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Product Manual

DM NUX

USB over Network Platform

Crestron Electronics, Inc.

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The original language version of this document is U.S. English.
All other languages are a translation of the original document.

Regulatory Model:

Contents

DM NUX

DM NUX USB over network devices deliver reliable, high-speed USB signal extension and routing for USB 1.0, 1.1, and 2.0 devices for distances of up to 330 ft (100 m).

> **Refer to Getting Started on page 2 for important information on using your product and this document.**

This section provides the following information:

Getting Started

Two types of DM NUX endpoints are available:

- A **Local** endpoint provides connectivity for a single USB host such as a computer, game console, codec, or media server. The DM-NUX-L2, DM-NUX-L2-1G-B, and DM-NUX-L2-1G-W are Local endpoints.
- A **Remote** endpoint provides connectivity for up to four USB devices such as a keyboard, mouse, webcam, or microphone. The DM-NUX-R2, DM-NUX-R2-1G-B, and DM-NUX-R2-1G-W are Remote endpoints.

To extend USB signals, at least one Local endpoint and one Remote endpoint must be connected and paired. These endpoints can either be connected over a network using Layer 2 communications, or connected directly point-to-point using CAT5e (or greater) cabling.

To dynamically route USB signals, Remote endpoints can be dynamically paired and unpaired from a Local endpoint using a Crestron control system. Up to five Remote endpoints can be paired with a single Local endpoint at a time. Multiple Remote endpoints paired to a single Local endpoint are referred to as a **virtual hub**, since they mimic the behavior of a USB hub being connected directly to the USB host.

Layer 2 and Layer 3 Communications

The DM NUX USB over network models covered in this product manual exclusively use Layer 2 network communications to transmit and receive data. Layer 2 communications are handled based on device MAC addresses. MAC addresses are a 12-character, unique identifier assigned at the hardware level, meaning there will never be duplicate MAC addresses on a network. However, layer 2 communications cannot be encrypted or traverse VLANs.

DM NVX endpoints that support USB over network extension can operate as either a Local or Remote endpoint when paired with DM NUX endpoints. Refer to the DM NVX AV-over-IP Platform Manual for information on configuring DM NVX endpoints for DM NUX USB over network routing.

When two DM NVX endpoints are paired for DM NUX USB over network extension, they can use Layer 3 communications to transmit and receive USB data. Layer 3 communications are handled based on IP addresses and can be encrypted using AES-128 and traverse VLANs, but **do not support the virtual hub feature of DM NUX USB over network devices**.

DM NUX USB over network communications are unicast traffic, which does not require the same degree of network management as multicast traffic. However, USB 2.0 data transmission can require up to 480 Mbps of throughput, so uplink bandwidth still remains a consideration when adding DM NUX endpoints to a network. Refer to AV-over-IP Network Design for information on managing networks with high-bandwidth unicast and multicast traffic.

Manually Pairing DM NUX Endpoints

All DM NUX endpoints in this document include a physical **Pair** button for manual pairing when the Local and Remote endpoints are directly connected via their **Link** ports.

To manually pair DM NUX endpoints that are connected point-to-point:

1. On the local endpoint (DM-NUX-L2 or DM-NUX-L2-1G), press and hold the **Pair** button until the **Link** LED on the front panel begins flashing green. This indicates that the endpoint is in Pairing mode.

   > **NOTES:**
   >
   > - To exit Pairing mode without pairing endpoints, press and hold the **Pair** button again until the **Link** LED reverts to its previous state.
   > - Hold the **Pair** button for less than 10 seconds; holding the button for longer than 10 seconds will remove all pairings from the endpoint.

2. Within 10 minutes of activating Pairing mode on the local endpoint, press and hold the **Pair** button on the remote endpoint (DM-NUX-R2 or DM-NUX-R2-1G) until the **Link** LED on the front panel begins flashing green.
3. The **Link** LED on each endpoint will temporarily pulse slowly as they pair before turning solid green. Once the **Link** LED on each endpoint is solid green, a valid link is established.

To pair DM NUX endpoints via custom programming, use the DM-NUX v1.1 and DM-NUX-Status v1.1 modules in SIMPL. Refer to the module help documentation within the software (by pressing the F1 key) for information.

Features and Applications

For the features and sample applications of each DM NUX endpoint, refer to Features on page 4.

Specifications

For the specifications of each DM NUX endpoint, refer to Specifications on page 21.

Installation

For information on installing a DM NUX endpoint, refer to one of the following sections for the relevant model:

- DM-NUX-L2 and DM-NUX-R2 Installation on page 36
- DM-NUX-L2-1G and DM-NUX-R2-1G Installation on page 43

Troubleshooting

For information on troubleshooting an installed DM NUX endpoint or pair, refer to Troubleshooting on page 48.

Features

This section provides the following information:

- DM-NUX-L2 Features
- DM-NUX-R2 Features
- DM-NUX-L2-1G Features
- DM-NUX-R2-1G Features

DM-NUX-L2 Features

Key features of the DM-NUX-L2 include:

- Reliable, high-speed USB signal extension for most USB 1.1 or 2.0 devices, including isochronous devices[1]
- Compatible with DM NVX® endpoints that support USB 2.0 signal extension
- Supports creating a virtual hub with up to five remote endpoints
- Enables USB signal routing under the control of a Crestron control system
- Driver-free compatibility with Windows®, macOS®, and Linux® operating systems[1]
- Transports USB data over an Ethernet network or point-to-point at speeds up to 480 Mbps
- Mass Storage Acceleration maximizes USB 2.0 bulk transfer speeds

Virtual Hub

Up to five remote endpoints may simultaneously be connected to a single DM-NUX-L2 endpoint, creating a virtual USB hub which allows numerous USB devices to control a single USB host (such as a PC).[1] These USB signals are transported over a local network and managed via a Crestron control system.

Endpoint Compatibility

The DM-NUX-L2 local endpoint is compatible with the DM-NUX-R2, DM-NUX-R2-1G, and DM NVX endpoints that support USB 2.0 signal extension. Any of these supported models can be paired with a DM-NUX-L2 to route and extend USB signals over a local area network (LAN).

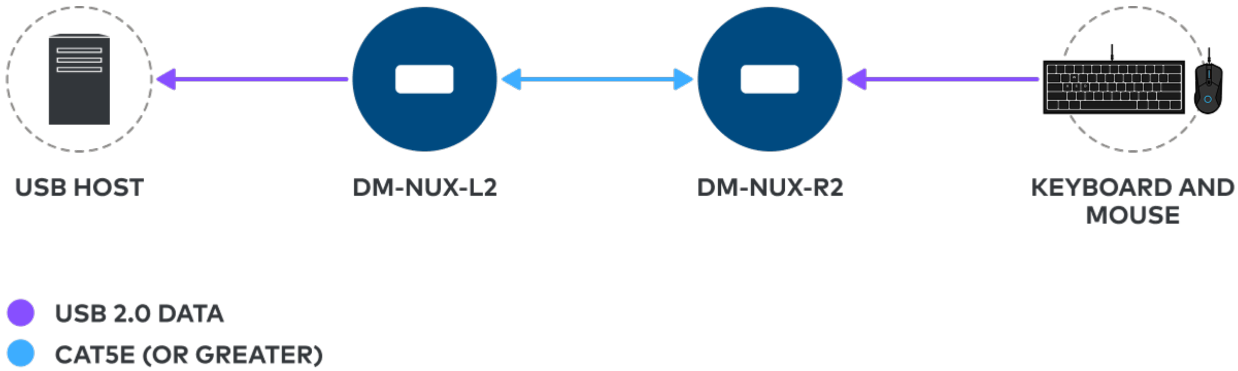
Point-to-Point Connectivity

In addition to layer 2 USB routing over a LAN, DM NUX endpoints can be connected directly to one another, providing point-to-point USB signal extension over a dedicated CAT5e (or greater) cable.[2]

Application Diagrams

This section shows DM NUX USB over network devices in applications of varying complexity. The surface-mountable and wall plate models are fully interchangeable in all of these applications.

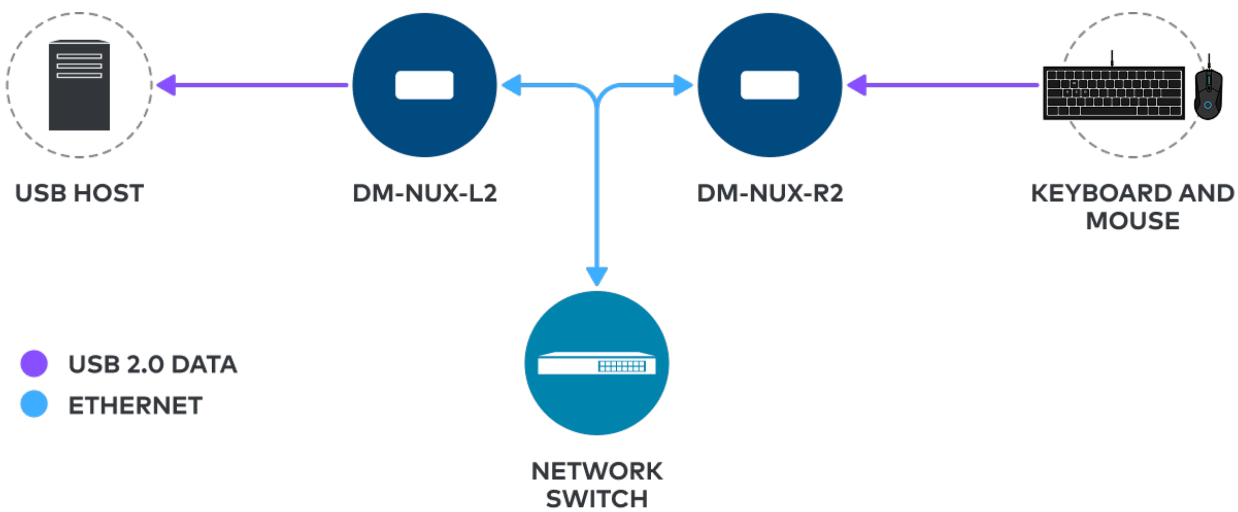
Point-to-Point USB Extension



This application highlights a basic point-to-point extension of USB 2.0 data over CAT5e (or greater) cabling using a DM NUX endpoint pair (one local endpoint and one remote endpoint). A USB device is connected at the remote endpoint and its signal is transmitted up to 330 ft (100 m) to the USB host connected to a local endpoint. Up to 30 devices can be connected to the host via the remote endpoint by using USB hubs.

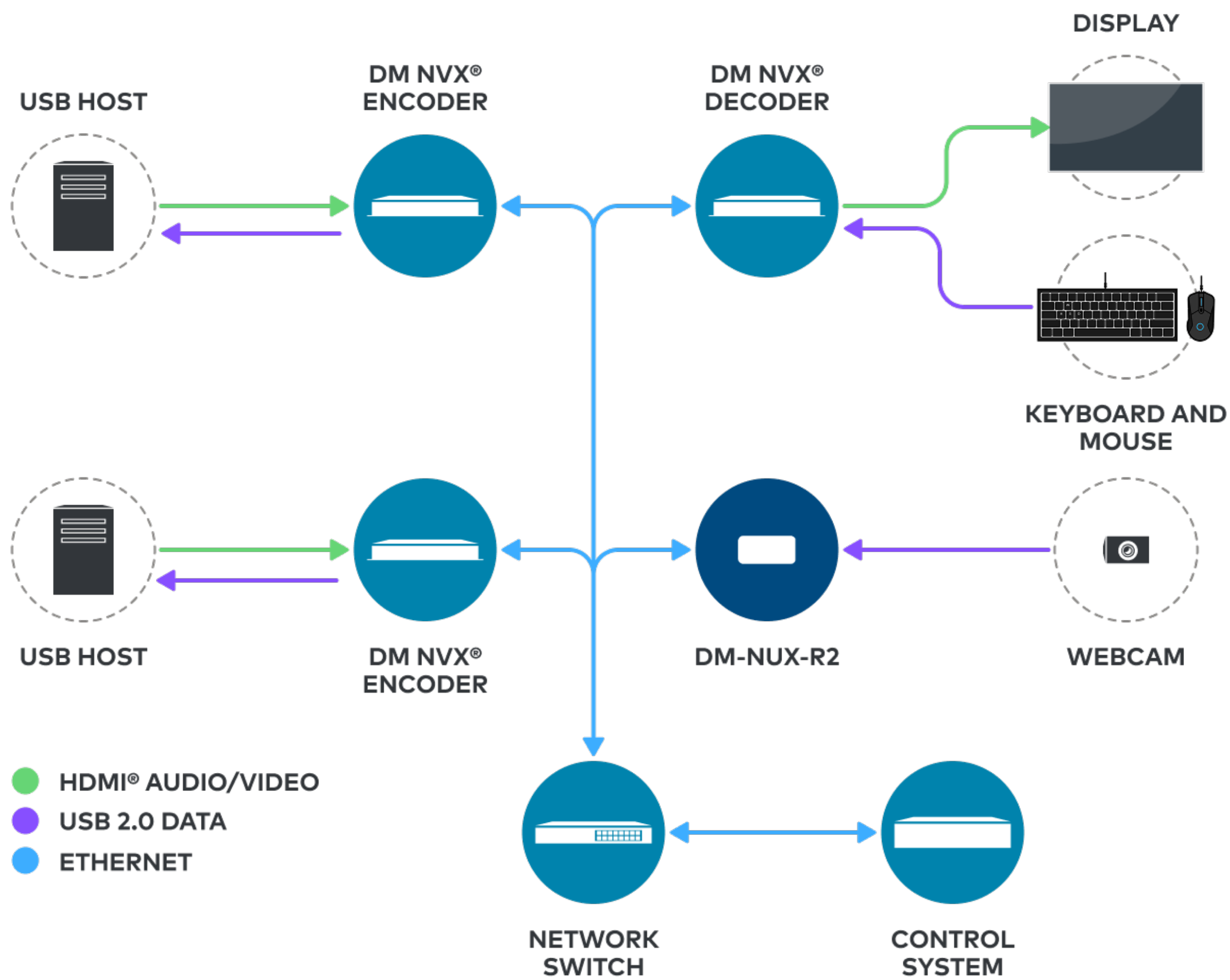
> **NOTE:** Refer to Knowledge Article 3082 for more information on managing USB tiers and bandwidth to ensure that all connected USB devices will enumerate and exchange data with the USB host.

