

AVPro Edge MXNet

Description

This driver is for control of AVPro Edge MXNet system. This driver communicates exclusively with the MXNet control box. The control box handles communication with endpoint devices.

A demo Integration Designer project has been created to demonstrate general usage of this driver.

Note: This document is not a replacement for understanding the equipment you're controlling and the documentation that is distributed with the equipment. Please read and understand all documentation before attempting to use this driver.

MXNet Integration Setup *IMPORTANT*

The MXNet control system has certain setup requirements before utilizing this driver. These are done to link control and feedback within the driver to the corresponding subsystems.

Encoders/Decoders: You must change the name of encoders and decoders. At the end of each name, you must append the following: [###] where "###" is the index of the encoder. This index will match with the index of the encoder within the driver. T

Example: LivingRoom[5] represents **Encoder 5** within the driver.

Video Wall/Video Wall Layout: When you create a video wall within the MXNet we interface, you must enter the full name in the "Video Wall 1 Name" field in Video Wall # Settings. The same must be done with any Video Wall layouts you use.

Final Note:

Encoders/Decoders once given the proper naming will auto link to the corresponding index. This is done without needing to enter their name in the driver settings. This is different than the Video Wall/Video Wall Layouts where the latter requires the exact name to be entered in the driver settings.

Development System

Integration Designer Version: 11.11

XP Processor Model: XP-8v

XP Processor Firmware: 25.1.27

Device Model(s): MXNet 1G, MXNet 10G

Device Firmware: 2.71

Revision History

v1.0.0 : Initial Release

Known Issues

Connection Settings

All communication between the MXNet control box and the driver will occur over a TCP connection via

port 24. The IP address of the control box can be entered in the driver settings.

Initialization Sequence

Once driver communications have been started and a successful handshake has been completed, the driver will automatically start polling the control box for the current state of all registered endpoints. Once the driver has successfully acquired the state of all endpoints, it will be considered initialized. No commands should be sent for endpoint control until this process is complete.

Driver Configuration

Debug Settings

Only visible if "Show Driver Debug Options" has been set in TraceViewer.

Enable Debug Messages

Enables the driver debugging messages.

Debug Level

Determines which debug messages to show.

Identifier

Prefix for debug messages to distinguish debug messages from this driver.

Network Settings

IP Address

IP Address of the control box.

IP Port

IP Port of the control box (default is 24).

Auto Connect

The driver will make a connection attempt to the device once the driver is fully loaded. This means if the processor is rebooted, the driver will make a connection attempt when it is back online.

Device Configuration

Encoder Count

Determines the number of encoder devices within the MXNet control system. A single instance of the driver supports up to 256 of these devices.

Decoder Count

Determines the number of decoder devices within the MXNet control system. A single instance of the

driver supports up to 256 of these devices.

Encoder # Settings

Encoder # Name

Defines a friendly name for the encoder device.

Baud Rate

Defines the Baud Rate for the corresponding encoder

Data Bits

Defines the Data Bits used for the corresponding encoder

Parity Setting

Defines the parity setting for the corresponding encoder

Decoder # Settings

Decoder # Name

Defines a friendly name for the decoder device.

Baud Rate

Defines the Baud Rate for the corresponding decoder

Data Bits

Defines the Data Bits used for the corresponding decoder

Parity Setting

Defines the parity setting for the corresponding decoder

Video Wall # Settings

Video Wall # Name

Defines the name of a video wall configured using the MXNet Web Interface. ***This must match the name exactly as it is used to link control/feedback***

Row Count

Defines the number of rows the video wall has. ***This must match the row value for the given wall in the MXNet web interface***

Column Count

Defines the number of columns the video wall has. ***This must match the column value for the given wall in the MXNet web interface***

Video Wall # Layout Count

Defines the number of Layouts the wall has. ***This will create the layout fields below for you to fill in the actual layout names***

Layout: #

Defines a layout name for the video wall. ***This must match a layout name exactly as it is used to link control/feedback***

Driver Controls

Communication> Connect:

Triggers the driver to make a connection to the device if not already connected.

Communication> Disconnect:

Triggers the driver to disconnect from the device if currently connected.

Matrix Switcher Commands> Matrix Tie:

Routes Audio, Video, or both to an Encoder to a Decoder.

Endpoint Commands>Send RS232 to Decoder

Sends a preprogrammed string to the designated decoder. ***Make sure the Serial Settings were configured appropriately in the Decoder Settings***

**Command Format Examples:*

- *PowerOn\r*
- *PowerOn0x0D*
- *0x500x6F0x770x650x720x4F0x6E0x0D*

Endpoint Commands>Send RS232 to Encoder

Sends a preprogrammed string to the designated encoder. ***Make sure the Serial Settings were configured appropriately in the Encoder Settings***

Endpoint Commands>Send CEC Command to Decoder

Sends either On or Off CEC commands to the designated decoder. This triggers the MXNet system to send many different On/Off commands out.

