



Contents

Introduction

Welcome.....	2
AdderLink XDIP features.....	4
Supplied items (per node).....	5
Optional extras.....	6

Installation

Locations.....	7
Mounting.....	7
Connections.....	7
Computer connections.....	8
Video format conversion.....	9
Console connections.....	11
Audio connections.....	12
Link connection.....	12
Power connection.....	13

Configuration

Initial configuration.....	14
Navigating the configuration wizard, OSD and Admin menu.....	14
To use the configuration wizard.....	14
To add a new transmitter.....	18
Restoring a node.....	20

Admin menus.....	21
Receiver node settings.....	21
General Settings page.....	21
OSD Settings page.....	22
Manage Ports page.....	23
Advanced page.....	24
Software Upgrade page.....	26
Setup Channels page.....	27
Transmitter node settings.....	27
General Settings page.....	27
Manage Ports pages.....	28
Advanced pages.....	29
Software Upgrade page.....	30

Operation

Switching channels.....	31
Switching channels from a receiver.....	31
Switching channels from an external system.....	32
Indicators.....	33

Further information

Getting assistance.....	34
Appendix 1 - IGMP.....	35
Appendix 2 - Layers.....	36
Appendix 3 - Link cable interference protection.....	37
Appendix 4 - XDIP API.....	38
Appendix 5 - Open source licenses.....	40

Index

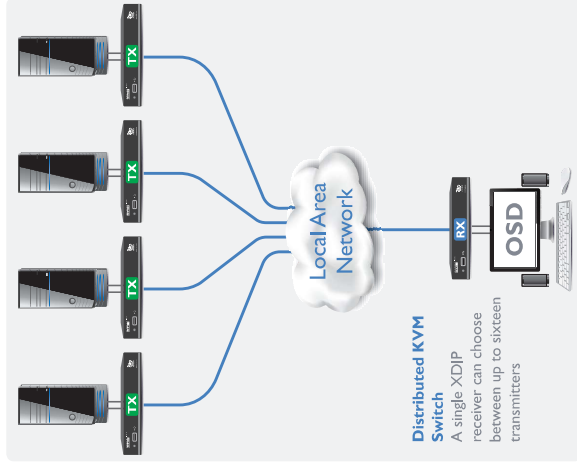
Introduction

WELCOME

Thank you for choosing the AdderLink XDIP extender nodes. At their simplest, AdderLink XDIPs are high resolution, low latency digital KVM extenders which will operate just as easily across a direct 100 meter CATx connection as they will across your standard 1GbE local network. However, there's much more to them than that.

Many hosts, one console

XDIPs can form what might be termed a *Distributed KVM switch*, where you authorize a single XDIP receiver to access up to sixteen separate XDIP transmitters and their connected PC host systems:

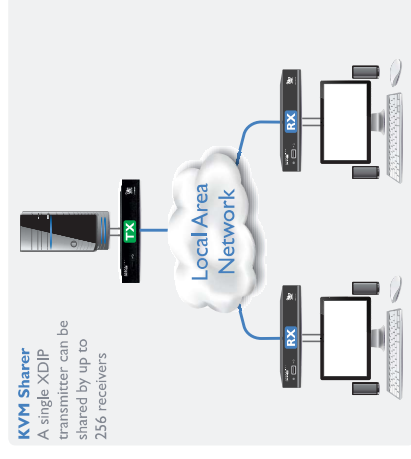


Distributed KVM Switch

A single XDIP receiver can choose between up to sixteen transmitters

Multiple consoles, one host

Alternatively, a different grouping of XDIPs can form a *'KVM Sharer'* to allow up to 256 receivers to access and control the resources of a single PC host system:



KVM Sharer

A single XDIP transmitter can be shared by up to 256 receivers

Transmitter or receiver? Your call

Every XDIP node arrives in *Start of Life* (SoL) mode: it's up to you to choose whether it becomes a transmitter or a receiver. This ensures that your small stock of nodes can efficiently meet your current requirements - and then be easily redistributed, in any order, to satisfy future issues too.



