputs

NDI Streaming

- Use the NDI PoE port for NDI encoding and decoding.

SDI Input

- Connect a 3G-SDI source to the SDI BNC connector.

HDMI Input

- Connect an HDMI source to the HDMI port.

VGA Input

- Connect a VGA source to the VGA port.

Composite Video Input

- Connect a composite video source to the AV BNC connector.

Using the Monitor

Selecting Video Inputs

Use the input selection buttons on the front panel to switch between video sources:

- Press NDI, SDI, HDMI, VGA, or AV to select the corresponding input.

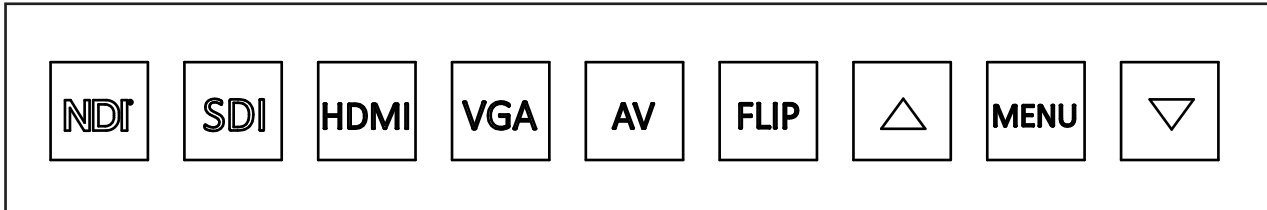
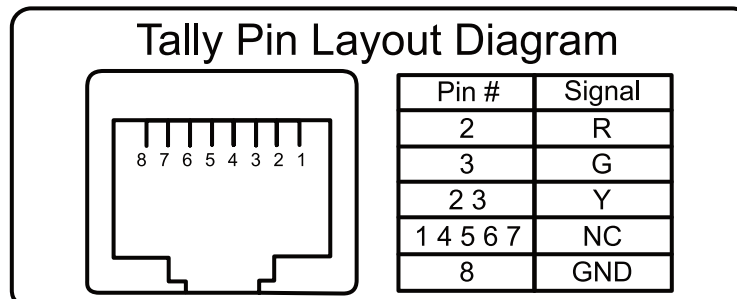


Image Flip and Orientation

Press the Flip button to toggle the image flip mode.

Set the desired orientation in the H/V Mirror section of the OSD menu.

Tally Light Functionality



Connect your contact closure tally control system to the Tally RJ45 port.

Pin Configuration:

- Pin 2: Red light
- Pin 3: Green light
- Pin 8: Ground
- Pins 1, 4-7: Not connected

Selecting Tally Light

Use the Tally Light Selector Switch next to the front tally light.

- **Top Tally Light:** For teleprompter use.
- **Front Tally Light:** For talent monitor use.

NDI Functionality

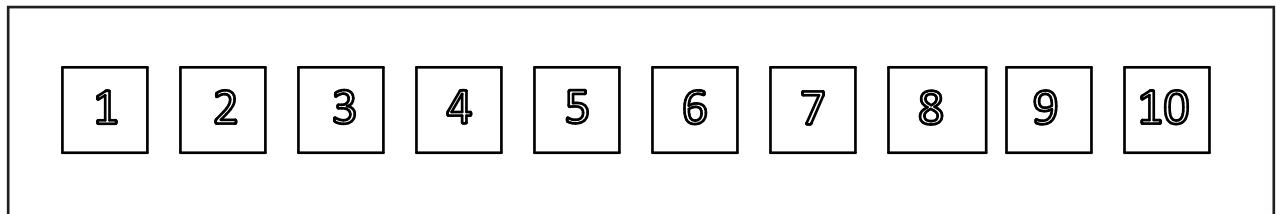
NDI Encoding Mode

When a baseband signal (HDMI, SDI, VGA, Composite) is connected and selected, the monitor can encode and broadcast it as a 1080p NDI stream over the network.

NDI Decoding Mode

The monitor can decode any 1080p high-bandwidth NDI stream and display it on the screen. Use the Web GUI or NDI Preset Buttons to select the desired NDI stream.