Layer 2 USB over Network Extension



This application highlights a basic point-to-point extension of USB 2.0 data over a network via layer 2 communications using a DM NUX endpoint pair. The endpoints can be paired manually using their **PAIR** buttons or via custom programming on a Crestron control system.

Layer 2 or Layer 3 USB over Network Dynamic Routing



This application highlights dynamic routing of USB signals, with several USB devices connected at remote endpoints that can be paired with either of two USB hosts. Each DM NVX encoder functions as a DM NUX local endpoint and can be paired with the DM NVX decoder and/or DM NUX remote endpoints to receive USB 2.0 data from a keyboard, mouse, and webcam. Each remote device can be paired with only a single local device at a time. Custom programming on a Crestron control system determines the dynamic pairing of these devices to route the USB signals.

> **TIP:** When two DM NVX endpoints are paired for USB over network extension, Layer 3 communications can be used instead of Layer 2. Layer 3 communication provides support for AES-128 end-to-end encryption, while Layer 2 communications are always unencrypted. Endpoints with DM-NUX in their model name only support Layer 2 communications.

Notes:

1. The USB endpoint is engineered to deliver maximum compatibility with the widest possible range of devices. Crestron does not guarantee that all USB devices or hosts are compatible with the USB endpoint. Certain USB devices may require additional driver installation if not directly supported by the computer's operating system. A USB webcam may not be used when five or more Remote endpoints are paired to a Local endpoint. Video from two cameras connected to a Remote endpoint may not be viewed on different applications simultaneously. Any 1.0/1.1 devices need a USB hub.
2. For a direct connection between a Local endpoint and a Remote endpoint, use high quality, solid core CAT5e (or greater) unshielded twisted pair (UTP) cable. To comply with the European Directive (CE), Crestron recommends using high-quality, solid core CAT5e (or greater) shielded twisted pair (STP) cable. If connecting either endpoint through a wall plate, a stranded patch cable may be used. The maximum aggregate cable length is 330 ft (100 m) between endpoints. The minimum cable length is 6 ft (1.8 m).

DM-NUX-R2 Features

Key features of the DM-NUX-R2 include:

- Reliable, high-speed USB signal extension for most USB 1.1 or 2.0 devices, including isochronous devices[1]
- Compatible with DM NVX® endpoints that support USB 2.0 signal extension
- Supports creating a virtual hub with a local endpoint
- Enables USB signal routing under the control of a Crestron control system
- Driver-free compatibility with Windows®, macOS®, and Linux® operating systems[1]
- Transports USB data over an Ethernet network or point-to-point at speeds up to 480 Mbps
- Mass Storage Acceleration maximizes USB 2.0 bulk transfer speeds

Virtual Hub

Up to five remote endpoints may simultaneously be connected to a single local endpoint, creating a virtual USB hub which allows numerous USB devices to control a single USB host (such as a PC).[1] These USB signals are transported over a local network and managed via a Crestron control system.

Endpoint Compatibility

The DM-NUX-R2 remote endpoint is compatible with the DM-NUX-L2, DM-NUX-L2-1G, and DM NVX endpoints that support USB 2.0 signal extension. Any of these supported models can be paired with a DM-NUX-R2 to route and extend USB signals over a local area network (LAN).

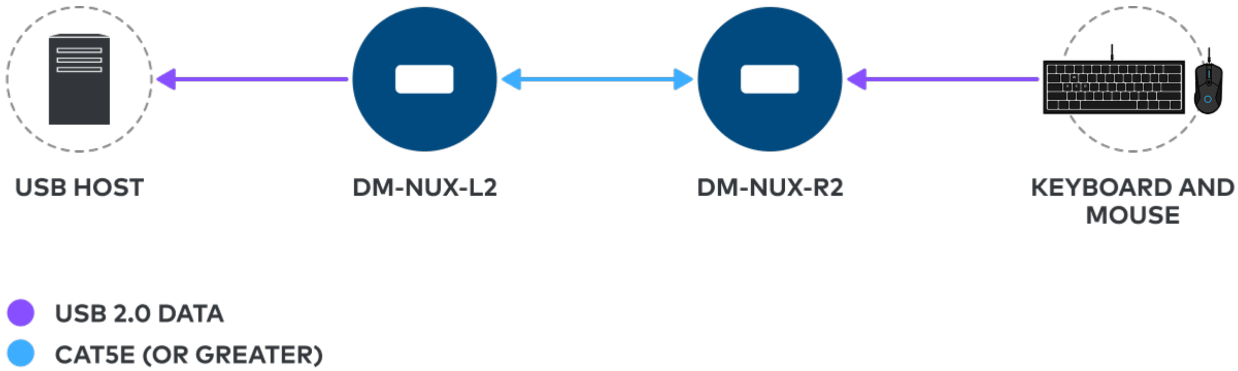
Point-to-Point Connectivity

In addition to layer 2 USB routing over a LAN, DM NUX endpoints can be connected directly to one another, providing point-to-point USB signal extension over a dedicated CAT5e (or greater) cable.[2]

Application Diagrams

This section shows DM NUX USB over network devices in applications of varying complexity. The surface-mountable and wall plate models are fully interchangeable in all of these applications.

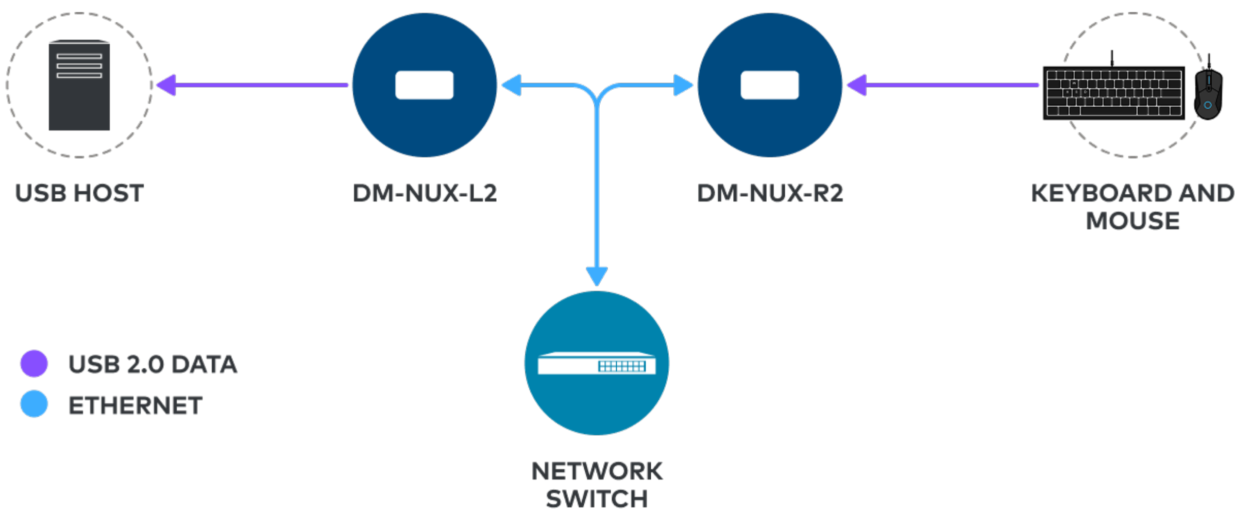
Point-to-Point USB Extension



This application highlights a basic point-to-point extension of USB 2.0 data over CAT5e (or greater) cabling using a DM NUX endpoint pair (one local endpoint and one remote endpoint). A USB device is connected at the remote endpoint and its signal is transmitted up to 330 ft (100 m) to the USB host connected to a local endpoint. Up to 30 devices can be connected to the host via the remote endpoint by using USB hubs.

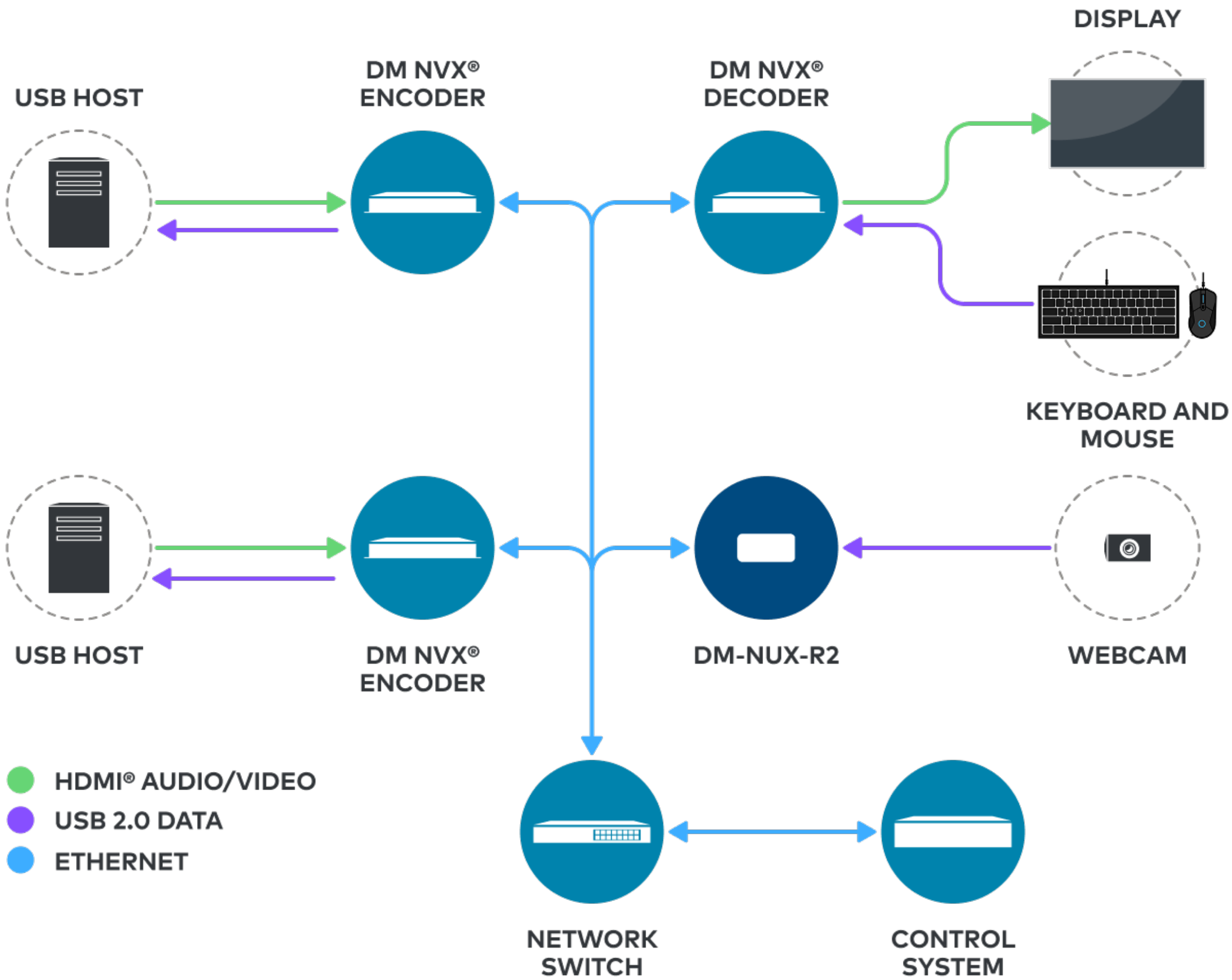
> **NOTE:** Refer to Knowledge Article 3082 for more information on managing USB tiers and bandwidth to ensure that all connected USB devices will enumerate and exchange data with the USB host.

Layer 2 or Layer 3 USB over Network Dynamic Routing



This application highlights a basic point-to-point extension of USB 2.0 data over a network via layer 2 communications using a DM NUX endpoint pair. The endpoints can be paired manually using their **PAIR** buttons or via custom programming on a Crestron control system.

Layer 2 USB over Network Dynamic Routing



This application highlights dynamic routing of USB signals, with several USB devices connected at remote endpoints that can be paired with either of two USB hosts. Each DM NVX encoder functions as a DM NUX local endpoint and can be paired with the DM NVX decoder and/or DM NUX remote endpoints to receive USB 2.0 data from a keyboard, mouse, and webcam. Each remote device can be paired with only a single local device at a time. Custom programming on a Crestron control system determines the dynamic pairing of these devices to route the USB signals.

> **TIP:** When two DM NVX endpoints are paired for USB over network extension, Layer 3 communications can be used instead of Layer 2. Layer 3 communication provides support for AES-128 end-to-end encryption, while Layer 2 communications are always unencrypted. Endpoints with DM-NUX in their model name only support Layer 2 communications.

Notes:

1. The USB endpoint is engineered to deliver maximum compatibility with the widest possible range of devices. Crestron does not guarantee that all USB devices or hosts are compatible with the USB endpoint. Certain USB devices may require additional driver installation if not directly supported by the computer's operating system. A USB webcam may not be used when five or more Remote endpoints are paired to a Local endpoint. Video from two cameras connected to a Remote endpoint may not be viewed on different applications simultaneously. Any 1.0/1.1 devices need a USB hub.
2. For a direct connection between a Local endpoint and a Remote endpoint, use high quality, solid core CAT5e (or greater) unshielded twisted pair (UTP) cable. To comply with the European Directive (CE), Crestron recommends using high-quality, solid core CAT5e (or greater) shielded twisted pair (STP) cable. If connecting either endpoint through a wall plate, a stranded patch cable may be used. The maximum aggregate cable length is 330 ft (100 m) between endpoints. The minimum cable length is 6 ft (1.8 m).

DM-NUX-L2-1G Features

Key features of the DM-NUX-L2-1G include:

- Reliable, high-speed USB signal extension for most USB 1.1 or 2.0 devices, including isochronous devices[1]
- Compatible with DM NVX® endpoints that support USB 2.0 signal extension
- Supports creating a virtual hub with up to five remote endpoints
- Enables USB signal routing under the control of a Crestron control system
- Driver-free compatibility with Windows®, macOS®, and Linux® operating systems[1]
- Transports USB data over an Ethernet network or point-to-point at speeds up to 480 Mbps
- Mass Storage Acceleration maximizes USB 2.0 bulk transfer speeds

Virtual Hub

Up to five remote endpoints may simultaneously be connected to a single DM-NUX-L2-1G endpoint, creating a virtual USB hub which allows numerous USB devices to control a single USB host (such as a PC).[1] These USB signals are transported over a local network and managed via a Crestron control system.