Endpoint Commands>Send CEC Command to Encoder

Sends either On or Off CEC commands to the designated encoder. This triggers the MXNet system to send many different On/Off commands out.

Endpoint Commands>Send IR to Decoder

Sends a programmed IR command to the designated decoder.

Endpoint Commands>Send IR to Encoder

Sends a programmed IR command to the designated Encoder.

{Video Wall #}>SelectLayout

Select the current layout to use for the corresponding video wall. The list is generated by the Video Wall Layouts in the settings for the Video Wall. {Video Wall #} will match the name of the video wall.

{Video Wall #}>SetVideoWallTX

Sets the specified windows input encoder.

{Video Wall #}>SelectTargetEncoder

Selects an encoder to be used with **SetVideoWallTX WithTarget**.

{Video Wall #}>SetVideoWallTX WithTarget

Sets the target window input encoder using the encoder last selected using: **SelectTargetEncoder**. This is functionally similar to **SetVideoWallTX** but enables the programmer to simplify the number of buttons needed to fully setup the Video wall routing.

Driver Feedback

Communications State

Gets the current communications state of the device. Indicates if communication is enabled or disabled.

Communications State>Disabled

Sets the communication state to disabled. Used to stop communication with the device.

Communications State>Enabled

Sets the communication state to enabled. Used to resume communication with the device.

Connection State

Gets the current connection state of the device.

Connection State>Disconnected

Indicates the device is not currently connected to the network or controller.

Connection State>Connected

Indicates the device is currently connected and available.

Initialization State

Reports the current initialization state of the MXNet driver.

Initialization State>Uninitialized

Indicates the system has not yet completed initialization. ****IMPORTANT* Make sure system is initialized before controlling. If it does not, check to make sure the MXNet system was setup and linked between the MXNet interface and the driver.***

Initialization State>Initialized

Indicates the system is fully initialized and operational.

Debug State

Indicates the debug state of the device for diagnostics.

Debug State>Disabled

Indicates that debug output/logging is disabled

Debug State>Enabled

Indicates that debug output/logging is enabled

{Decoder #}>Current Audio Source

Reports the currently selected audio input source for the specified decoder.

{Decoder #}>Current Video Source

Reports the currently selected video input source for the specified Decoder.

{Decoder #}>Is Encoder Encoder # Audio Source

Checks whether Encoder # is currently selected as the audio source for the specified Decoder.

{Decoder #}>Is Encoder Encoder # Video Source

Checks whether Encoder # is currently selected as the video source for Decoder 1.

{Decoder #}>Is Encoder Encoder # Selected

Checks if Encoder # is actively selected by the specified decoder.

{Decoder #}>Initialization State

Reports the current initialization state of specified decoder.

{Decoder #}>Uninitialized

Indicates that the specified decoder has not been initialized yet.

{Decoder #}>Initialized

Indicates that the specified decoder has successfully initialized.

{Decoder #}>Mac

Indicates the MAC address of the specified decoder.

{Decoder #}>Name

Returns the configured name or label for the specified decoder.

{Encoder #}>Initialization State

Reports the current initialization state of specified encoder.

{Encoder #}>Uninitialized

Indicates that the specified encoder has not been initialized yet.

{Encoder #}>Initialized

Indicates that the specified encoder has successfully initialized.

{Encoder #}>Mac

Indicates the MAC address of the specified encoder.

{Encoder #}>Name

Returns the configured name or label for the specified encoder.

{Encoder #}>VideoPreview

Indicates the video preview url for the specified encoder

Discovery>Discovered Video Walls

Indicates all of the discovered video walls as an RTI List.

{Video Wall #}>Current Layout

Indicates the currently active layout applied to the video wall.

{Video Wall #}>Is Encoder # Selected

Checks whether Encoder # is selected as the current source to route.

{Video Wall #}>Layout: #

Indicates layout name as discovered from the MXNet system.

{Video Wall #}>Layout: # Is Current

Indicates whether layout # is currently active on the video wall.

{Video Wall #}>Layouts

Indicates a list of discovered layouts that can be applied to the video wall.

{Video Wall #}>Video Wall Name

Indicates the discovered name of the video wall.

{Video Wall #}>Window {row}:{col} Current Input

Indicates the encoder currently supplying input to window {row}:{col} of the current video wall layout.

Further Assistance

If you need more information or assistance, please contact us.

Developer Information

Company: Control Concepts, Inc.
Phone: (201) 797-7900
Email: projects@controlconcepts.net
Website: <https://controlconcepts.net/>
Developer: Erich Berger