Using NDI Preset Buttons



Assigning NDI Streams to Presets

- Access the Web GUI and navigate to the Decoding page.
- Under NDI Sources, select an NDI stream and assign it to a preset number (1-10).

Recalling NDI Streams

- Press the corresponding NDI Preset Button (1-10) on the front panel to display the assigned NDI stream.

Accessing the Web GUI

1. Connect to the Same Network

- Ensure your computer is connected to the same network as the NDI monitor.
- Make sure that your firewall is turned off or configured properly to open TCP and UDP ports (5960-5970) that allow NDI video and audio to pass through.

2. Find the Monitor's IP Address

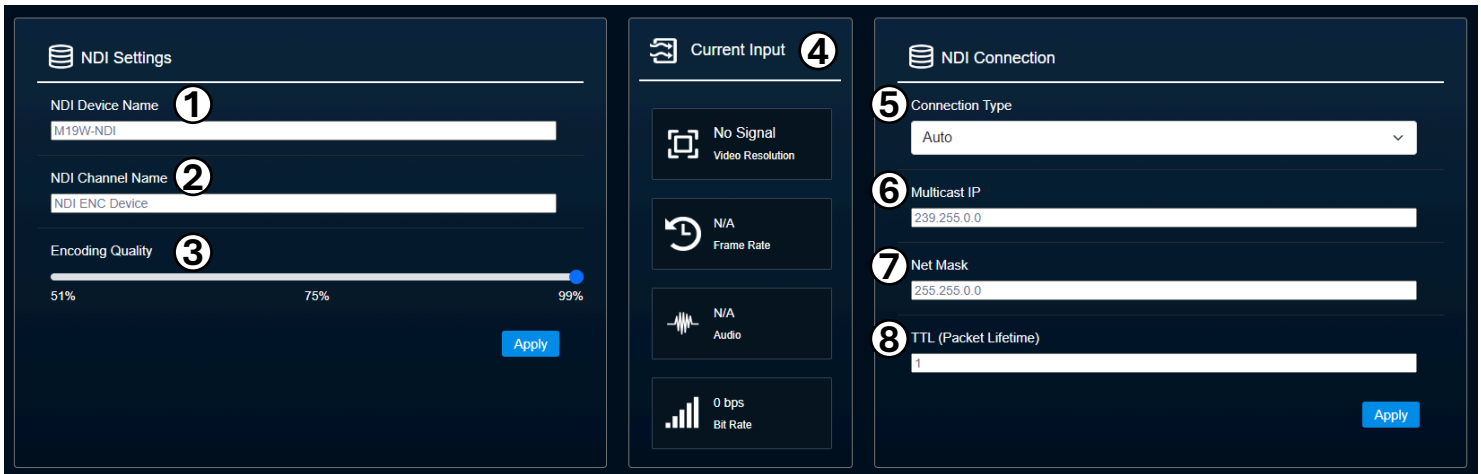
- The default IP address is 192.168.1.114 (if using a static IP).
- If set to DHCP, retrieve the IP address from the OSD menu under System > NDI IP.
 - If the IP Address displays as 0.0.0.0, Make sure to have a router on your network to assign the IP address of the Monitor

3. Open a Web Browser

- Enter the monitor's IP address into the address bar (e.g., <http://192.168.1.114>).

4. Login

- Default credentials:
 - Username: admin
 - Password: password
- Note: It's recommended to change the default password upon first login.