Start of Life (SoL) mode

The operation mode of each XDIP is signified by the color of the front panel PWR indicator

All HD video welcome

HDMI is the native video port on each node, however, using suitable third party converters you can connect DVI, dual-mode DisplayPort® (DP++) or VGA signals at either end of the links:

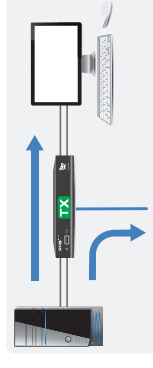


Power to perform: POE or adapter

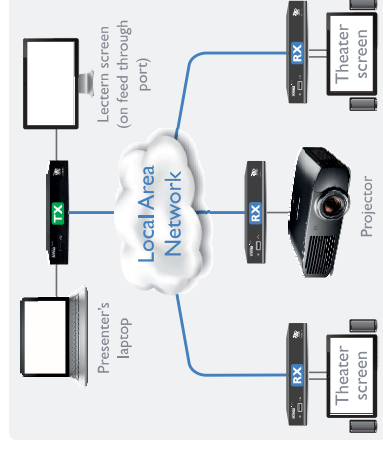
Efficiency is key to XDIP operation, sufficiently so that each node can comfortably function using only the Power over Ethernet (PoE) capabilities of your network. Where that's not an option, we also supply optional power adapters for local mains operation.

Feed through for flexibility

Every XDIP node features a *Feed through* port. This allows you to add a local console that can access both nearby and distant resources. When the local console is placed on an XDIP receiver, it will operate as its own KVM switch. Alternatively, when the local console is attached to an XDIP transmitter, it will also act as a video splitter:



A combined application of the *Feed through* and *KVM sharer* features could be used, for instance, to serve a lecture theater:



Remote controlled matrix configuration - see next page

continued

Remote controlled matrix

XDIPs can also form an audio-visual matrix where multiple receivers access content from a choice of transmitters - all under external control. Such configurations are useful in distributed signage applications where a control system coordinates multiple displays (up to 256) and determines how each one derives its digital content.

There are two methods for remotely controlling an XDIP matrix:

- Method 1 - Using third party controller system, such as those supplied by Crestron™, AMX™ and many others, to issue commands through our RESTful API (see page 38), or
- Method 2 - Using the browser on a connected PC to access the receivers and using the resulting OSD menu (see page 32).

IMPORTANT: When using either method, you must first enable the remote control functionality on each receiver (this option is disabled by default).
See *Receiver > Advanced page* on page 24.

Remote controlled matrix

An external control system or connected PC can determine how each receiver should derive its content, from a choice of up to eight transmitters.