Endpoint Compatibility

The DM-NUX-L2-1G local endpoint is compatible with the DM-NUX-R2, DM-NUX-R2-1G, and DM NVX endpoints that support USB 2.0 signal extension. Any of these supported models can be paired with a

DM-NUX-L2-1G to route and extend USB signals over a local area network (LAN).

Point-to-Point Connectivity

In addition to layer 2 USB routing over a LAN, DM NUX endpoints can be connected directly to one another, providing point-to-point USB signal extension over a dedicated CAT5e (or greater) cable.[2]

Application Diagrams

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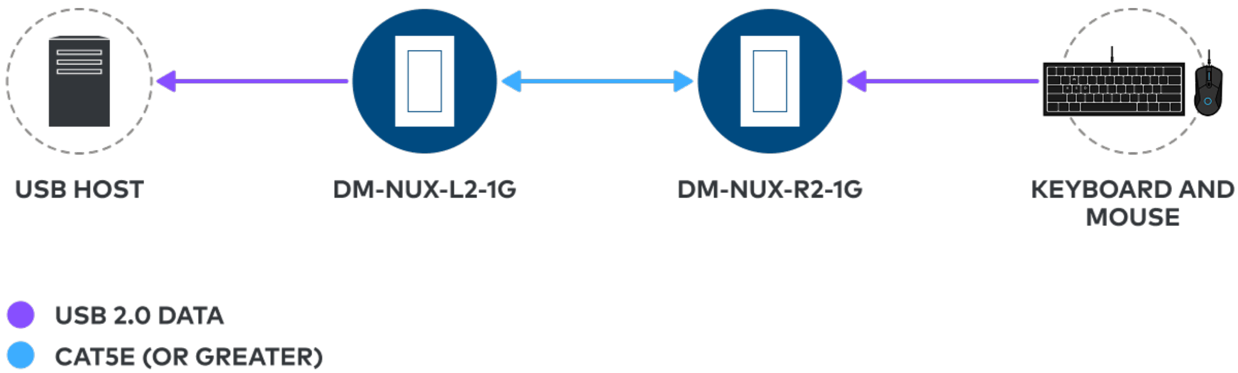
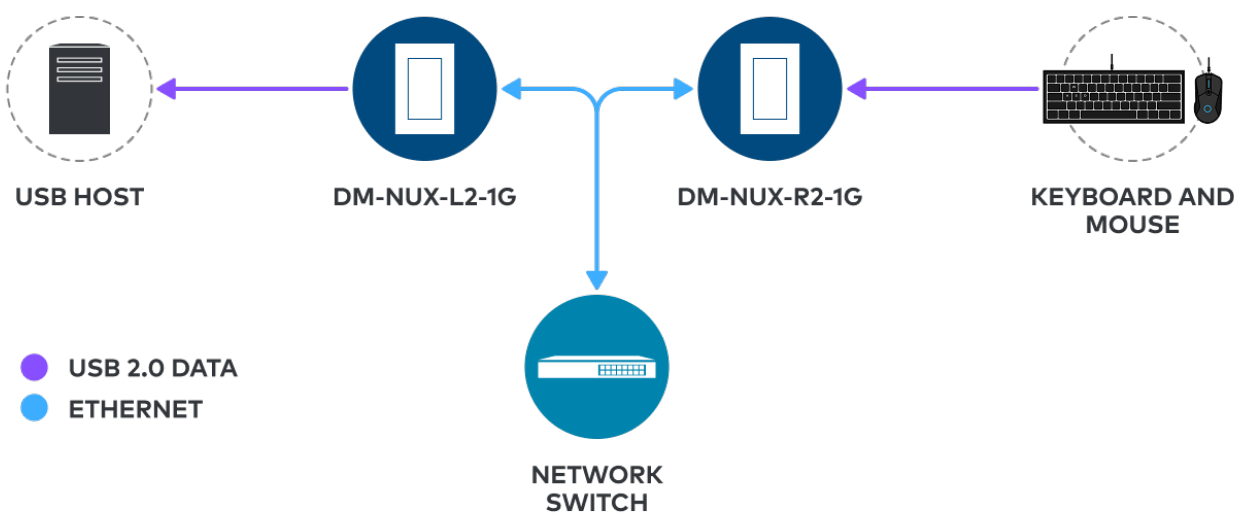
Point-to-Point USB Extension



This application highlights a basic point-to-point extension of USB 2.0 data over CAT5e (or greater) cabling using a DM NUX endpoint pair (one local endpoint and one remote endpoint). A USB device is connected at the remote endpoint and its signal is transmitted up to 330 ft (100 m) to the USB host connected to a local endpoint. Up to 30 devices can be connected to the host via the remote endpoint by using USB hubs.

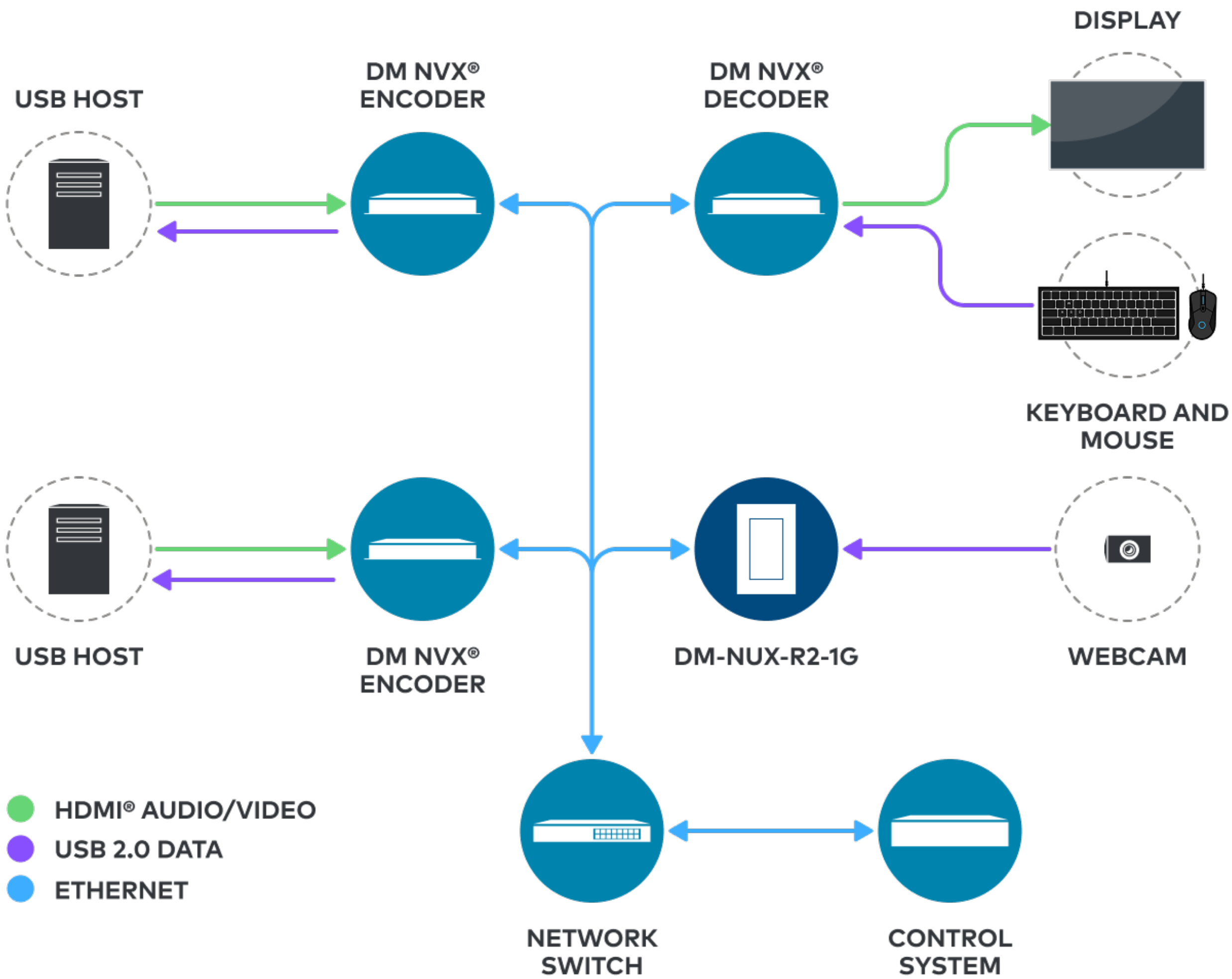
> **NOTE:** Refer to Knowledge Article 3082 for more information on managing USB tiers and bandwidth to ensure that all connected USB devices will enumerate and exchange data with the USB host.

Layer 2 USB over Network Extension



This application highlights a basic point-to-point extension of USB 2.0 data over a network via layer 2 communications using a DM NUX endpoint pair. The endpoints can be paired manually using their **PAIR** buttons or via custom programming on a Crestron control system.

Layer 2 or Layer 3 USB over Network Dynamic Routing



This application highlights dynamic routing of USB signals, with several USB devices connected at remote endpoints that can be paired with either of two USB hosts. Each DM NVX encoder functions as a DM NUX local endpoint and can be paired with the DM NVX decoder and/or DM NUX remote endpoints to receive USB 2.0 data from a keyboard, mouse, and webcam. Each remote device can be paired with only a single local device at a time. Custom programming on a Crestron control system determines the dynamic pairing of these devices to route the USB signals.

> **TIP:** When two DM NVX endpoints are paired for USB over network extension, Layer 3 communications can be used instead of Layer 2. Layer 3 communication provides support for AES-128 end-to-end encryption, while Layer 2 communications are always unencrypted. Endpoints with DM-NUX in their model name only support Layer 2 communications.

Notes:

1. The USB endpoint is engineered to deliver maximum compatibility with the widest possible range of devices. Crestron does not guarantee that all USB devices or hosts are compatible with the USB endpoint. Certain USB devices may require additional driver installation if not directly supported by the computer's operating system. A USB webcam may not be used when five or more Remote endpoints are paired to a Local endpoint. Video from two cameras connected to a Remote endpoint may not be viewed on different applications simultaneously. Any 1.0/1.1 devices need a USB hub.
2. For a direct connection between a Local endpoint and a Remote endpoint, use high quality, solid core CAT5e (or greater) unshielded twisted pair (UTP) cable. To comply with the European Directive (CE), Crestron recommends using high-quality, solid core CAT5e (or greater) shielded twisted pair (STP) cable. If connecting either endpoint through a wall plate, a stranded patch cable may be used. The maximum aggregate cable length is 330 ft (100 m) between endpoints. The minimum cable length is 6 ft (1.8 m).

DM-NUX-R2-1G Features

Key features of the DM-NUX-R2-1G include:

- Reliable, high-speed USB signal extension for most USB 1.1 or 2.0 devices, including isochronous devices[1]
- Compatible with DM NVX® endpoints that support USB 2.0 signal extension
- Supports creating a virtual hub with a local endpoint
- Enables USB signal routing under the control of a Crestron control system
- Driver-free compatibility with Windows®, macOS®, and Linux® operating systems[1]
- Transports USB data over an Ethernet network or point-to-point at speeds up to 480 Mbps
- Mass Storage Acceleration maximizes USB 2.0 bulk transfer speeds

Virtual Hub

Up to five remote endpoints may simultaneously be connected to a single local endpoint, creating a virtual USB hub which allows numerous USB devices to control a single USB host (such as a PC).[1] These USB signals are transported over a local network and managed via a Crestron control system.

Endpoint Compatibility

The DM-NUX-R2-1G remote endpoint is compatible with the DM-NUX-L2, DM-NUX-L2-1G, and DM NVX endpoints that support USB 2.0 signal extension. Any of these supported models can be paired with a DM-NUX-R2-1G to route and extend USB signals over a local area network (LAN).

Point-to-Point Connectivity

In addition to layer 2 USB routing over a LAN, DM NUX endpoints can be connected directly to one another, providing point-to-point USB signal extension over a dedicated CAT5e (or greater) cable.[2]

Application Diagrams

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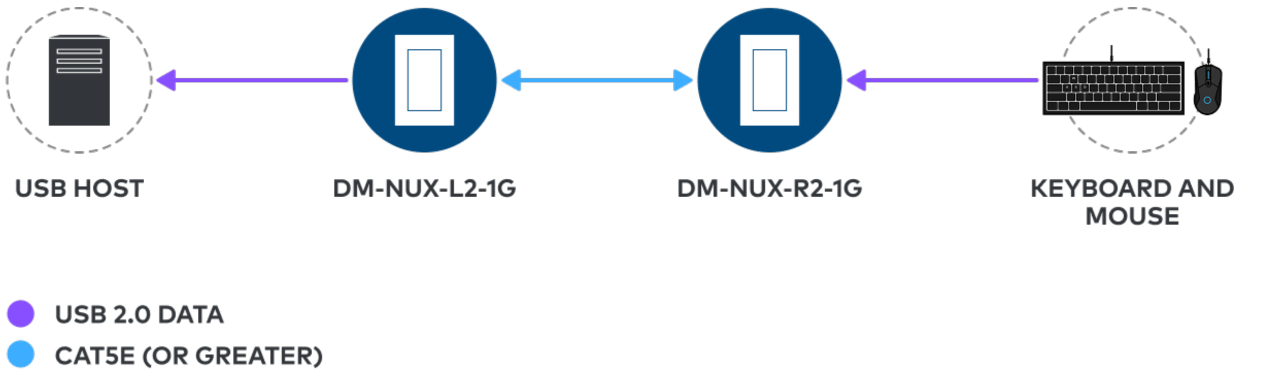
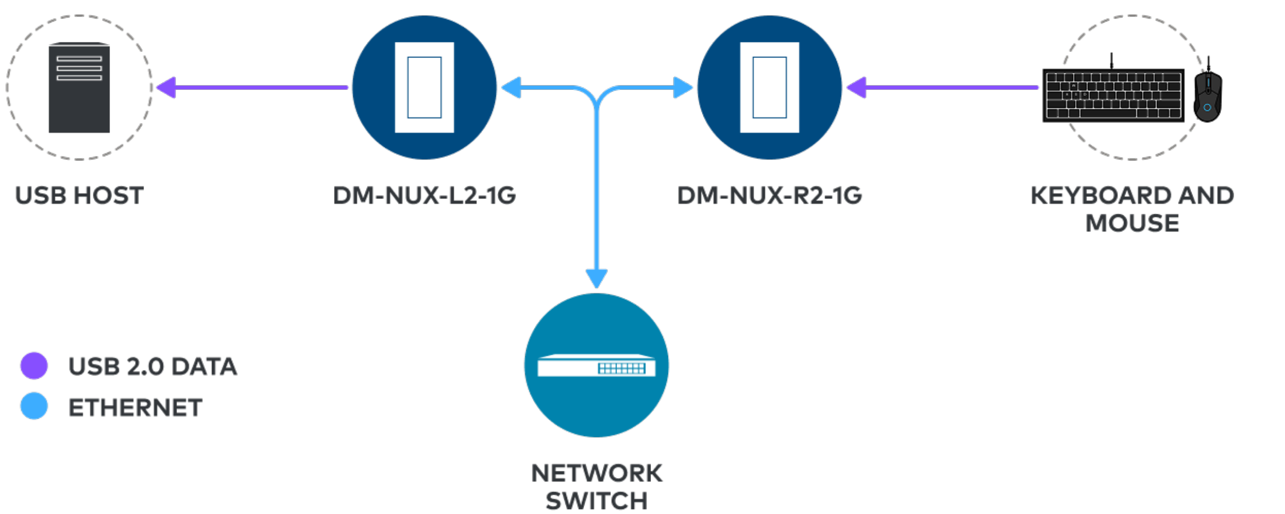
Point-to-Point USB Extension



