ZeeVee-Zyper Installation and Usage Guide

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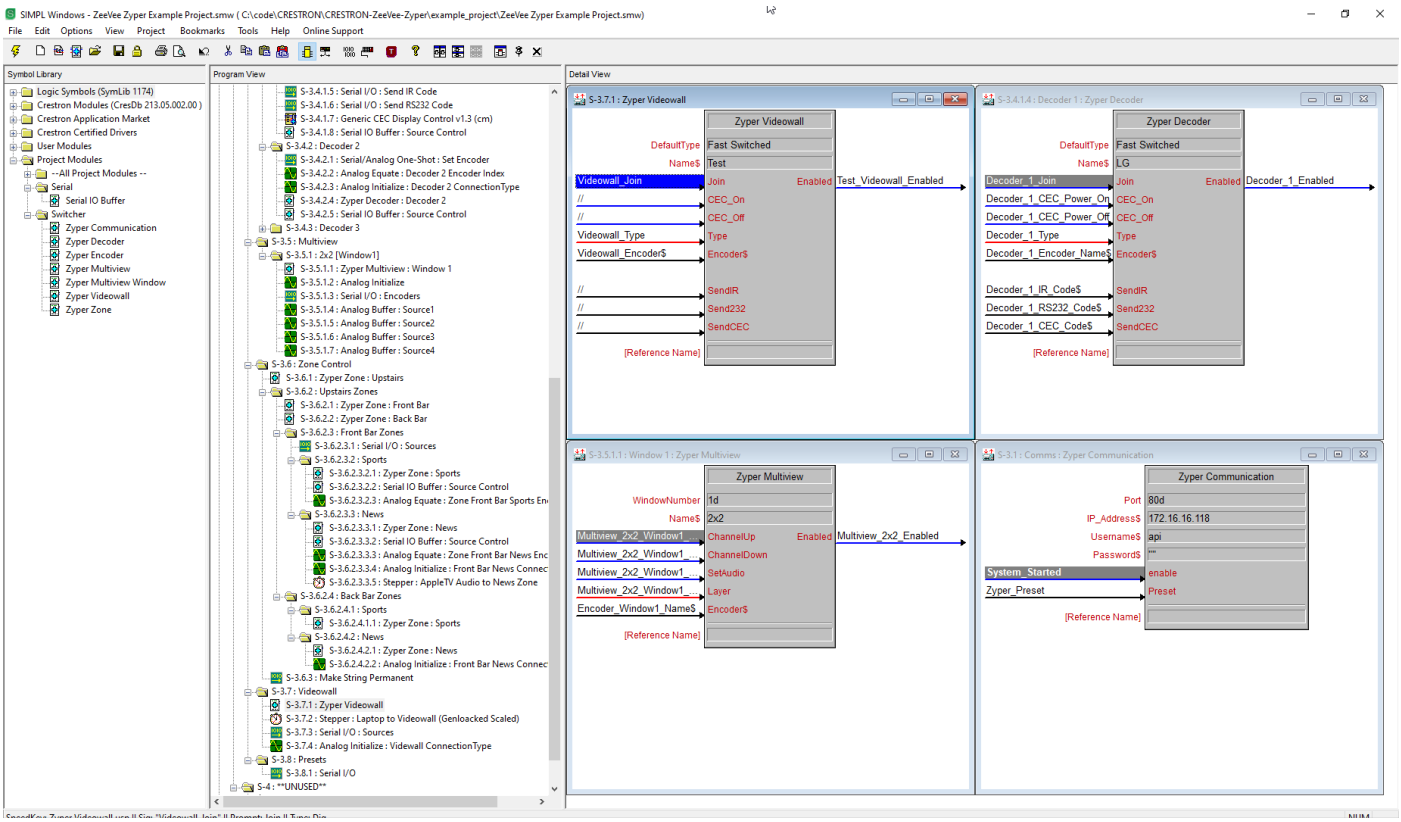
zeevee
Intelligent AV Distribution

Contents

Overview

The ZyPer4K, ZyPerUHD60 and ZyPerUHD technology enables you to send crystal clear high-resolution video, analog and digital audio virtually anywhere you can run a network cable. By using industry-standard IP networking technology, ZeeVee enables the most scalable, flexible, cost-effective and easily controlled way for sending nearly any HD video to any display across a room, enterprise, building, or stadium without using expensive, proprietary AV Matrix switchers.