1 Encoding NDI Settings

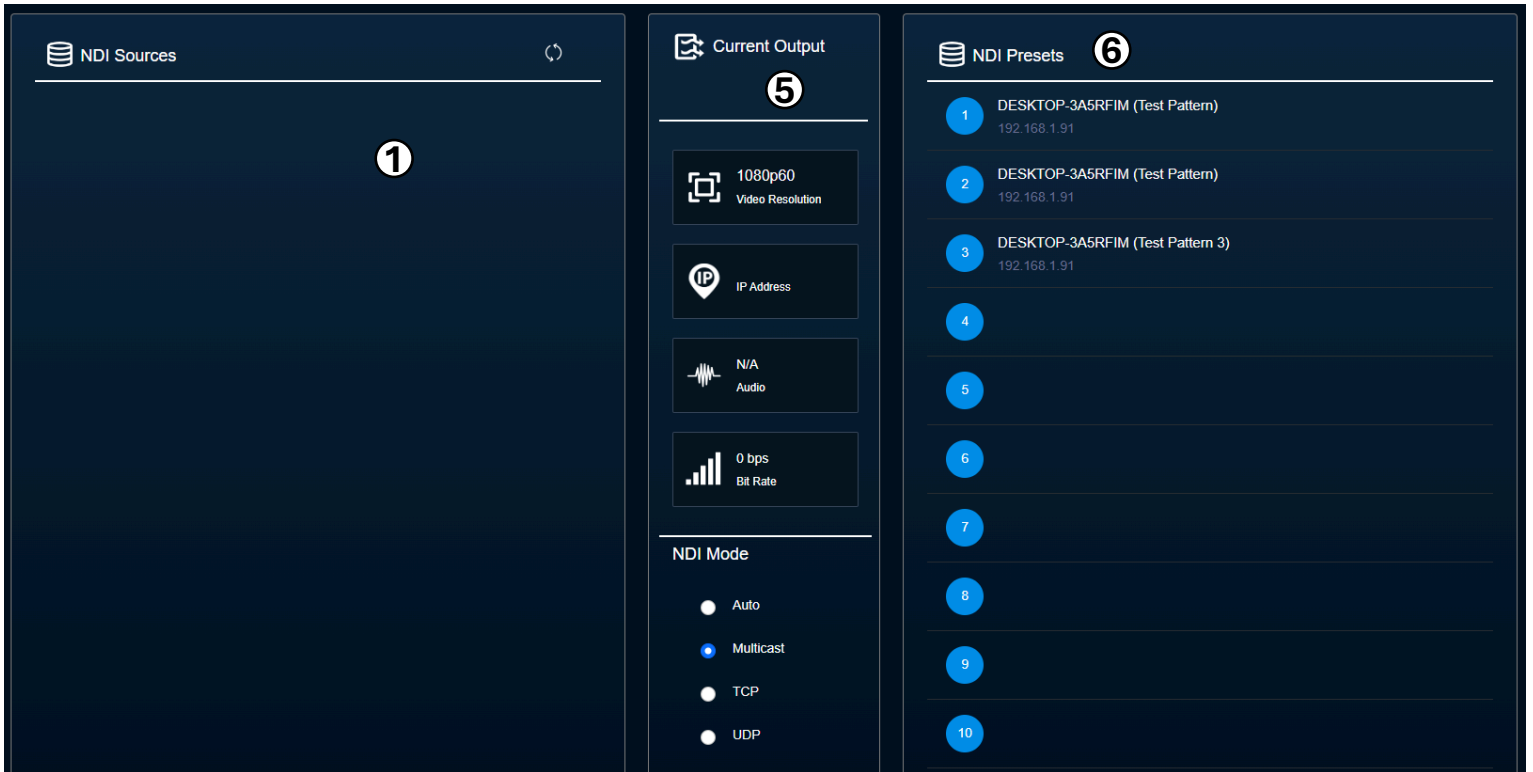
1. NDI Device Name: Set the device name visible to other NDI devices.
2. NDI Channel Name: Set the channel name for the encoded stream.
3. Encoding Quality: Adjust from 51% to 99% for desired video quality.

Current Input

4. View real-time stats of the currently encoded NDI stream.

NDI Connection

5. Connection Type: Select unicast or multicast.
6. Multicast IP: Set the multicast IP address.
7. Netmask: Configure the subnet mask.
8. TTL (Packet Lifetime): Set the time-to-live for network packets.



2 Decoding NDI Sources

1. Displays all available NDI streams on the network.
2. For devices with multiple streams, click the drop-down arrow to view all streams.
3. Click the Monitor icon to display the stream immediately.
4. Click the Plus icon to assign the stream to an NDI preset.