This application highlights a basic point-to-point extension of USB 2.0 data over CAT5e (or greater) cabling using a DM NUX endpoint pair (one local endpoint and one remote endpoint). A USB device is connected at the remote endpoint and its signal is transmitted up to 330 ft (100 m) to the USB host connected to a local endpoint. Up to 30 devices can be connected to the host via the remote endpoint by using USB hubs.

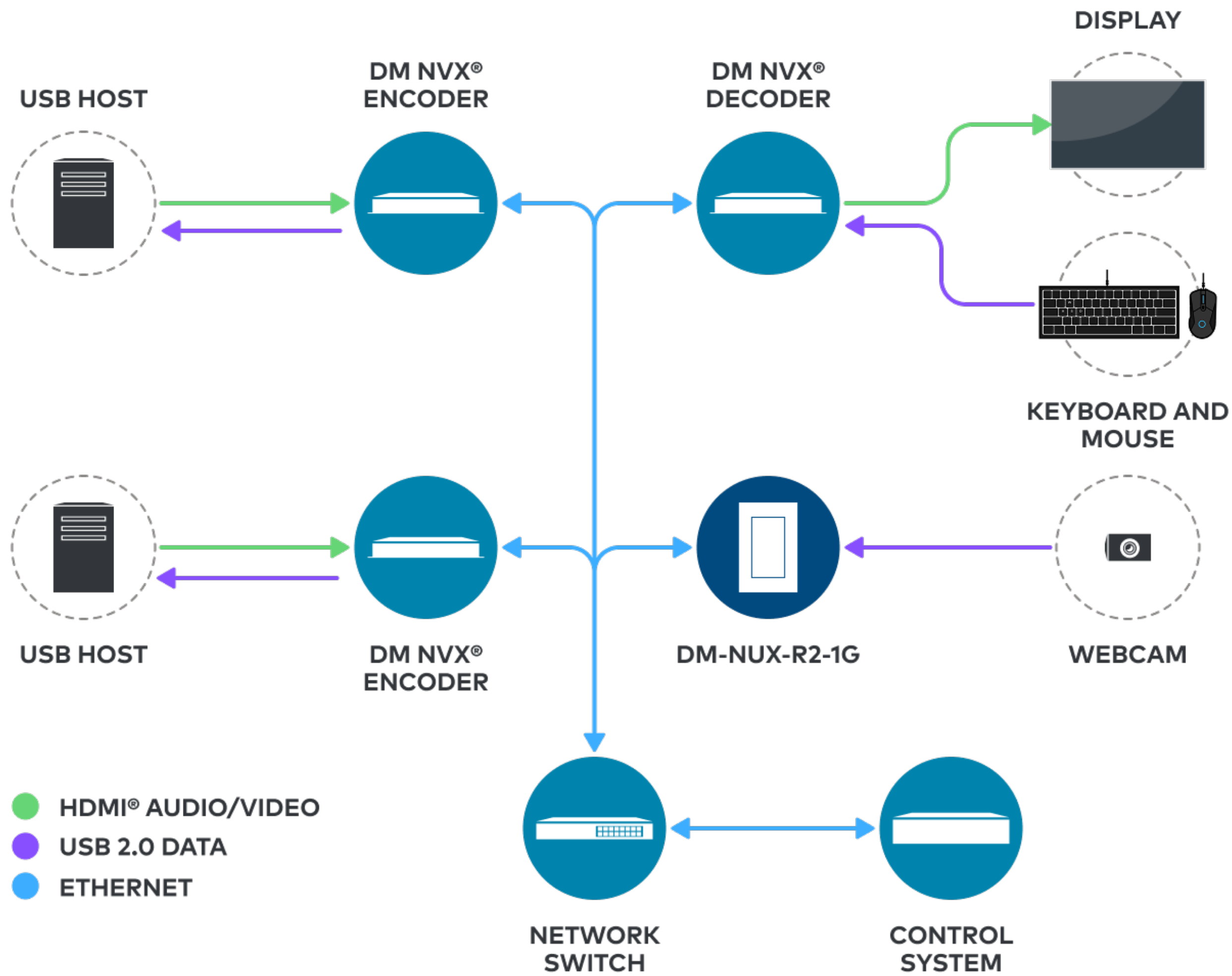
> **NOTE:** Refer to Knowledge Article 3082 for more information on managing USB tiers and bandwidth to ensure that all connected USB devices will enumerate and exchange data with the USB host.

Layer 2 USB over Network Extension



This application highlights a basic point-to-point extension of USB 2.0 data over a network via layer 2 communications using a DM NUX endpoint pair. The endpoints can be paired manually using their **PAIR** buttons or via custom programming on a Crestron control system.

Layer 2 or Layer 3 USB over Network Dynamic Routing



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> **TIP:** When two DM NVX endpoints are paired for USB over network extension, Layer 3 communications can be used instead of Layer 2. Layer 3 communication provides support for AES-128 end-to-end encryption, while Layer 2 communications are always unencrypted. Endpoints with DM-NUX in their model name only support Layer 2 communications.

Notes:

1. The USB endpoint is engineered to deliver maximum compatibility with the widest possible range of devices. Crestron does not guarantee that all USB devices or hosts are compatible with the USB endpoint. Certain USB devices may require additional driver installation if not directly supported by the computer's operating system. A USB webcam may not be used when five or more Remote endpoints are paired to a Local endpoint. Video from two cameras connected to a Remote endpoint may not be viewed on different applications simultaneously. Any 1.0/1.1 devices need a USB hub.
2. For a direct connection between a Local endpoint and a Remote endpoint, use high quality, solid core CAT5e (or greater) unshielded twisted pair (UTP) cable. To comply with the European Directive (CE), Crestron recommends using high-quality, solid core CAT5e (or greater) shielded twisted pair (STP) cable. If connecting either endpoint through a wall plate, a stranded patch cable may be used. The maximum aggregate cable length is 330 ft (100 m) between endpoints. The minimum cable length is 6 ft (1.8 m).

Specifications

This section provides the following information:

DM-NUX-L2 Specifications

Product specifications for the DM-NUX-L2 are provided below.

Product Specifications

Communications

Ethernet	100BASE-T/1000BASE-T, Layer 2, up to 480 Mbps, dependent upon network speed and quality
USB Device Support	USB 1.0/1.1 and 2.0, hub compatible, including isochronous devices[1]
USB Hub Support	The full USB signal chain may include up to 4 USB hubs plus one DM NUX local endpoint and one DM NUX remote endpoint[1] **NOTE:** Refer to Knowledge Article 3082 for more information on USB hubs and tiers.
Maximum Device Limit	30 USB devices, or 4 USB hubs with 26 USB devices
Host Computer OS Support	Windows®, macOS®, and Linux® operating systems
USB Throughput	USB 2.0 up to 480 Mbps; USB 1.1 up to 12 Mbps

Connectors

Link	(1) 8-pin RJ-45 connector, female; Connects to an Ethernet network or directly to a Remote endpoint[2]
USB	(1) USB Type B connector, female (USB Type B to Type A cable included); USB 2.0 device port for connection to the USB host, such as a computer, media server, game console, codec, etc.
Config	For factory use only

Controls & Indicators

Pair	(1) Push button, used to establish a connection with a Remote endpoint
Activity	(1) Amber LED, indicates data activity over the Link connection
Host	(1) Green LED, indicates a valid connection to the USB host
Link	(1) Green LED, indicates a valid Link connection to the Remote endpoint
Power	(1) Blue LED, indicates operating power is supplied via the USB host

Power

USB powered via the USB host

Environmental

Temperature	32° to 122°F (0° to 50°C)
Humidity	20% to 80% RH (noncondensing)

Construction

Enclosure	Black anodized aluminum
Mounting	Freestanding or surface-mounted (mounting bracket included)

Dimensions

Height	1.02 in. (26 mm)
Width	3.94 in. (100 mm)
Depth	2.99 in. (76 mm)

Weight

6.3 oz (179 g)

Compliance

Regulatory Model: M201947001

CE, IC, FCC Part 15 Class B digital device

Notes:

1. The USB endpoint is engineered to deliver maximum compatibility with the widest possible range of devices. Crestron does not guarantee that all USB devices or hosts are compatible with the USB endpoint. Certain USB devices may require additional driver installation if not directly supported by the computer's operating system. A USB webcam may not be used when five or more Remote endpoints are paired to a Local endpoint. Video from two cameras connected to a Remote endpoint may not be viewed on different applications simultaneously. Any 1.0/1.1 devices need a USB hub.
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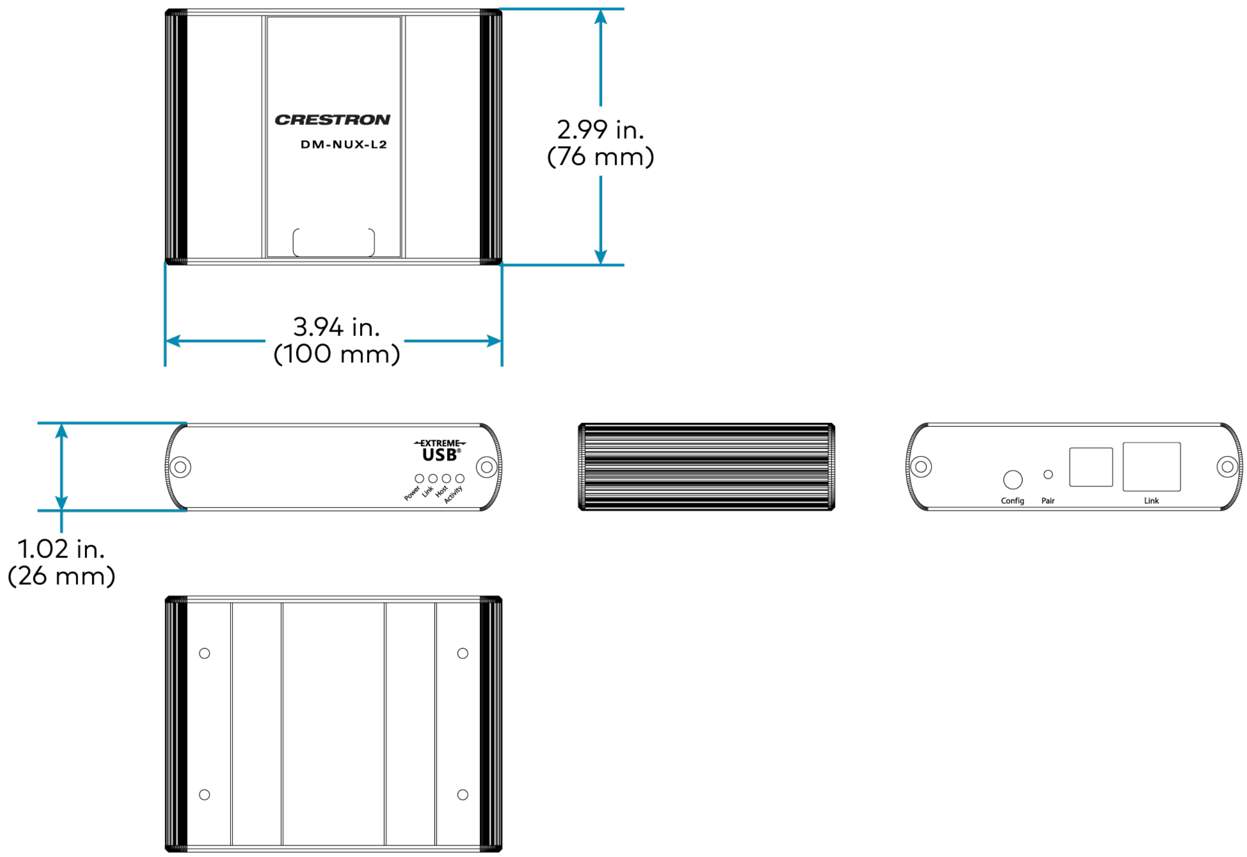
Dimension Drawings



DM-NUX-R2 Specifications

Product specifications for the DM-NUX-R2 are provided below.