The FREE driver developed by Chowmain will integrate the via ZeeVee Zyper Encoders and Decoders via the Zyper Management System.



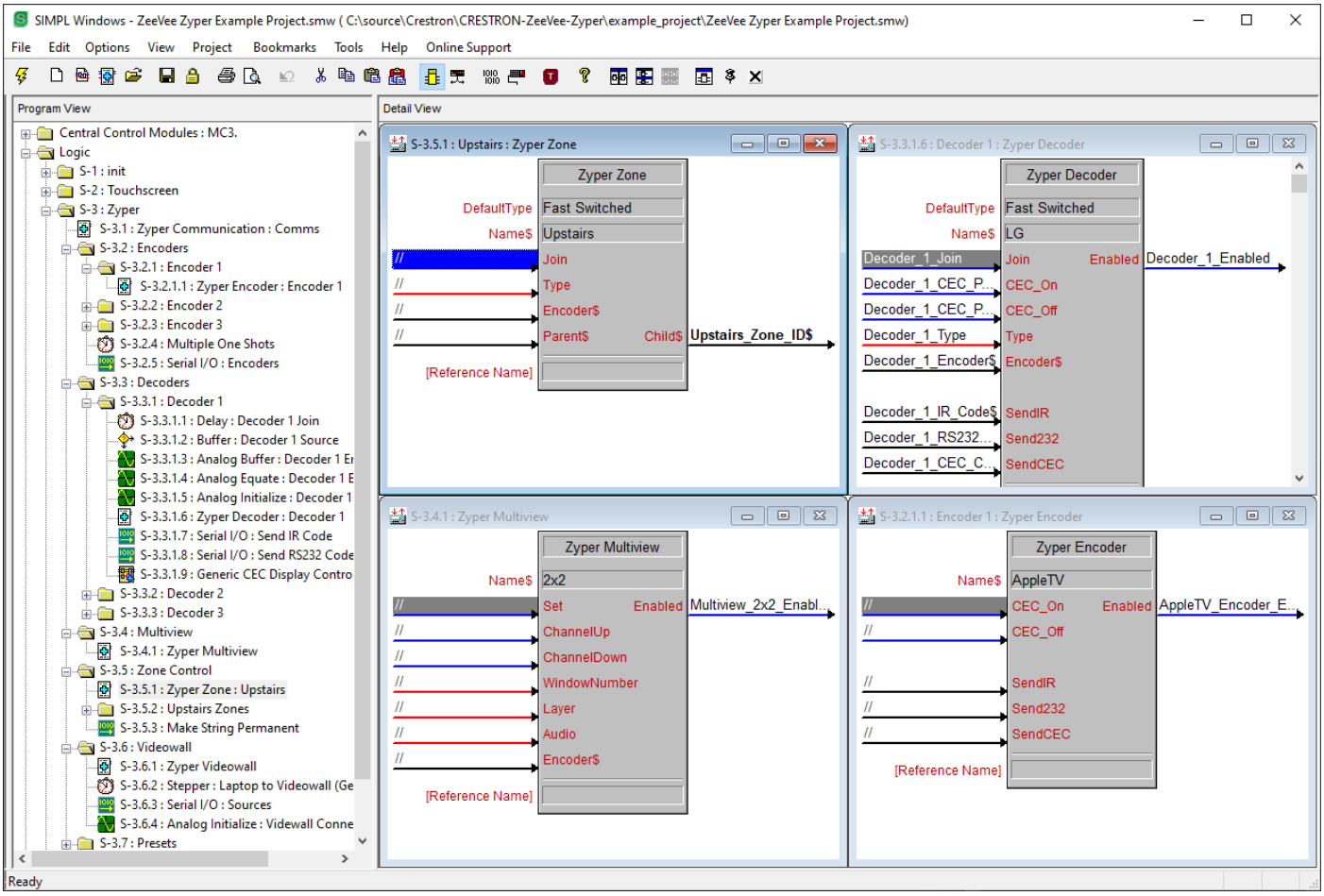
Product Features

- Switch an encoder to and decoder
- No limitation on the number of encoders or decoders
- Send CEC Power On or Power Off commands directly for any encoder, decoder or videowall.
- Use a default connection type for each decoder or videowall to speed up programming.
- Dynamically set the connection type on connection for more flexibility for any decoder or videowall
- Send IR, RS232 or CEC commands to any encoder, decoder or videowall
- Each encoder and decoder has an enabled digital output that indicates if the device has been correctly configured and it ready to use
- Multiview Control, allowing you to set individual windows, layers and select the audio feed for the Multiview.
- Control over zones and subzones
- Send a custom Preset

Installation

The zip file that included this documentation has the simpl# (.clz file) and simpl+ (.usp file) module that needs to be copied in to your project folder. The files were built and tested on a Crestron 3-series processor, but have been compiled with 4-series support.