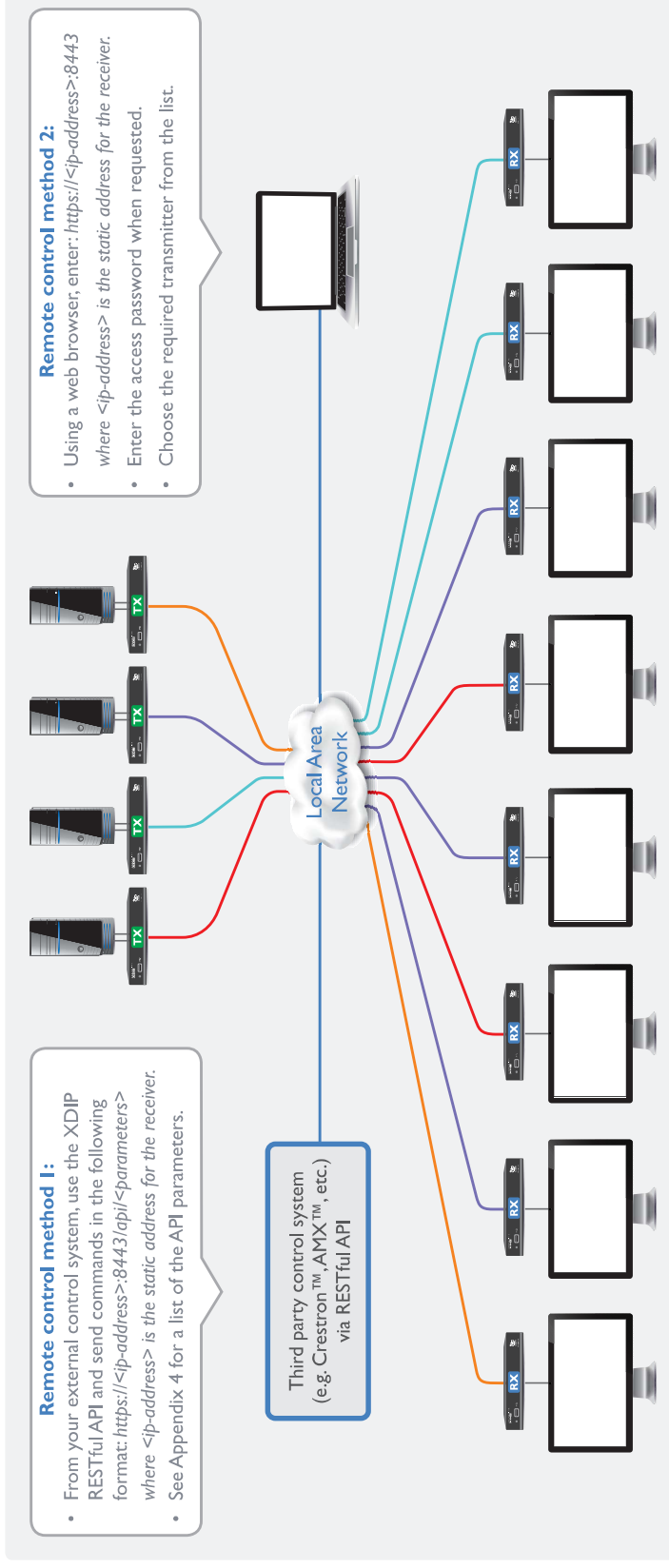
Remote control method 1:

- From your external control system, use the XDIP RESTful API and send commands in the following format: `https://<ip-address>:8443/api/<parameters>` where `<ip-address>` is the static address for the receiver.
- See Appendix 4 for a list of the API parameters.

Third party control system
(e.g. Crestron™, AMX™, etc.)
via RESTful API

Remote control method 2:

- Using a web browser, enter: `https://<ip-address>:8443` where `<ip-address>` is the static address for the receiver.
- Enter the access password when requested.
- Choose the required transmitter from the list.



To ensure ease of configuration with third party controllers, the XDIP system is provided with a full REST API.

New features have been added to XDIP units to enable remote control matrix operation:

- Each XDIP module can be assigned a static IP address as well as its main (DHCP-provided) dynamic address, so that external systems have a separate, consistent control pathway.
- Each XDIP module has separate admin and access passwords; the latter providing selective access to content and switching controls.
- Full third-party switching support provided by REST API via the network connection. The YAML file for the API can be found at:

<https://support.adder.com/tiki/tiki-index.php?page=XDIP%3A+Using+the+API>

For details of the XDIP Public REST API, see [Appendix 4 - XDIP API](#).

Note: The API control is contained within each receiver. Receivers operate as separate entities and they are all controlled independently.

ADDERLINK XDIP FEATURES

AdderLink XDIP nodes are contained within slimline metal casings measuring just 169 x 112 x 31 mm.



Recessed reset button
See "Restoring a node" on page 20.

USB port
Available for console use on receiver and transmitter nodes.

Status indicators
These provide visual confirmation of various system functions. See [Indicators](#) for further details.