Product Specifications

Replace this text

Ethernet	100BASE-T/1000BASE-T, Layer 2, up to 480 Mbps, dependent upon network speed and quality
USB Device Support	USB 1.0/1.1 and 2.0, hub compatible, including isochronous devices[1]
USB Hub Support	The full USB signal chain may include up to 4 USB hubs plus one DM NUX local endpoint and one DM NUX remote endpoint[1] **NOTE:** Refer to Knowledge Article 3082 for more information on USB hubs and tiers.
Maximum Device Limit	30 USB devices, or 4 USB hubs with 26 USB devices
Host Computer OS Support	Windows®, macOS®, and Linux® operating systems
USB Throughput	USB 2.0 up to 480 Mbps; USB 1.1 up to 12 Mbps

Connectors

24V 1A	(1) 2.1 x 5.5 mm DC power connector; 24VDC power input; PW-2407WU power pack included
Link	(1) 8-pin RJ-45 connector, female; Connects to an Ethernet network or directly to a Local endpoint[2]
USB	(4) USB Type A connectors, female; USB 2.0 ports for connection of USB devices such as a mouse, keyboard, or other peripheral[1]; Available USB Power: Up to 600mA at each port concurrently; Up to 1A when two or fewer ports are in use **NOTE:** The USB connectors of a DM NUX Remote endpoint only supply power to the connected peripheral when a USB host is connected to a paired Local endpoint.
Config	For factory use only

Controls & Indicators

Pair	(1) Push button, used to establish a connection with a Local endpoint

Activity	(1) Amber LED, indicates data activity over the Link connection
Host	(1) Green LED, indicates a valid connection to the USB host
Link	(1) Green LED, indicates a valid Link connection to the Remote endpoint
Power	(1) Blue LED, indicates operating power is supplied via the included power pack

Power

Input: 100-240VAC, 50/60 Hz;
Output: 0.75A @ 24VDC;
PW-2407WU power pack included

Environmental

Temperature	32° to 122°F (0° to 50°C)
Humidity	20% to 80% RH (noncondensing)

Construction

Enclosure	Black anodized aluminum
Mounting	Freestanding or surface-mounted (mounting bracket included)

Dimensions

Height	1.02 in. (26 mm)
Width	3.94 in. (100 mm)
Depth	2.99 in. (76 mm)

Weight

6.7 oz (190 g)

Compliance

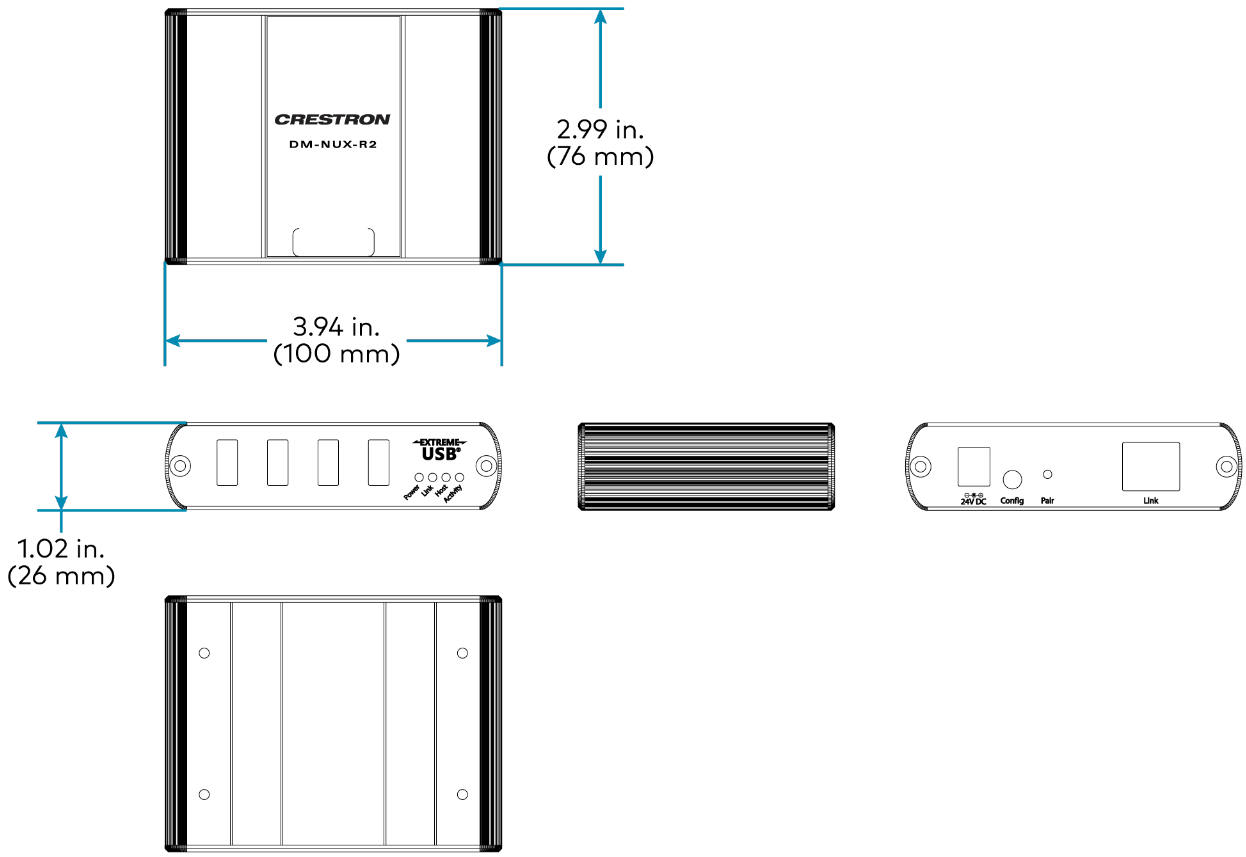
Regulatory Model: 201947001

CE, IC, FCC Part 15 Class B digital device

Notes:

1. The USB endpoint is engineered to deliver maximum compatibility with the widest possible range of devices. Crestron does not guarantee that all USB devices or hosts are compatible with the USB endpoint. Certain USB devices may require additional driver installation if not directly supported by the computer's operating system. A USB webcam may not be used when five or more Remote endpoints are paired. Video from two cameras connected to a Remote endpoint may not be viewed on different applications simultaneously. Any 1.0/1.1 devices need a USB hub.
2. For a direct connection between a Local endpoint and a Remote endpoint, use high quality, solid core CAT5e (or greater) unshielded twisted pair (UTP) cable. To comply with the European Directive (CE), Crestron recommends using high-quality, solid core CAT5e (or greater) shielded twisted pair (STP) cable. If connecting either endpoint through a wall plate, a stranded patch cable may be used. The maximum aggregate cable length is 330 ft (100 m) between endpoints. The minimum cable length is 6 ft (1.8 m).

Dimension Drawings



DM-NUX-L2-1G Specifications

Product specifications for the DM-NUX-L2-1G are provided below. Specifications are identical between the DM-NUX-L2-1G-B and DM-NUX-L2-1G-W except where noted.

Product Specifications

Communications

Ethernet	100BASE-T/1000BASE-T, Layer 2, up to 480 Mbps, dependent upon network speed and quality
USB Device Support	USB 1.0/1.1 and 2.0, hub compatible, including isochronous devices[1]
USB Hub Support	The full USB signal chain may include up to 4 USB hubs plus one DM NUX local endpoint and one DM NUX remote endpoint[1] **NOTE:** Refer to Knowledge Article 3082 for more information on USB hubs and tiers.
Maximum Device Limit	30 USB devices, or 4 USB hubs with 26 USB devices
Host Computer OS Support	Windows®, macOS®, and Linux® operating systems
USB Throughput	USB 2.0 up to 480 Mbps; USB 1.1 up to 12 Mbps

Connectors

24V 0.75A	(1) 2-pin 3.5 mm detachable terminal block; 24VDC power input[2]; PW-2407WUL power pack (sold separately)
Link	(1) 8-pin RJ-45 connector, female; Connects to an Ethernet network or directly to a Remote endpoint[3]; IEEE 802.3af
USB	(1) USB Type B connector, female (USB Type B to Type A cable included); USB 2.0 device port for connection to the USB host, such as a computer, media server, game console, codec, etc.
Config	For factory use only

Controls & Indicators

PAIR	(1) Push button, used to establish a connection with a Remote endpoint
ACT	(1) Amber LED, indicates data activity over the Link connection
HOST	(1) Green LED, indicates a valid connection to the USB host
LINK	(1) Green LED, indicates a valid Link connection to the Remote endpoint

PWR	(1) Blue LED, indicates operating power is supplied via PoE or a power supply (not included)

Power

Input: 100-240VAC, 50/60 Hz;
Output: 0.75A @ 24VDC

IEEE 802.3af powered device;
An optional ferrite bead is provided to reduce or prevent EMI (electromagnetic interference)[2]

Environmental

Temperature	32° to 122°F (0° to 50°C)
Humidity	20% to 80% RH (noncondensing)

Construction

Enclosure	Metal, black finish with black (DM-NUX-L2-1G-B) or white (DM-NUX-L2-1G-W) polycarbonate label overlay
Mounting	Mounts in a North American 1-gang electrical box (not included); FP-G1 series decorator style faceplate (sold separately)

Dimensions

Height	4.12 in. (105 mm) front panel without faceplate; 2.68 in. (68 mm) back box
Width	1.72 in. (44 mm) front panel without faceplate
Depth	1.95 in. (50 mm)

Weight

6.3 oz (179 g)

Compliance

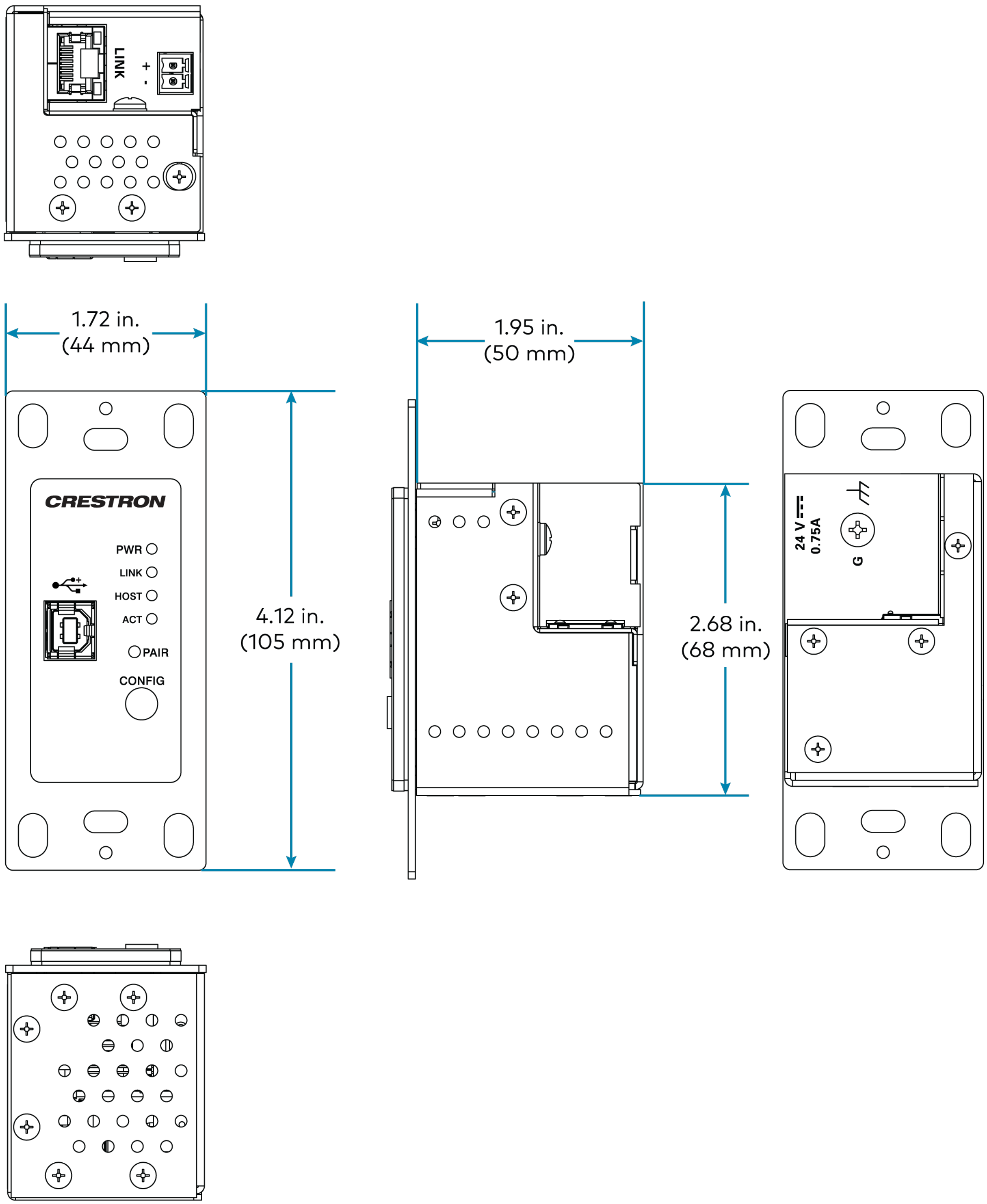
Regulatory Model: M201947001

IC, FCC Part 15 Class B digital device

Notes:

1. The USB endpoint is engineered to deliver maximum compatibility with the widest possible range of devices. Crestron does not guarantee that all USB devices or hosts are compatible with the USB endpoint. Certain USB devices may require additional driver installation if not directly supported by the computer's operating system. A USB webcam may not be used when five or more Remote endpoints are paired to a Local endpoint. Video from two cameras connected to a Remote endpoint may not be viewed on different applications simultaneously. Any 1.0/1.1 devices need a USB hub.
2. A ferrite bead is provided to reduce or prevent EMI (electromagnetic interference). When using a power source other than PoE (power over Ethernet), Crestron recommends installing this ferrite bead on the power supply cable close to the device.
3. For a direct connection between a Local endpoint and a Remote endpoint, use high quality, solid core CAT5e (or greater) unshielded twisted pair (UTP) cable. To comply with the European Directive (CE), Crestron recommends using high-quality, solid core CAT5e (or greater) shielded twisted pair (STP) cable. If connecting either endpoint through a wall plate, a stranded patch cable may be used. The maximum aggregate cable length is 330 ft (100 m) between endpoints. The minimum cable length is 6 ft (1.8 m).

Dimension Drawings



DM-NUX-R2-1G Specifications

Product specifications for the DM-NUX-R2-1G are provided below. Specifications are identical between the DM-NUX-R2-1G-B and DM-NUX-R2-1G-W except where noted.