The zip file also contains a SIMPL project and a VT-Pro touchscreen design that you can use for testing.



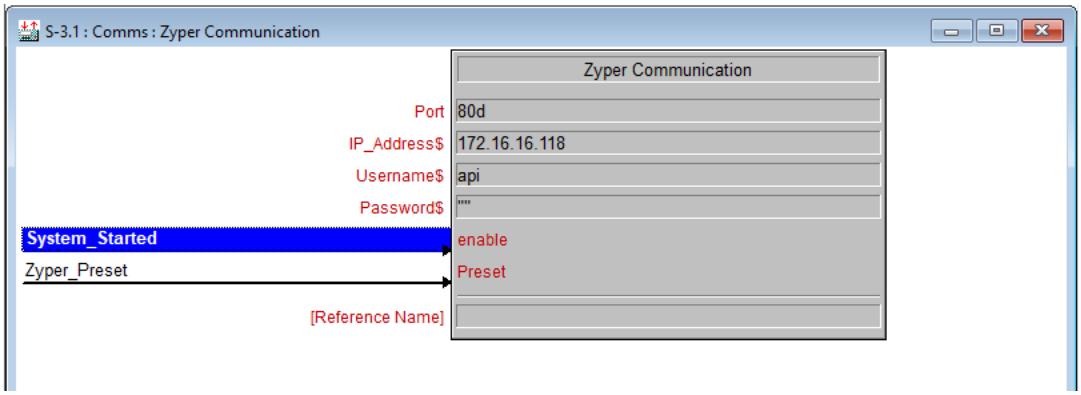
Configuration - Communication Module

The ZeeVee-Zyper driver consists of several modules, one for communication and one for each of control devices.

Not matter what the system type you are using you will need to include the Communications module. This is used to connect to the gateway and is a requirement for all setups. This module handles all the communication between Crestron and the ZeeVee-Zyper encoders and decoders.

To configure the system you will need to provide the IP Address, Port, Username and Password of the gateway.

Once connected the Communication module will scan for connected devices and provide an enabled event for each encoder, decoder, multiview and videowall.



Communications Module Inputs

Parameters

IP_Address
The IP address of the gateway.

Port
The port of the gateway.

PollTime
The Poll can be used to set the time in seconds that the system uses to poll the encoders and decoders for their current state.

Username
The client ZeeVee username used to log into the system.

Password
The clients ZeeVee password used to log into the system.