Current Output

5. Shows video stats for the NDI stream currently displayed.

NDI Presets

6. Manage assigned NDI presets for quick access via front panel buttons.

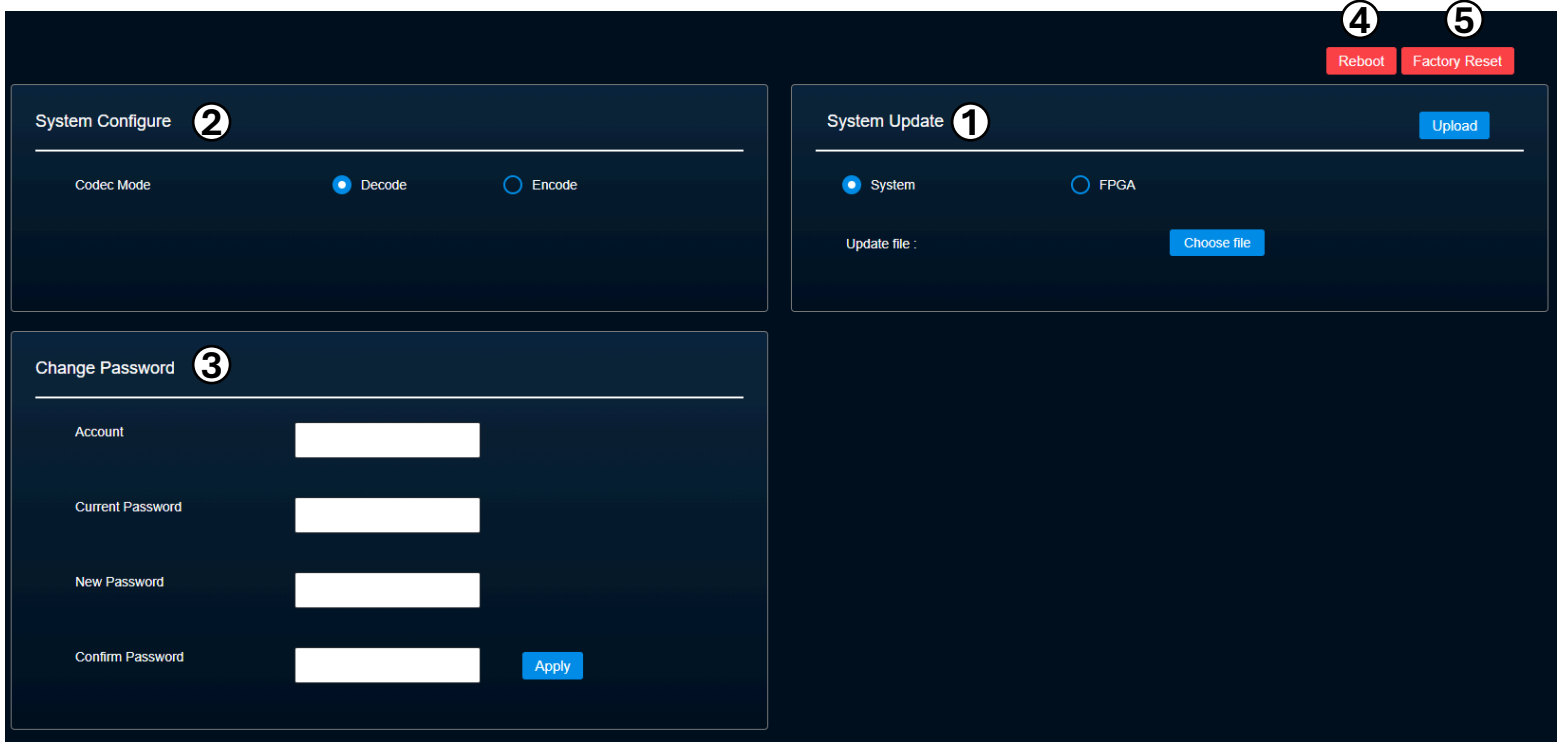
The screenshot shows a 'Network Settings' window with a dark blue background. At the top, there are two radio button options: 'DHCP' (selected) and 'Static'. A circled '1' is placed above the 'Static' option. Below the options, there are three input fields. The first is labeled 'IP address' with a circled '2' to its left, containing the value '192.168.1.56'. The second is labeled 'Mask address' and contains '255.255.255.0'. The third is labeled 'Gateway address' and contains '192.168.1.1'. At the bottom left, there is a blue 'Apply' button.