Product Specifications

Replace this text

Ethernet	100BASE-T/1000BASE-T, Layer 2, up to 480 Mbps, dependent upon network speed and quality
USB Device Support	USB 1.0/1.1 and 2.0, hub compatible, including isochronous devices[1]
USB Hub Support	The full USB signal chain may include up to 4 USB hubs plus one DM NUX local endpoint and one DM NUX remote endpoint[1] **NOTE:** Refer to Knowledge Article 3082 for more information on USB hubs and tiers.
Maximum Device Limit	30 USB devices, or 4 USB hubs with 26 USB devices
Host Computer OS Support	Windows®, macOS®, and Linux® operating systems
USB Throughput	USB 2.0 up to 480 Mbps; USB 1.1 up to 12 Mbps

Connectors

24V 0.75A	(1) 2-pin 3.5 mm detachable terminal block; 24VDC power input[2]; PW-2407WUL power pack (sold separately)
Link	(1) 8-pin RJ-45 connector, female; Connects to an Ethernet network or directly to a Local endpoint[3]; IEEE 802.3af
USB	(4) USB Type A connectors, female; USB 2.0 ports for connection of USB devices such as a mouse, keyboard, or other peripheral[1]; Available USB Power: Up to 600mA at each port concurrently; Up to 1A when two or fewer ports are in use **NOTE:** The USB connectors of a DM NUX Remote endpoint only supply power to the connected peripheral when a USB host is connected to a paired Local endpoint.
Config	For factory use only

Controls & Indicators

PAIR	(1) Push button, used to establish a connection with a Local endpoint
ACT	(1) Amber LED, indicates data activity over the Link connection
HOST	(1) Green LED, indicates a valid connection to the USB host
LINK	(1) Green LED, indicates a valid Link connection to the Remote endpoint
PWR	(1) Blue LED, indicates operating power is supplied via PoE or a power supply (not included)

Power

Input: 100-240VAC, 50/60 Hz;
Output: 0.75A @ 24VDC

IEEE 802.3af powered device;
An optional ferrite bead is provided to reduce or prevent EMI (electromagnetic interference)[2]

Environmental

Temperature	32° to 122°F (0° to 50°C)
Humidity	20% to 80% RH (noncondensing)

Construction

Enclosure	Metal, black finish with black (DM-NUX-R2-1G-B) or white (DM-NUX-R2-1G-W) polycarbonate label overlay
Mounting	Mounts in a North American 1-gang electrical box (not included); FP-G1 series decorator style faceplate (sold separately)

Dimensions

Height	4.12 in. (105 mm) front panel without faceplate; 2.68 in. (68 mm) back box
Width	1.72 in. (44 mm) front panel without faceplate
Depth	1.95 in. (50 mm)

Weight

6.7 oz (190 g)

Compliance

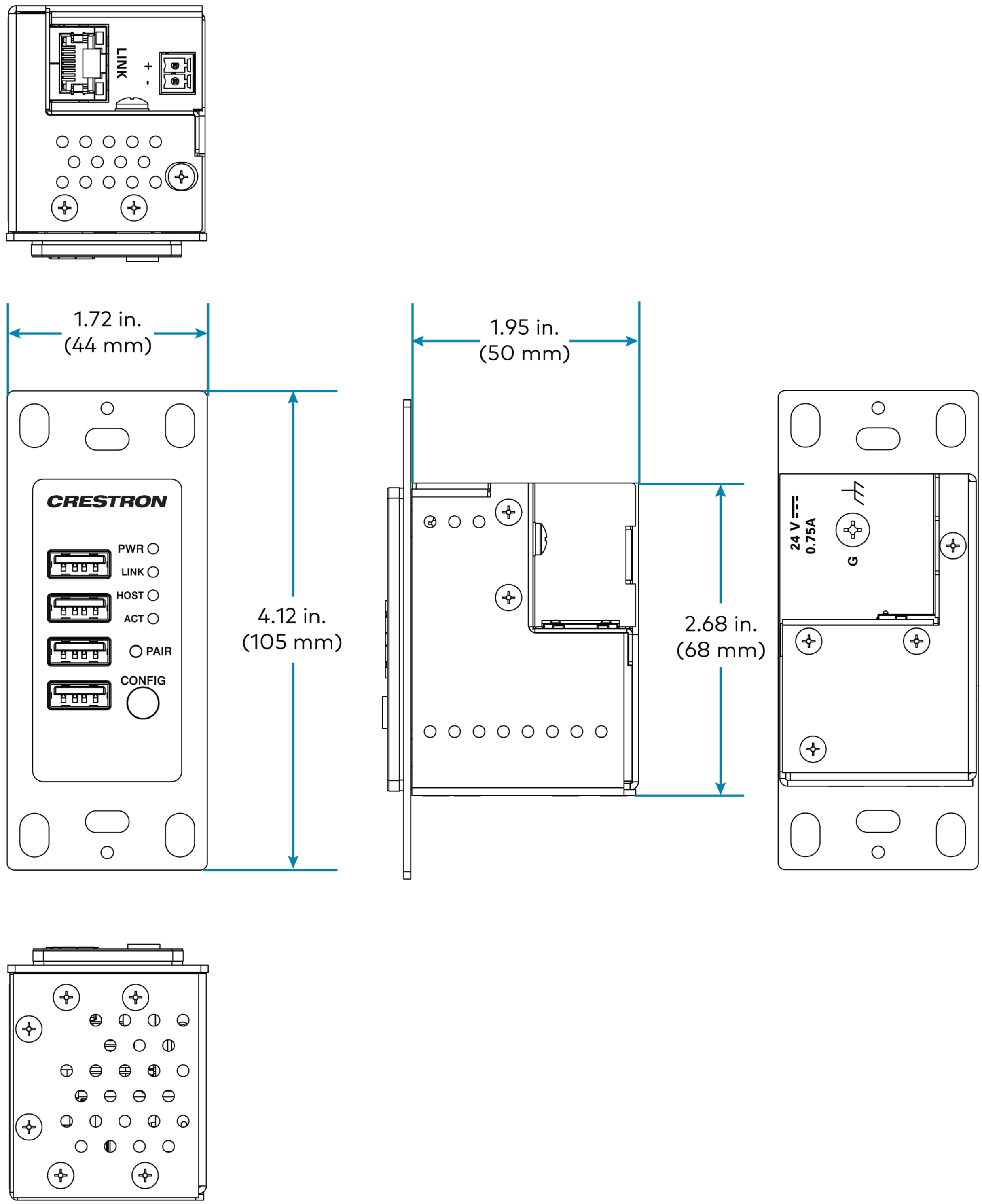
Regulatory Model: 201947001

IC, FCC Part 15 Class B digital device

Notes:

1. The USB endpoint is engineered to deliver maximum compatibility with the widest possible range of devices. Crestron does not guarantee that all USB devices or hosts are compatible with the USB endpoint. Certain USB devices may require additional driver installation if not directly supported by the computer's operating system. A USB webcam may not be used when five or more Remote endpoints are paired. Video from two cameras connected to a Remote endpoint may not be viewed on different applications simultaneously. Any 1.0/1.1 devices need a USB hub.
2. A ferrite bead is provided to reduce or prevent EMI (electromagnetic interference). When using a power source other than PoE (power over Ethernet), Crestron recommends installing this ferrite bead on the power supply cable close to the device.
3. For a direct connection between a Local endpoint and a Remote endpoint, use high quality, solid core CAT5e (or greater) unshielded twisted pair (UTP) cable. To comply with the European Directive (CE), Crestron recommends using high-quality, solid core CAT5e (or greater) shielded twisted pair (STP) cable. If connecting either endpoint through a wall plate, a stranded patch cable may be used. The maximum aggregate cable length is 330 ft (100 m) between endpoints. The minimum cable length is 6 ft (1.8 m).

Dimension Drawings



Installation

This section provides the following information:

- DM-NUX-L2 and DM-NUX-R2 Installation
- DM-NUX-L2-1G and DM-NUX-R2-1G Installation

DM-NUX-L2 and DM-NUX-R2 Installation

Use the following procedures to install and pair the DM-NUX-L2 and DM-NUX-R2.

TIP: These endpoints can be paired with DM-NUX-L2-1G or DM-NUX-R2-1G endpoints, as well as with DM NVX endpoints that support DM NUX USB over network.

Refer to the following headings:

- In the Box on page 36
- Connections on page 37
- Mounting on page 39
- Indicators on page 41
- Pairing and Unpairing on page 41

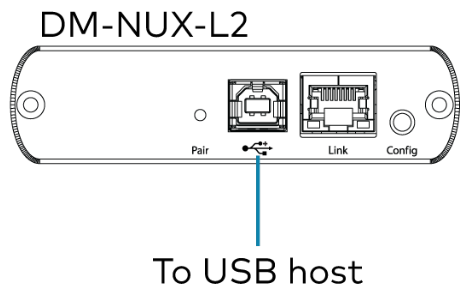
In the Box

Qty.	Description
1	DM-NUX-L2 or DM-NUX-R2, DM NUX USB over Network Endpoint
	Additional Items
1	Kit, mounting hardware (2041279)
	DM-NUX-L2 Only
1	Cable, USB Type A to Type B, 6 ft. (1.8 m) (2053187)
	DM-NUX-R2 Only
1	Power pack, 24VDC, 0.75A, 100-240VAC (PW-2407WU, 2045865)

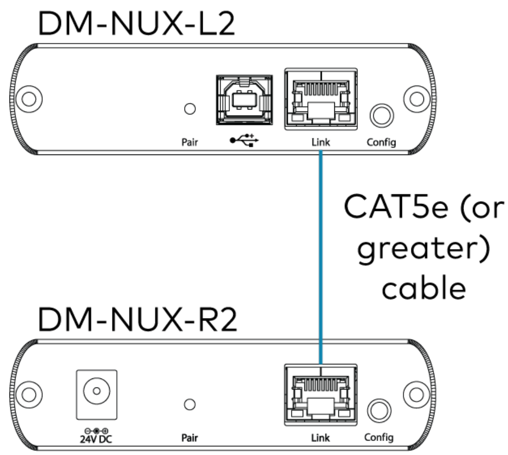
Connections

Make all necessary connections to the DM-NUX-L2 and DM-NUX-R2 as described below.

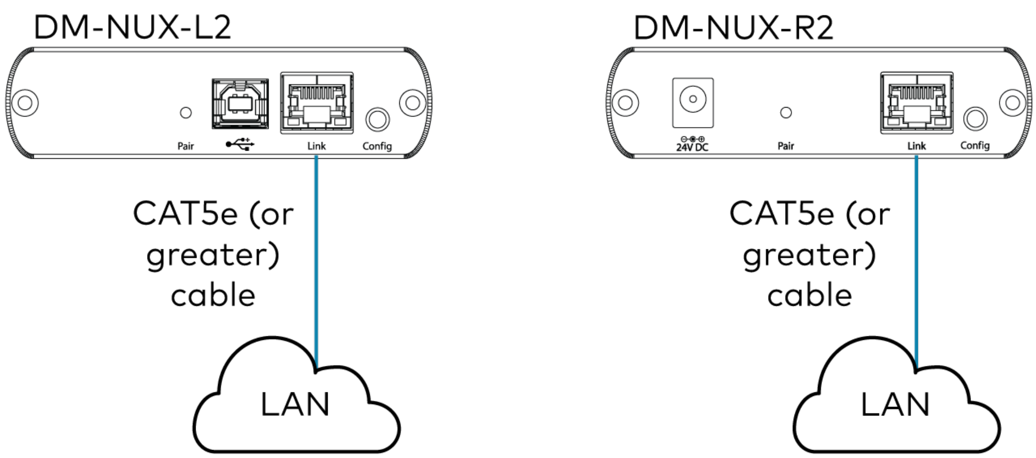
1. Using the included USB cable, connect the DM-NUX-L2 local endpoint to a USB host. The host connection powers the DM-NUX-L2.



2. Using CAT5e (or greater) cable, connect the **Link** port on each device either:
    - Directly to the **Link** port of the other endpoint (for point-to-point USB signal extension).



    - To an available network switch port on a LAN (for Layer 2 USB signal routing).

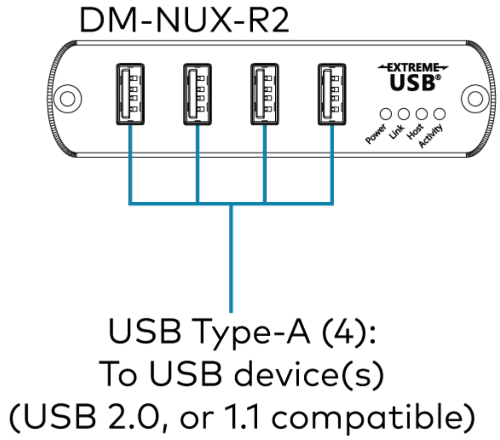


CAUTION: Do not connect the DM-NUX-L2 or DM-NUX-R2 to a Crestron USB-EXT extender. USB-EXT extenders are intended for use as point-to-point USB extenders and must not be connected to an Ethernet LAN or any other network device via the **LINK** port.

NOTES:

- To comply with the European Directive (CE), Crestron recommends using high-quality, solid core CAT5e (or greater) shielded twisted pair (STP) cable.
- The CAT5e (or greater) cable must have a straight-through conductor configuration with no crossovers and must be terminated with 8-conductor RJ45 connectors at both ends.

3. Using USB 2.0 cables (not included), connect the USB Type-A device ports on the DM-NUX-R2 to USB devices (USB 1.1 or 2.0 compatible). Connect up to 30 devices using up to three USB hubs.