Digital Inputs

enable
The enable signal will enable the module. This will send the commands that control discovery to communicate to the gateway.

Preset
The preset signal will send a preset command to the gateway.

Zypher Decoder Module

Parameters

Default Type

The default type is the type of device and is required for communication. This can be overridden by the Type input.

Type options Include:

- Analog Audio
- Fast Switched
- Genlocked
- Genlocked Scaled
- HDMI Audio
- Video
- USB

Name

The name of the device. This can either be the MAC address of the device or the Name of the device in the gateway.

Digital Inputs

Join

The join command sets the current source of the decoder to the Encoder previously set with the Encoder input. The Default Type will be used unless it has been overridden by the Type input.

CEC_On

The CEC_On signal will send the Power on command via CEC

CEC_Off

The CEC_Off signal will send the Power off command via CEC

Analog Inputs

Type

The Type command will override the default type which is used when sending a Join command.

String Inputs

Encoder

The Encoder is used by the Join command to attach a specific encoder to the current decoder. This value must be set before the Join signal is sent. The value is the MAC address or name of the encoder.

SendIR

The SendIR sends the provided string as an IR command to the device. The IR code should be in pronto hex format.

Send232

The Send232 sends the provided string as a 232 command to the device. The string will be sent as its received, so if you need to send raw bytes please make sure they are correctly escaped.

SendCEC

The SendCEC sends the provided string as an CEC command to the device. The format for these commands are the standard CEC hex strings.

Digital Outputs

Enabled

The Enabled signal will indicate that the module is connected to the gateway.

Cable Connected

The Cable Connected signal will be high when the HDMI cable is plugged in and providing a signal, and low if it cannot find the HDMI signal.

String Outputs

Connected Name

The Connected name signal will provide the name (or MAC if it has no name) of the connected encoder.

Connected MAC

The Connected name signal will provide the MAC of the connected encoder.

Zyper Encoder Module

Parameters

Name
The name of the device. This can either be the MAC address of the device or the Name of the device in the gateway.

Digital Inputs

CEC_On
The CEC_On signal will send the Power on command via CEC

CEC_Off
The CEC_Off signal will send the Power off command via CEC

String Inputs

SendIR
The SendIR sends the provided string as an IR command to the device. The IR code should be in pronto hex format.

Send232
The Send232 sends the provided string as a 232 command to the device. The string will be sent as its received, so if you need to send raw bytes please make sure they are correctly escaped.

SendCEC
The SendCEC sends the provided string as an CEC command to the device. The format for these commands are the standard CEC hex strings.

Digital Outputs

Enabled
The Enabled signal will indicate that the module is connected to the gateway.

Cable Connected
The Cable Connected signal will be high when the HDMI cable is plugged in and providing a signal, and low if it cannot find the HDMI signal.

String Outputs

NameOut$

The NameOut$ Signal provides the name you have provided for this encoder. This can be used by subsequent modules that need the name to switch inputs for the various different modules, rather than having to provide hard built SIO's.

Zyper Multiview Module

The Multiview module control one specific widow number in a Multiview setup - the Multiview setup is done through the web interface. The module needs to the name of the Multiview and the Window number to provide control over the various functions available.

Parameters

Windows Number

The Window Number within the pre-configured Multiview setup.

Name

The name of the Multiview. This must match the name in the web interface.

Digital Inputs

ChannelUp

The ChannelUp signal will send the Channel Up command to a specific window for the current multiview.

ChannelDown

The ChannelUp signal will send the Channel Down command to a specific window for the current multiview.

Set Audio

THe Set Audio command will change the audio for this Multiview to this windows number.

Analog Inputs

Layer

The Layer is the layer to set the current window of the Multiview to. Layer values can be between 1 and 9.

String Inputs

Encoder

The Encoder is used by the Set command to attach a specific encoder to a specific window for the current multiview. The value is the MAC address or name of the encoder.

