

Draft/Experimental status!

Envy module for Crestron

Revision: 0.53

Date: 02.05.2021

Change History

0.53 20210503

- added "Debug_enable" signal to switch on debug out in SIMPL debugger. Debug output is now disabled by default.

0.52 20210415

- fixed bug in Display commands

0.51 20210414

- fixed bug in parsing routine
- fixed bug: clear signal data when NoSignal

V0.5 20210331

- added Hotplug, Force1080p60Output, ResetTemporary Command
- Feedback for Hotplug, NoSignal changed to *_FB
- added Feedback for Force1080p60Output, ResetTemporary
- added profiles (source, display, custom) - Activate and Deactivate
- added direct aspect ratio selection
- added SendSpecialCommand\$ to send control commands directly via string
- added unparsed output string signal
- some minor bug fixes and cleanup

V0.4 20210107

- Added Power On (no external WOL necessary any more) => ! a UDP-Socket is still required for 4-Series processors, due to a bug in the handling of UDP sockets in 4-Series processors!
- Integrated TCP-Communication (no external TCP/Client symbol required anymore)
- Update Signal-Info upon connect

Summary

This help-file provides information to integrate the Envy for Crestron module into an existing Crestron control program.

More functionality will be added in upcoming revisions.

Prerequisites

This module is compiled for use with Series 2/3/4 Crestron control processors. Up to now, it has only been tested with a Series 3 processor.

Since release V0.40, TCP- and UDP-connections are handled from within the module, no additional TCP-/UDP-socket is required in the program.

Please note: There's currently a bug in the UDP stack of the 4-Series Crestron processors, preventing the WoL feature to work from within the module. An external UDP-socket needs to be added to the program. For your convenience, the WoL "magic package" is generated by the Envy module and can be used to be fed into your UDP-socket symbol to trigger power-up of the Envy.

Module Description

This module sends out commands triggered by the master program to the Envy and receives and processes feedback received from the Envy.