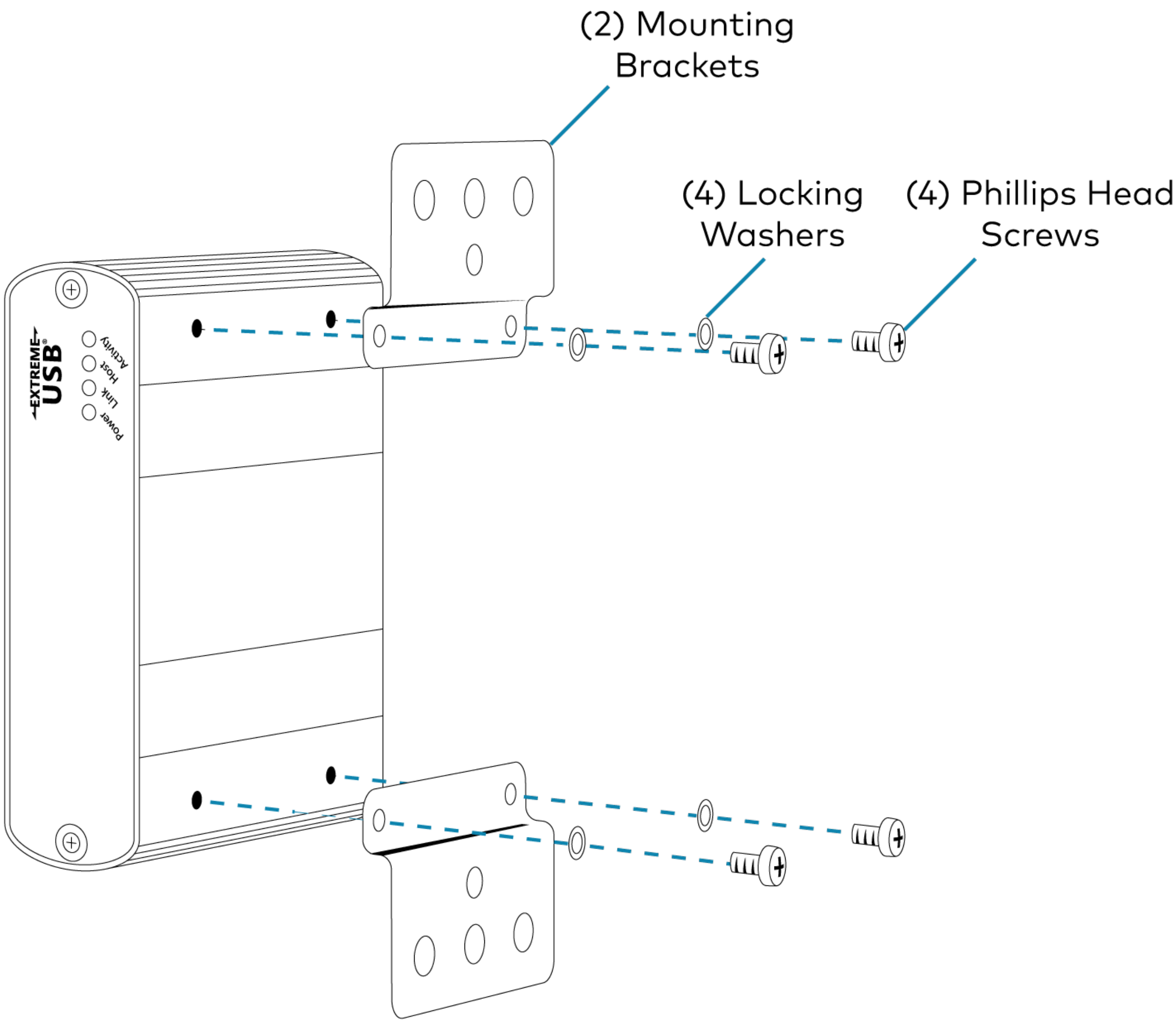


NOTES:

- DM NUX endpoints are engineered to deliver maximum compatibility with the widest possible range of USB devices. Crestron does not guarantee that all USB devices or hosts are compatible with DM NUX endpoints.
- Due to bandwidth limitations, a webcam can not be connected at the DM-NUX-R2 remote endpoint when five or more remote endpoints are paired with a single local endpoint.
- Video from two cameras connected to a DM-NUX-R2 can not be viewed on different applications on the USB host simultaneously.
- DM NUX endpoints can be connected to the LAN port of DigitalMedia™ endpoints. While DM NUX endpoints support high-speed (480 Mbps) USB devices, DM® Ethernet links only support speeds up to 100 Mbps. If higher bandwidth is required, connect the DM NUX endpoints directly to a Gigabit Ethernet network.

Mounting

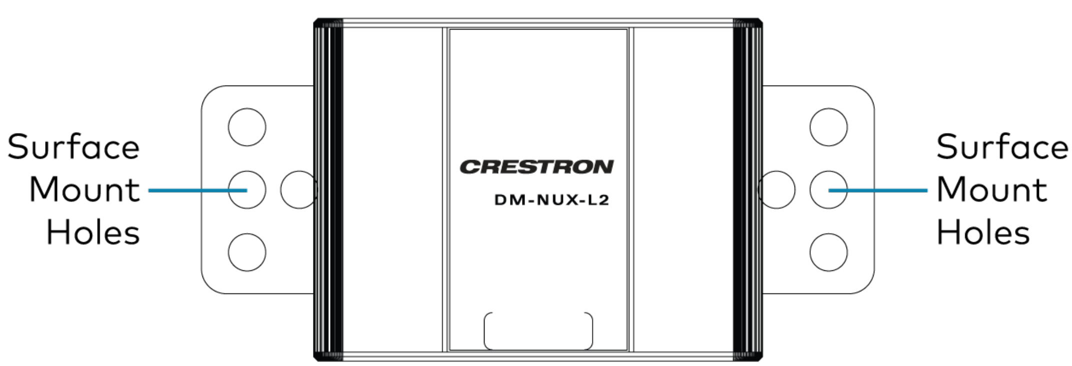
To mount the DM NUX endpoint, attach the two supplied mounting brackets to the rear of the endpoint using the four supplied Phillips head screws and locking washers (two screws and washers for each bracket) as shown below.



Once the mounting brackets are attached, the endpoint can be mounted onto a flat surface or a rack rail.

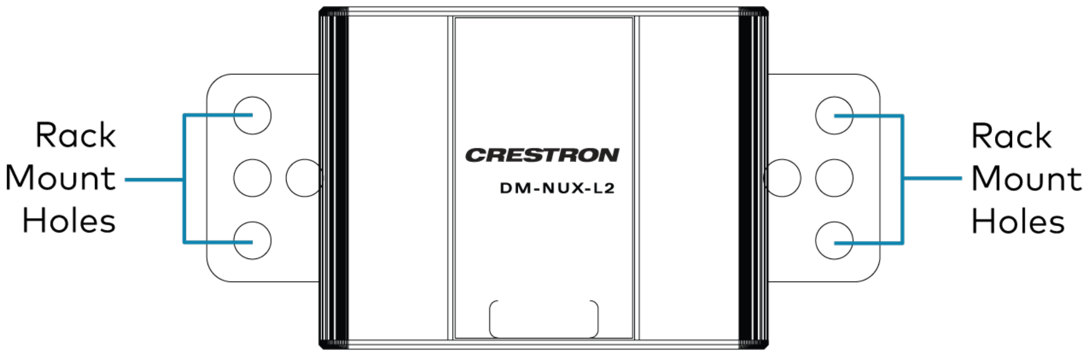
Mount onto a Flat Surface

Attach the endpoint to a flat surface using the outer-middle hole of each mounting bracket and mounting screws (not included).



Mount onto a Rack Rail

Mount the endpoint to a rack rail using either the left or right mounting bracket. Attach the mounting bracket to the rack rail using the top and bottom holes and two rack screws (not included).



Indicators

Refer to the following table for information about the LED indicators on the DM NUX endpoints.

LED Indicator	Color	Meaning
Activity	Flashing amber	Data transmission is occurring between the DM NUX endpoint and another paired DM NUX or DM NVX endpoint
Host	Solid green	The USB host is recognizing the DM NUX endpoint
Link	Solid green	A valid link is established with the DM NUX endpoint
	Flashing green (fast)	The DM NUX endpoint is in Pairing mode
	Pulsing green (slow)	The DM NUX endpoint is attempting to establish a link
Power	Blue	The DM NUX endpoint is receiving power

Pairing and Unpairing

Pairing the DM NUX endpoint establishes a link between a DM-NUX-L2 local endpoint and a DM-NUX-R2 remote endpoint. Manual pairing may be performed when a local endpoint and a remote endpoint are directly connected to each other in a point-to-point configuration or connected over a network. In a point-to-point configuration, USB switching is not available. For networked USB switching, a Crestron control system with custom programming is required to automatically pair endpoints.

To manually pair DM NUX endpoints that are connected point-to-point:

1. On the local endpoint (DM-NUX-L2), press and hold the **Pair** button until the **Link** LED on the front panel begins flashing green. This indicates that the endpoint is in Pairing mode.

   > **NOTES:**
   > - To exit Pairing mode without pairing endpoints, press and hold the **Pair** button again until the **Link** LED reverts to its previous state.
   > - Hold the **Pair** button for less than 10 seconds; holding the button for longer than 10 seconds will remove all pairings from the endpoint.

2. Within 10 minutes of activating Pairing mode on the local endpoint, press and hold the **Pair** button on the remote endpoint (DM-NUX-R2) until the **Link** LED on the front panel begins flashing green.
3. The **Link** LED on each endpoint will temporarily pulse slowly as they pair before turning solid green. Once the **Link** LED on each endpoint is solid green, a valid link is established.

To pair DM NUX endpoints via custom programming, use the DM-NUX v1.1 and DM-NUX-Status v1.1 modules in SIMPL. Refer to the module help documentation within the software (by pressing the F1 key) for information.

DM-NUX-L2-1G and DM-NUX-R2-1G Installation

Use the following procedures to install and pair the DM-NUX-L2-1G and DM-NUX-R2-1G.

TIP: These endpoints can be paired with DM-NUX-L2 or DM-NUX-R2 endpoints, as well as with DM NVX endpoints that support DM NUX USB over network.

Refer to the following headings:

- In the Box on page 43
- Connections on page 43
- Mounting on page 46
- Indicators on page 46
- Pairing and Unpairing on page 47

In the Box

Qty.	Description
1	DM-NUX-L2-1G(-B or -W) or DM-NUX-R2-1G(-B or -W), DM NUX USB over Network Wall Plate
	Additional Items
2	Screw, 6-32 x 1/4 in., pan head, SEMS (2007218)
1	Connector, 2-pin (2003574)
1	Ferrite bead, cable mount (2054945)

Connections

Make all necessary connections to the DM-NUX-L2-1G and DM-NUX-R2-1G as described below.

NOTES:

- Signal routing is not supported when the DM-NUX-L2-1G and DM-NUX-R2-1G are connected point-to-point or when powered via a 24V 0.75A power supply (sold separately) instead of Power over Ethernet (PoE).
- A ferrite bead is provided to reduce or prevent electromagnetic interference (EMI). When using a power source other than PoE, Crestron recommends installing this ferrite bead on the power supply cable close to the connection on the wall plate.

1. Feed a CAT5e (or greater) shielded twisted-pair (STP) cable through the opening on the top of the electrical box (not included).

> **NOTES:**
>
> - To comply with the European Directive (CE), Crestron recommends using high-quality, solid core CAT5e (or greater) shielded twisted pair (STP) cable.
> - The CAT5e(or greater) cable must have a straight-through conductor configuration with no crossovers and must be terminated with 8-conductor RJ45 connectors at both ends.

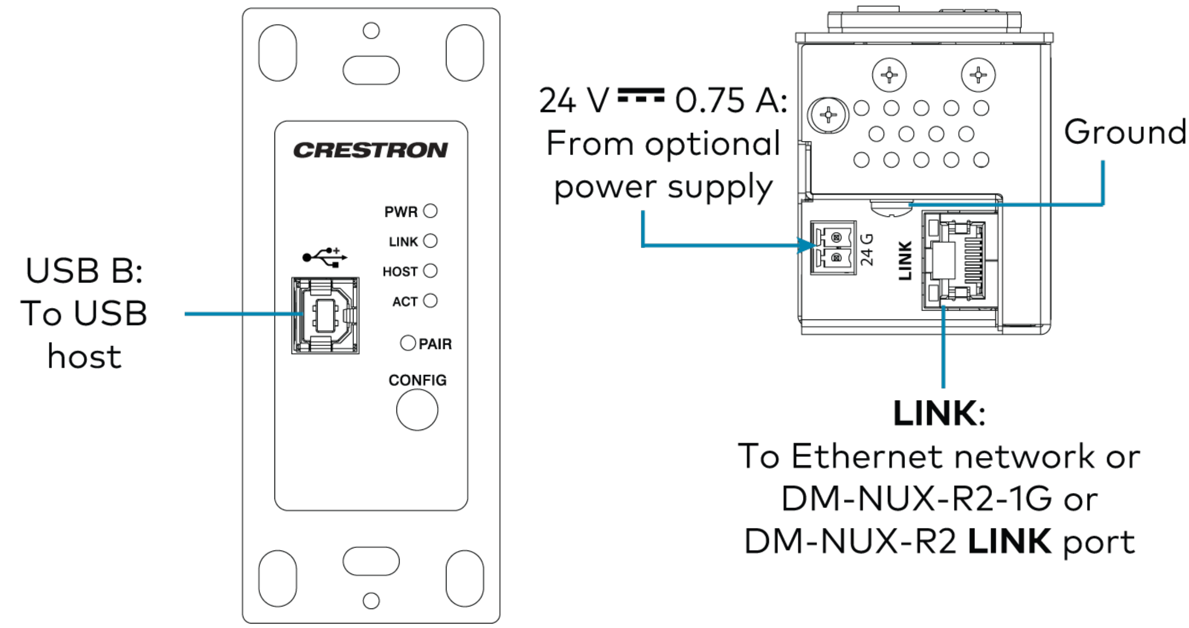
2. Connect the **LINK** port on each endpoint to an Ethernet network or to the **LINK** port of another DM NUX endpoint. The maximum cable distance is 330 ft (100 m).

> **CAUTION:** Do not connect the DM-NUX-L2-1G or DM-NUX-R2-1G to a Crestron USB-EXT extender. USB-EXT extenders are intended for use as point-to-point USB extenders and must not be connected to an Ethernet LAN or any other network device via the **LINK** port.