Digital Outputs

Enabled

The Enabled signal will indicate that the module is connected to the gateway.

Zyper Videowall Module

Parameters

Default Type

The default type is the type of device and is required for communication. This can be overridden by the Type input.

Type options Include:

- Analog Audio
- Fast Switched
- Genlocked
- Genlocked Scaled
- HDMI Audio
- Video
- USB

Name

The name of the videowall. This must match the name in the gateway.

Digital Inputs

Join

The join command sets the current source of the videowall to the Encoder previously set with the Encoder input. The Default Type will be used unless it has been overridden by the Type input.

CEC_On

The CEC_On signal will send the Power on command via CEC

CEC_Off

The CEC_Off signal will send the Power off command via CEC

Type

The Type command will override the default type which is used when sending a Join command.

String Inputs

Encoder

The Encoder is used by the Join command to attach a specific encoder to the current videowall. This value must be defined before the Join command is sent. The value is the MAC address or name of the encoder.

SendIR

The SendIR sends the provided string as an IR command to the device.

Send232

The Send232 sends the provided string as a 232 command to the device.

SendCEC

The SendCEC sends the provided string as an CEC command to the device.

Digital Outputs

Enabled

The Enabled signal will indicate that the module is connected to the gateway.

Zones Configuration

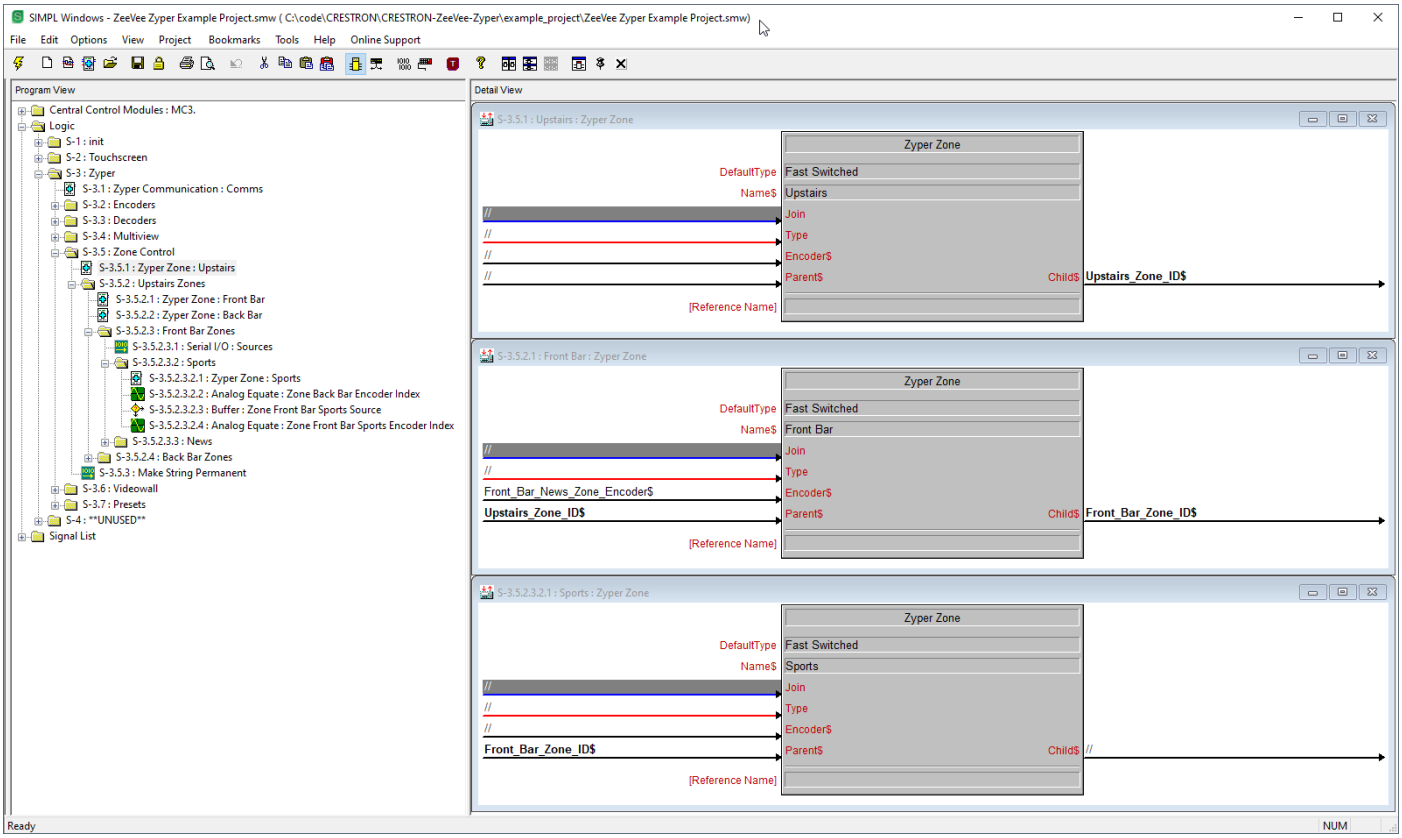
Zyper zones are created hierarchically, with each parent zone being able to have multiple child zone. The zones modules are connected in the same way, with child zones modules connected to the parent zone modules. This connection is by way of two string joins a parent and a child. The Child join is an output and joins to the parent join of the child module.