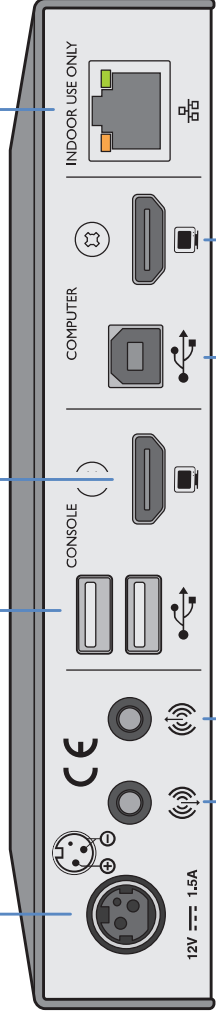
LNK - indicates the presence of a valid data link.

USB and **VID** - indicate active USB and video connections.

PWR - indicates the presence of input power (the color also indicates overall mode: TX: Green, RX: Blue, Start of Life: Red, Recovery mode: Yellow).

On **TX**: [Optional] Feed to a local console
On **RX**: Feed to the user console
USB ports
HDMI video port

Data link - either connect directly to another node or indirectly to multiple others via a supported network switch* (PoE 802.3af supported)



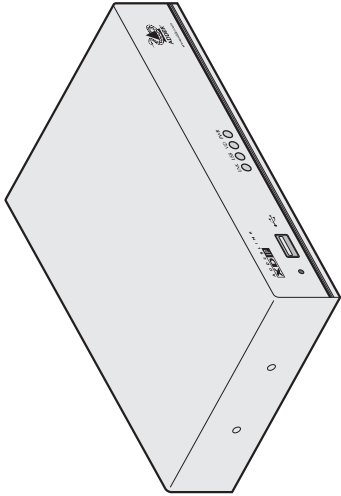
12VDC power port
(PoE option available)

Audio line out jack
Audio line in jack

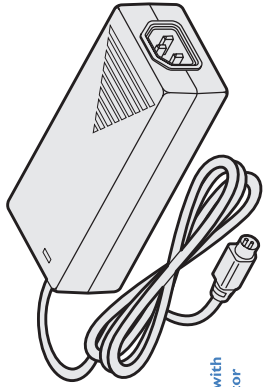
USB port
HDMI video port
On **TX**: Link to the main computer
On **RX**: [Optional] Link to a local computer

- * The network switch used must:
- Support 1 Gb transfer rates.
 - Support [IGMP](#) (Internet Group Management Protocol) to at least level 2 (preferably level 3).
 - Have [IGMP Fast Leave](#) and [IGMP Snooping](#) enabled.

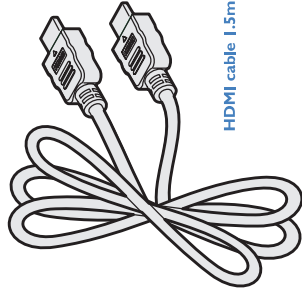
SUPPLIED ITEMS (per node)



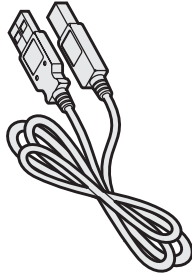
AdderLink XDIP node



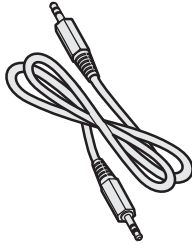
Power adapter with locking connector



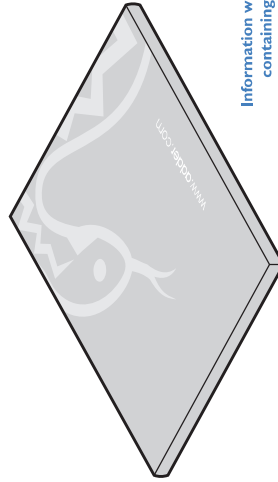
HDMI cable 1.5m



USB cable 2m (type A to B)



Audio cable 3m (3.5mm stereo jacks)



Information wallet containing:

- Quick setup guide
- Eight self-adhesive rubber feet
- Safety document