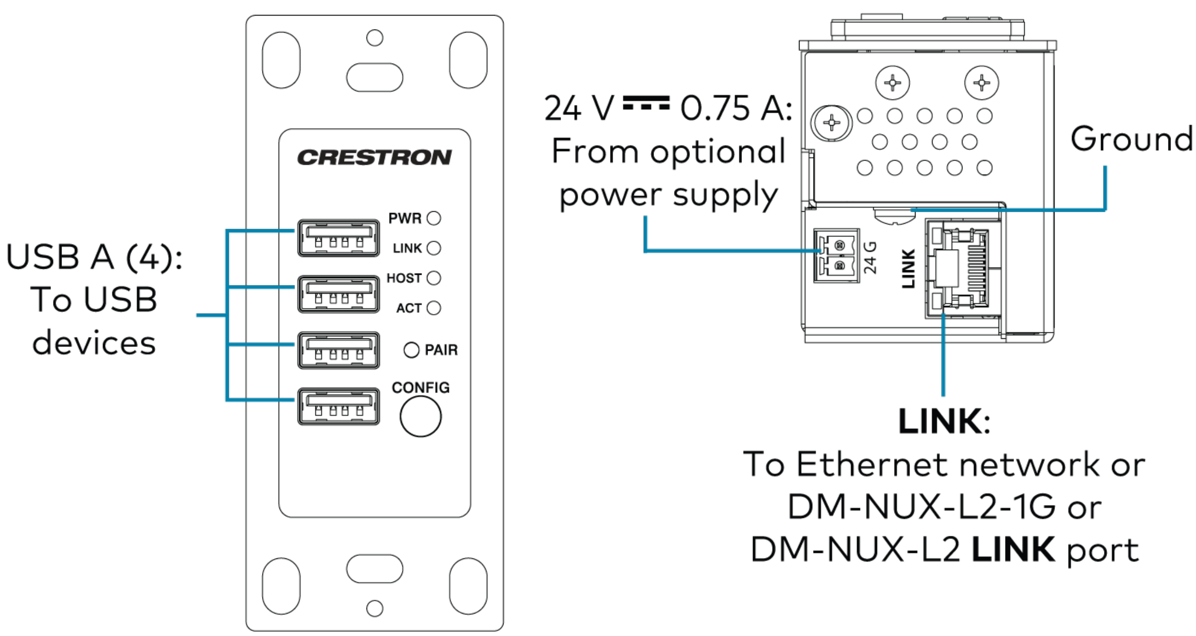
3. Make the required USB connections:
   - Using a USB 2.0 A to B cable (not included), connect the USB B end to the DM-NUX-L2-1G host port and connect the USB A end to a USB Type A port on the USB host (USB 1.1 or 2.0 compatible).
   - Using USB 2.0 cables (not supplied), connect the USB devices (USB 1.1 or 2.0 compatible) to the DM-NUX-R2-1G. Up to four USB devices may be connected. Confirm that each USB device enumerates at the USB host once the DM NUX endpoints are paired. Refer to Knowledge Article 3082 for information on why devices may not be enumerating at the USB host.

   > **NOTES:**
   >
   > - DM NUX endpoints are engineered to deliver maximum compatibility with the widest possible range of USB devices. Crestron does not guarantee that all USB devices or hosts are compatible with DM NUX endpoints.
   > - Due to bandwidth limitations, a webcam can not be connected at the DM-NUX-R2-1G remote endpoint when five or more remote endpoints are paired with a single local endpoint.
   > - Video from two cameras connected to a DM-NUX-R2-1G can not be viewed on different applications on the USB host simultaneously.
   > - DM NUX endpoints can be connected to the LAN port of DigitalMedia™ endpoints. While DM NUX endpoints support high-speed (480 Mbps) USB devices, DM® Ethernet links only support speeds up to 100 Mbps. If higher bandwidth is required, connect the DM NUX endpoints directly to a Gigabit Ethernet network.

DM-NUX-L2-1G (Front) | DM-NUX-L2-1G (Top)



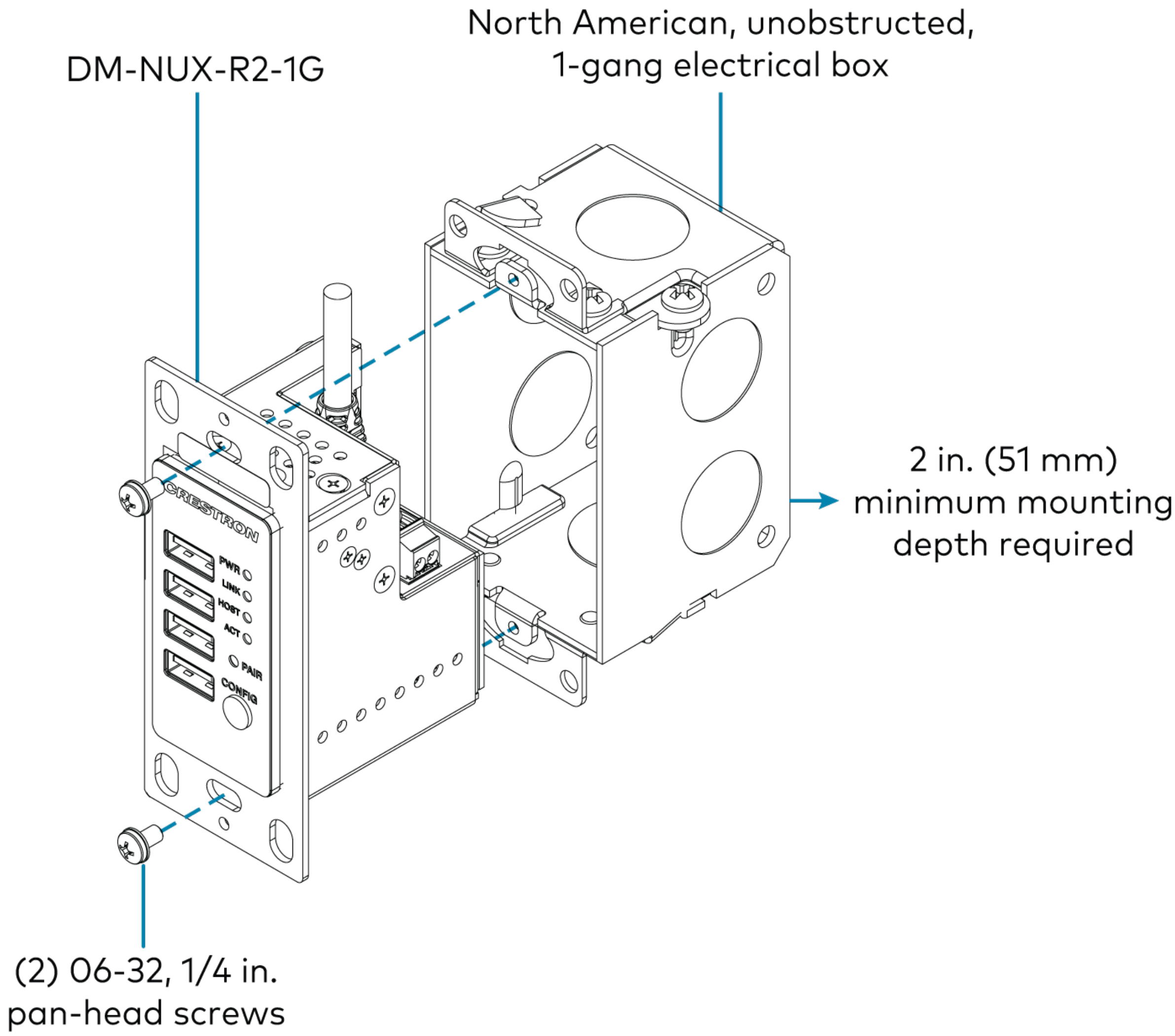
DM-NUX-R2-1G (Front) | DM-NUX-R2-1G (Top)



Mounting

To mount the DM NUX endpoint in a single gang electrical box (not included):

1. Place the DM NUX endpoint into the electrical box.
2. Use the two included 6-32 x 1/4 in. pan head mounting screws to attach the endpoint to the electrical box.
3. Attach an FP-G1 series decorator style faceplate (sold separately) to the endpoint.



Indicators

Refer to the following table for information about the LED indicators on the DM NUX endpoints.

LED Indicator	Color	Meaning
ACT	Flashing amber	Data transmission is occurring between the DM NUX endpoint and another paired DM NUX or DM NVX endpoint

HOST	Solid green	The USB host is recognizing the DM NUX endpoint
LINK	Solid green	A valid link is established with the DM NUX endpoint
	Flashing green (fast)	The DM NUX endpoint is in Pairing mode
	Pulsing green (slow)	The DM NUX endpoint is attempting to establish a link
PWR	Blue	The DM NUX endpoint is receiving power

Pairing and Unpairing

Pairing the DM NUX endpoint establishes a link between a DM-NUX-L2 local endpoint and a DM-NUX-R2 remote endpoint. Manual pairing may be performed when a local endpoint and a remote endpoint are directly connected to each other in a point-to-point configuration or connected over a network. In a point-to-point configuration, USB switching is not available. For networked USB switching, a Crestron control system with custom programming is required to automatically pair endpoints.

To manually pair DM NUX endpoints that are connected point-to-point:

1. On the local endpoint (DM-NUX-L2), press and hold the **PAIR** button until the **LINK** LED on the front panel begins flashing green. This indicates that the endpoint is in Pairing mode.

   NOTES:

   - To exit Pairing mode without pairing endpoints, press and hold the **PAIR** button again until the **LINK** LED reverts to its previous state.
   - Hold the **PAIR** button for less than 10 seconds; holding the button for longer than 10 seconds will remove all pairings from the endpoint.

2. Within 10 minutes of activating Pairing mode on the local endpoint, press and hold the **PAIR** button on the remote endpoint (DM-NUX-R2) until the **LINK** LED on the front panel begins flashing green.
3. The **LINK** LED on each endpoint will temporarily pulse slowly as they pair before turning solid green. Once the **LINK** LED on each endpoint is solid green, a valid link is established between.

To pair DM NUX endpoints via custom programming, use the DM-NUX v1.1 and DM-NUX-Status v1.1 modules in SIMPL. Refer to the module help documentation within the software (by pressing the F1 key) for information.

Troubleshooting

Refer to the following table for common troubleshooting scenarios and their resolutions.

Issue	Resolution(s)	Notes
All LEDs on the DM-NUX-L2 are off.	The endpoint is not receiving power from the USB host.	Ensure that the USB host is connected to and can provide power to the DM-NUX-L2. If the problem persists, try moving the USB cable to another port on the USB host.
All LEDs on the DM-NUX-R2 are off.	The endpoint is not receiving power from the included power supply.	Ensure that the AC power adapter is properly connected to the endpoint. If the problem persists, check the power pack connection to the AC power source.
All LEDs on the DM-NUX-L2-1G or DM-NUX-R2-1G are off.	The endpoint is not receiving power from the power supply or PoE.	Ensure that the power supply or network cable is properly connected to the endpoint. If connected to a network switch, ensure that the network port can supply PoE to the DM NUX endpoint. If the problem persists, trying moving the network cable to another PoE capable port of the network switch.
The **Link** LED is off.	The connection between the local and remote endpoints is failing.	Connect a short CAT5e (or greater) patch cable point-to-point between the endpoints to verify the connection. If this is successful, check the initial cabling for defects or crossover terminations; all cabling between DM NUX endpoints should be UTP or STP CAT5e (or greater) with straight-through terminations and RJ45 connectors at both ends.

Issue	Resolution(s)	Notes
The **Link** LED is off.	There is no connection between the local and remote endpoints.	Ensure that both endpoints are connected directly to each other or to active network switch ports on the same network. **NOTE:** Layer 2 network traffic cannot traverse VLANs.
	The endpoints are not paired.	Pair the units - refer to Getting Started on page 2 for information on manually pairing endpoints.
	The endpoints are connected to different subnets or VLANs.	Ensure that the endpoints are connected to network switch ports that are part of the same subnet and/or VLAN.
	The traffic between the endpoints is being blocked by network management settings.	Ensure that network traffic is not being blocked; if necessary, contact the network administrator.
The **Link** LEDs are flashing slowly.	The endpoints are attempting to pair with each other.	Wait for the pairing process to complete. If the endpoints do not successfully pair after a few minutes, contact the network administrator to ensure that network traffic between the endpoints is not being blocked.

<table>
<tr><th>Issue</th><th>Resolution(s)</th><th>Notes</th></tr>
<tr><td rowspan="4">The Link LED on the DM-NUX-L2 (-1G) is on, but the Host LED is off.</td><td>The USB host is not powered on.</td><td rowspan="4">Perform the following steps:
1. Disconnect all USB devices from the paired remote endpoint.
2. Disconnect the local endpoint from the USB host.
3. Disconnect the remote endpoint from its power supply.
4. Reconnect the local endpoint to the USB host.
5. Reconnect the remote endpoint to its power supply.
6. In the Device Manager software of the USB host, check the USB controllers section for the local endpoint, which will enumerate as a Generic USB Hub.
If the endpoint still does not enumerate and the USB host supports USB hubs, the local endpoint may be malfunctioning.
Contact Crestron True Blue Support for assistance.</td></tr>
<tr><td>The endpoint is not connected to the USB host.</td></tr>
<tr><td>The USB host is not recognizing the endpoint (the endpoint is not enumerating with the USB host).</td></tr>
<tr><td>The USB host does not support USB hubs.</td></tr>
<tr><td rowspan="2">A USB device connected to the remote endpoint is not working properly.</td><td>Insufficient bandwidth is available on the network connection to support the device.</td><td>Connect the local and remote endpoints directly point-to-point and try the USB device again.</td></tr>
<tr><td>The local endpoint is paired to the incorrect remote endpoint.</td><td>Ensure that the local endpoint is paired with the appropriate remote endpoint.</td></tr>
</table>

Resources

The following resources are provided for the DM NUX.

> **NOTE:** You may need to provide your Crestron.com web account credentials when prompted to access some of the following resources.

Crestron Support and Training

- Crestron True Blue Support
- Crestron Resource Library
- Crestron Online Help (OLH)
- Crestron Technical Institute (CTI) Portal

Programmer and Developer Resources

- help.crestron.com: Provides help files for Crestron programming tools such as SIMPL, SIMPL#, and Crestron Toolbox™ software
- developer.crestron.com: Provides developer documentation for Crestron APIs, SDKs, and other development tools

Product Certificates

To search for product certificates, refer to the Product Certificates section of the Crestron Resource Library.

Related Documentation

- Crestron Technical Documentation

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Specifications subject to
change without notice.