③ Network Network Settings

1. Choose between DHCP or Static IP configuration.

IP Configuration

2. If using a static IP, set the IP Address, Subnet Mask, and Gateway Address.



4 System Firmware Updates

1. Update the firmware for the FPGA and system chips.

System Configuration

2. Switch between Encoding and Decoding modes.

Change Password

3. Update the login credentials for the Web GUI.

Reboot

4. Perform a software reboot of the monitor.

Factory Reset

5. Restore all settings to factory defaults.

NDI Tally Feature

The M19W-NDI monitor's tally light system is fully compatible with High Bandwidth NDI®, providing seamless integration with NDI-enabled video mixing software like vMix. When you're using the monitor in NDI Encoding Mode, the NDI stream generated by the monitor can be received by your mixing software over the network. The tally lights on the monitor will then respond automatically based on the stream's status in the mixing software.

How It Works:

- Preview Status (Green Light):
 - When your mixing software places the monitor's NDI stream in the preview window, the monitor's tally light will illuminate green.
 - This indicates to on-camera talent that they are in standby mode and may go live soon.
- Live Status (Red Light):
 - When the mixing software transitions the monitor's NDI stream to the live program output, the tally light will turn red.
 - This alerts the talent that they are currently live on air.

Setup Instructions:

- Enable NDI Encoding Mode:
 - Access the Web GUI and navigate to System > System Configure.
 - Ensure that the monitor is set to Encoding Mode.
- Connect to Mixing Software:
 - Open your NDI-compatible mixing software (e.g., vMix) on a computer connected to the same network.
 - Add the monitor's NDI stream as a source.
- Utilize Tally Functionality:
 - As you switch between preview and live modes in your mixing software, the monitor's tally lights will respond accordingly without additional configuration.

Tally Light Selection:

- Use the Tally Light Selector Switch located next to the front tally light to choose which tally light to activate:
 - **Front Tally Light:** Ideal when the monitor is used as a talent monitor.
 - **Top Tally Light:** Best suited for teleprompter setups.

Benefits:

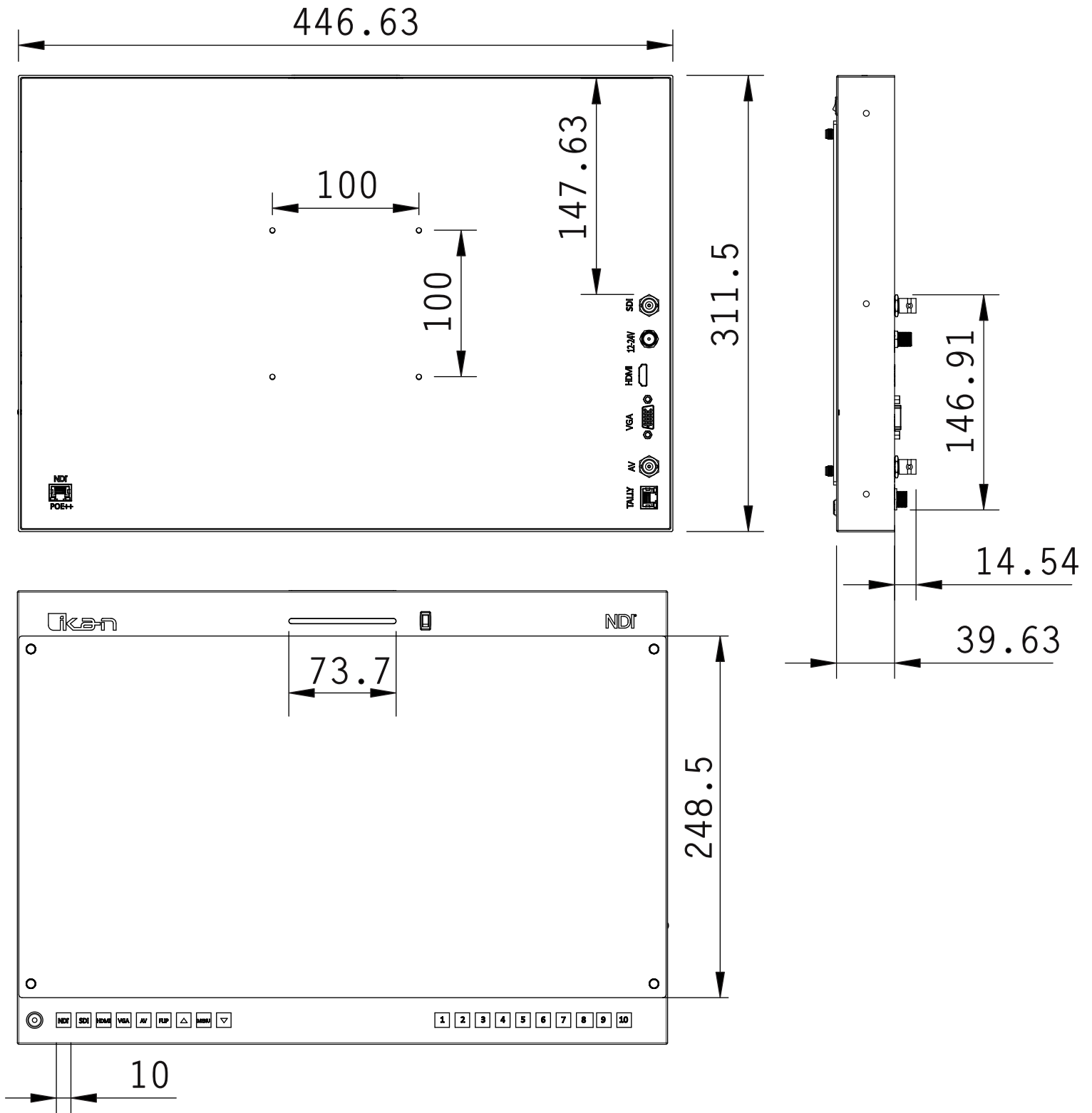
- Automatic Tally Integration:
 - No need for extra wiring or tally systems; the NDI protocol handles tally communication over the network.
- Enhanced Talent Communication:
 - Provides immediate visual feedback to on-camera talent, improving the flow of live productions.
- Simplified Workflow:
 - Especially useful in setups where the monitor and camera are mounted on the same teleprompter system, streamlining both video encoding and tally indications.

Notes:

- Compatibility:
 - Ensure your mixing software supports NDI tally data. Most professional NDI-enabled applications like vMix do.
- Network Requirements:
 - Both the monitor and the mixing software must be connected to the same local network to communicate effectively.
- Monitor Settings:
 - The monitor must be in NDI Encoding Mode for the tally feature to function via NDI.
 - Check the monitor's IP address in the OSD menu under System > NDI IP if you experience connectivity issues.

By utilizing the NDI Tally Feature, the M19W-NDI monitor not only serves as a high-quality display but also enhances on-set communication, making it an invaluable tool for live broadcasts and productions.

Dimensions (mm)



Specifications

M19W-NDI Specifications	
Model	M19W-NDI
Aspect Ratio	16:9
Maximum Brightness	1000 cd/m2
Screen Size (Diagonal)	18.5 in.
Mount	VESA 100mm
Video Inputs	SDI, HDMI, VGA
Input Voltage	DC 12v / 5A
Power Consumption	36W
Weight of Monitor	5.73 lbs.
Product Dimensions	18.3" x 12.3 x 1.2""
Native Resolution	1920 x 1080
Viewing Angle	178° (H) / 178° (V)
Build Material	Aluminum Chassis
Image Flip	Horizontal: Yes Vertical: Yes
Tally Interface	RJ45



Certifications and Compliance

- CE
- UKCA

Warranty Information

Ikan Corporation provides a limited warranty for the M19W-NDI Monitor. Please refer to the warranty card included in the package or visit our website for detailed terms and conditions.

Contact Information

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