madVR Emvy 0.50			
IP_Address\$	192.168.1.148		
Mac_Address\$	70.85.c2.fc.1b.3a		
	Connect		
KKino_Dev_Emy_POn	PowerOn	Connected	KKino_Dev_Emy_Connected
KKino_Dev_Emy_PowerOff	PowerOff	MissingHeartbeat_FB	KKino_Dev_Emy_MissingHeartbeat_FB
KKino_Dev_Emy_Standby	Standby	NoSignal_FB	KKino_Dev_Emy_NoSignal_FB
KKino_Dev_Emy_Restart	Restart	HotPlug_FB	KKino_Dev_Emy_HotPlug_FB
		ResetTemporary_FB	KKino_Dev_Emy_ResetTemporary_FB
KKino_Dev_Emy_ReloadSoftware	ReloadSoftware		
KKino_Dev_Emy_SetAR_Auto	SetAR_Auto	Current_AR_119	KKino_Dev_Emy_AR119
KKino_Dev_Emy_SetAR_Hold	SetAR_Hold	Current_AR_133	KKino_Dev_Emy_AR133
KKino_Dev_Emy_SetAR_119	SetAR_119	Current_AR_137	KKino_Dev_Emy_AR137
KKino_Dev_Emy_SetAR_178	SetAR_178	Current_AR_143	KKino_Dev_Emy_AR143
KKino_Dev_Emy_SetAR_185	SetAR_185	Current_AR_166	KKino_Dev_Emy_AR166
KKino_Dev_Emy_SetAR_200	SetAR_200	Current_AR_175	KKino_Dev_Emy_AR175
KKino_Dev_Emy_SetAR_220	SetAR_220	Current_AR_178	KKino_Dev_Emy_AR178
KKino_Dev_Emy_SetAR_235	SetAR_235	Current_AR_185	KKino_Dev_Emy_AR185
KKino_Dev_Emy_SetAR_240	SetAR_240	Current_AR_200	KKino_Dev_Emy_AR200
KKino_Dev_Emy_SetAR_255	SetAR_255	Current_AR_220	KKino_Dev_Emy_AR220
KKino_Dev_Emy_SetAR_276	SetAR_276	Current_AR_235	KKino_Dev_Emy_AR235
KKino_Dev_Emy_GetIncomingSignalInfo	GetIncomingSignalInfo	Current_AR_237	KKino_Dev_Emy_AR237
KKino_Dev_Emy_GetAR	GetAR	Current_AR_239	KKino_Dev_Emy_AR239
KKino_Dev_Emy_GetTemperatures	GetTemperatures	Current_AR_240	KKino_Dev_Emy_AR240
KKino_Dev_Emy_HotPlug	Hotplug	Current_AR_255	KKino_Dev_Emy_AR255
KKino_Dev_Emy_Force1080p60Output	Force1080p60Output	Current_AR_266	KKino_Dev_Emy_AR266
KKino_Dev_Emy_ResetTemporary	ResetTemporary	Current_AR_276	KKino_Dev_Emy_AR276
KKino_Dev_Emy_KeyPress_POWER	KeyPress_POWER	Emvy_WOLS	KKino_Dev_Emy_WOLS
KKino_Dev_Emy_KeyHold_POWER	KeyHold_POWER	pixel_AR\$	KKino_Dev_Emy_pixel_AR\$
KKino_Dev_Emy_KeyPress_MENU	KeyPress_MENU	float_AR\$	KKino_Dev_Emy_float_AR\$
KKino_Dev_Emy_KeyHold_MENU	KeyHold_MENU	nearestWellKnown_AR\$	KKino_Dev_Emy_nearestWellKnown_AR\$
KKino_Dev_Emy_KeyPress_LEFT	KeyPress_LEFT	AR_Descriptions\$	KKino_Dev_Emy_AR_Descriptions\$
KKino_Dev_Emy_KeyHold_LEFT	KeyHold_LEFT	Current_Resolutions\$	KKino_Dev_Emy_Current_Resolution\$
KKino_Dev_Emy_KeyPress_RIGHT	KeyPress_RIGHT	Current_Framerates\$	KKino_Dev_Emy_Current_Framerate\$
KKino_Dev_Emy_KeyHold_RIGHT	KeyHold_RIGHT	Current_Dimensions\$	KKino_Dev_Emy_Current_Dimension\$
KKino_Dev_Emy_KeyPress_UP	KeyPress_UP	Current_PixelFormats\$	KKino_Dev_Emy_Current_PixelFormat\$
KKino_Dev_Emy_KeyHold_UP	KeyHold_UP	Current_BitDepths\$	KKino_Dev_Emy_Current_BitDepth\$
KKino_Dev_Emy_KeyPress_DOWN	KeyPress_DOWN	Current_TransferFunctions\$	KKino_Dev_Emy_Current_TransferFunction\$
KKino_Dev_Emy_KeyHold_DOWN	KeyHold_DOWN	Current_Gamuts\$	KKino_Dev_Emy_Current_Gamut\$
KKino_Dev_Emy_KeyPress_OK	KeyPress_OK	Current_VideoLevels\$	KKino_Dev_Emy_Current_VideoLevel\$
KKino_Dev_Emy_KeyHold_OK	KeyHold_OK	Current_AspectMarkers\$	KKino_Dev_Emy_Current_AspectMarker\$
KKino_Dev_Emy_KeyPress_INPUT	KeyPress_INPUT		
KKino_Dev_Emy_KeyHold_INPUT	KeyHold_INPUT		
KKino_Dev_Emy_KeyPress_SETTINGS	KeyPress_SETTINGS		
KKino_Dev_Emy_KeyHold_SETTINGS	KeyHold_SETTINGS		
KKino_Dev_Emy_KeyPress_RED	KeyPress_RED		
KKino_Dev_Emy_KeyHold_RED	KeyHold_RED		
KKino_Dev_Emy_KeyPress_GREEN	KeyPress_GREEN		
KKino_Dev_Emy_KeyHold_GREEN	KeyHold_GREEN		
KKino_Dev_Emy_KeyPress_BLUE	KeyPress_BLUE		
KKino_Dev_Emy_KeyHold_BLUE	KeyHold_BLUE		
KKino_Dev_Emy_KeyPress_YELLOW	KeyPress_YELLOW		
KKino_Dev_Emy_KeyHold_YELLOW	KeyHold_YELLOW		
KKino_Dev_Emy_Toggle_ToneMap	Toggle_ToneMap		
KKino_Dev_Emy_Toggle_HighlightRecovery	Toggle_HighlightRecovery		
KKino_Dev_Emy_Toggle_ContrastRecovery	Toggle_ContrastRecovery		
KKino_Dev_Emy_Toggle_ShadowRecovery	Toggle_ShadowRecovery		
KKino_Dev_Emy_3Dlut	Toggle_3Dlut		
KKino_Dev_Emy_Screenboundaries	Toggle_Screenboundaries		
KKino_Dev_Emy_Histogram	Toggle_Histogram		
KKino_Dev_Emy_Toggle_DebugOSD	Toggle_DebugOSD		
KKino_Dev_Emy_ActivateSelectedSourceProfile	ActivateSelectedSourceProfile		
KKino_Dev_Emy_ActivateSelectedDisplayProfile	ActivateSelectedDisplayProfile		
KKino_Dev_Emy_ActivateSelectedProfile	ActivateSelectedProfile		
KKino_Dev_Emy_DeactivateSelectedProfileGroup	DeactivateSelectedProfileGroup		
KKino_Dev_Emy_DisplayAlertWindow	DisplayAlertWindow		
KKino_Dev_Emy_CloseAlertWindow	CloseAlertWindow		
KKino_Dev_Emy_DisplayMessage	DisplayMessage		
KKino_Dev_Emy_DisplayAudioVolume	DisplayAudioVolume		
KKino_Dev_Emy_DisplayAudioMute	DisplayAudioMute		
KKino_Dev_Emy_CloseAudioMute	CloseAudioMute		
KKino_Dev_Emy_Source#	Source#		
KKino_Dev_Emy_Display#	Display#		
KKino_Dev_Emy_ProfileGroup#	ProfileGroup#		
KKino_Dev_Emy_Profile#	Profile#		
KKino_Dev_Emy_Alert_Text\$	Alert_Text\$		
KKino_Dev_Emy_DisplayMessage_Timeout	DisplayMessage_Timeout		
KKino_Dev_Emy_DisplayMessage_Text\$	DisplayMessage_Text\$		
KKino_Dev_Emy_DisplayAudioVolume_minValue	DisplayAudioVolume_minValue		
KKino_Dev_Emy_DisplayAudioVolume_currentValue	DisplayAudioVolume_currentValue		
KKino_Dev_Emy_DisplayAudioVolume_maxValue	DisplayAudioVolume_maxValue		
KKino_Dev_Emy_DisplayAudioVolume_unitDescription\$	DisplayAudioVolume_unitDescription\$		
KKino_Dev_Emy_RX\$	Emvy_RX\$		
[Reference Name]			