For example, if you had a building that had an upstairs section, that had been split into a Front and a Back Bar and each bar had a News zone and a sports zone, then you would have the Upstairs (Parent) connecting to the Front Bar (Child) and also to the Back Bar(Child), and each of those in turn would in turn connect to the Sports (Child) and News(Child).

In this way you can follow a path, for example for the Upstairs, Front Bar, Sports zone the connection could be represented like this.

```
Upstairs -> Front Bar -> Sports
```

When making the connections in Crestron the zones need to know about any parent or child relationships. So the Upstairs would have a Child ID join but no Parent as it is the highest level. The Front Bar would have its Parent join attached to the Upstairs Child join, and also have its Child join of its own. THe Sports would have a parent join attached to the child of the Front Bar, but no child join of its onw as it is the last entry in the chain.



Zone Control

Each zone module will send commands to its own devices as well as and child devices. Using the setup described above, with Upstairs with Front and Back Bar children and Sport and News Children of the Front and Back Bar we can explain how the controls will work.

Sending a new encoder to the Front Bar would change the devices in that zone as well as the all the child zones (Sports and News) to the new encoder. Sending a new encoder to the Sports child zone of the Front Bar however would only affect the devices in that sub-zone.

Zyper Zone Module

Parameters

Default Type

The type of connection to the decoder can be made in two ways, either setting it on each connection, or using a default type for every connection. If you want the same type for every connection you can use this parameter to set that. This parameter will be overridden by the Type input if you use that.

Type options Include:

- Analog Audio
- Fast Switched
- Genlocked
- Genlocked Scaled
- HDMI Audio
- Video
- USB

Name

The name of the zone or sub-zone. This must match the name in the gateway.

Digital Inputs

Join

The join command sets the current source of the zone to the Encoder previously set with the Encoder input. The Default Type will be used unless it has been overridden by the Type input.

Analog Inputs

Type

The Type command will override the default type which is used when sending a Join command. This can be used to set a type dynamically when changing to a new encoder.

String Inputs

Encoder

The Encoder is used by the Join command to attach a specific encoder to the current zone. This value must be defined before the Join signal is sent. The value is the MAC address or name of the encoder.

Parent
The Parent is the parent zone that the zone is connected to. Please refer to the Zone Config section for more details.

String Outputs

Child
The Child is the child zone that the zone is connected to. Please refer to the Zone Config section for more details.