Module Parameters

Please provide the IP-address and the MAC-address of the Envy to be controlled. (MAC-address is required for PowerOn to work)

Module Inputs

(Inputs will be categorized in sections in upcoming revisions)

Connect – When set to high, the connection to the Envy will be established

PowerOn/PowerOff/Standby/Restart/ReloadSoftware – Triggers the corresponding action (self-explanatory)

SetAR_Auto/SetAR_Hold/SetAR_xxx – Set Envy aspect ratio detection to “Auto” or “Hold” and set specific temporary aspect ratio.

GetIncomingSignalInfo/GetAR/GetTemperatures – Request IncomingSignalInfo, Aspect Ratio and GPU/HDMI-input card temperature. (no feedback from module for temperatures yet – will be implemented in upcoming revisions)

Hotplug/Force1080p60Output/ResetTemporary – Force Hotplug. Force 1080p60 output. Reset temporary adjustments.

KeyPress_XXX/KeyHold_YYY – Emulate the corresponding key press or key hold as being triggered by the Envy remote control.

Toggle_YYY – Toggles the corresponding function.

For detailed information on the usage of profiles, please consult the Envy profile documentation. Profiles need to be created and managed directly with the Envy.

ActivateSelectedSourceProfile/Source# – Activates the source profile selected by the analog signal “Source#”.

ActivateSelectedDisplayProfile/Display# – Activates the display profile selected by the analog signal “Display#”.

ActivateSelectedProfile/ProfileGroup#/Profile# – Activates the custom profile selected by the analog signals “ProfileGroup#” and “Profile#”.

DisplayAlertWindow/CloseAlertWindow/DisplayAlertText\$ – Displays the Text “DisplayAlertText\$” on the display in an alert window that needs to be closed by triggering the “CloseAlertWindow”-signal.

DisplayMessage/ DisplayMessage_ Timeout/ DisplayMessage_ Text\$ – Displays the Text “DisplayMessage_ Text\$” on the display in a message window that closes after a number of seconds specified via the signal “DisplayMessage_ Timeout”.

DisplayAudioVolume/ DisplayAudioVolume_ minValue / DisplayAudioVolume_ currentValue / DisplayAudioVolume_ minValue / DisplayAudioVolume_ unitDescription\$ – Displays volume information on the display specified by the signals “DisplayAudioVolume_ minValue”,

“DisplayAudioVolume_currentValue”, “DisplayAudioVolume_minValue”, “DisplayAudioVolume_unitDescription\$”. These values need to come from the control system programming.

Envy_RX\$ – Connect to RX of Envy TCP/Client symbol. (for testing purpose, not needed for normal use)

Module Outputs

Connected – Signal is high if the Envy is connected and responding

MissingHeartbeat_FB – Signal is high if the Envy hasn’t received a “Heartbeat” message for 60 seconds.

NoSignal_FB – Signal is high if the Envy is not receiving an input signal.

HotPlug_FB – Signal is high if the Envy if HDMI-input has been hotplugged

ResetTemporary_FB – Signal is high if the Envy if the temporary settings of the Envy have been reset (by triggering the “ResetTemporary” signal or triggered internally by the Envy though a change in the input signal.

Current_AR_XYZ – Signal is high if the corresponding aspect ratio is detected

Envy_WOL\$ – Magic Package that can be sent to a UDP-socket signal to power-up the Envy.

pixel_AR\$/float_AR\$/nearestWellKnown_AR\$ – Detected aspect ratio as strings.

AR_Description\$ – Descriptive name of detected AR as a string.

Current_AR_Mode/Resolution/Framerate/Dimension/PixelFormat/BitDepth/TransferFunction/Gamut/VideoLevel/AspectMarker\$ – Information about the current incoming video signal as strings.

License

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