

Draft/Experimental status!

Envy module for RTI

Revision: 0.50

Date: 2021/04/08

Changelog

V0.50 20210408

- added Hotplug, Force1080p60Output, ResetTemporary Command
- added Feedback for Force1080p60Output, ResetTemporary
- added ActivateProfiles (Source, Display, custom) - Activate and Deactivate
- added direct aspect ratios
- added SendSpecialCommand\$ to send control commands directly via string
- added unparsed output string signal
- some minor bug fixes and cleanup

V0.45 20210318

- Added ActivateDisplayProfiles and ActivateSourceProfiles

V0.30 20210311

Initial Version

Summary

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

More functionality will be added in upcoming revisions.

Prerequisites

This module should work with all current RTI control processors using ID9 or APEX development environment. It was tested on a XP6 and XP8.

Driver Description

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

Driver Properties

TCP-Address: enter the TCP/IP address of the Envy

TCP-Port: enter the TCP/IP port used by the Envy (default 44077)

MAC-address: enter the MAC-address of the Envy (this is required for the Power-On command)

Driver commands

Power Functions

Power On / Power Off / Standby / Restart / ReloadSoftware

Remote Control

Emulates the corresponding key press or key hold as being triggered by the Envy remote control.

AR Functions

SetAR_Auto / SetAR_Hold / SetAR – Set Envy aspect ratio detection to “Auto” or “Hold” and to a selection of fixed aspect ratios.

Demo Functions

Toggle ToneMap / HighlightRecovery / ContrastRecovery / ShadowRecovery / 3Dlut / ScreenBoundaries / Histogram / DebugOSD

Signal Functions

GetIncomingSignalInfo / GetAspectRatio / GetMaskingRatio / GetTemperatures

Request IncomingSignalInfo, Aspect/Masking Ratio and GPU/HDMI-input card temperature.

Hotplug / Force1080p60Output / ResetTemporary

Trigger simulated HDMI Hotplug, Force output to 1080p60, reset temporary settings.

Display Message Functions

DisplayAlertWindow / CloseAlertWindow

You can ask Envy to display a centered alert window with a message text in it. The user has to manually close the window, otherwise it's displayed "forever".

DisplayMessage

This displays a little text message in the bottom center of the screen, for a specific number of seconds.

DisplayAudioVolume

This command tells Envy to display an AVR volume control GUI, in case your AVR doesn't show a volume control GUI, for whatever reason

DisplayAudioMute / CloseAudioMute

Display and close small mute symbol on the screen.

Profile Functions

ActivateProfile DISPLAY 1-16

Activate display profile 1-16.

ActivateProfile SOURCE 1-32

Activate source profile 1-32.

ActivateProfile ProfileGroup 1-32 Profile 1-32

Activate profile 1-32 in profile group 1-32.

Driver Variables

Connection State

Connected State (0 disconnected, 1 connected) / Connected / Disconnected – Variable is high if the Envy is connected and responding

System Feedback

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

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

MissingHeartbeat – Signal is high if the Envy hasn't received a "Heartbeat" message for 60 seconds.

Force1080p60Output – Signal is high if the the Force1080p60Output command has been triggered.

ResetTemporary – Signal is high if the ResetTemporary command has been triggered.

Unparsed Response – Raw feedback response from the Envy

Input Signal Feedback

Current Resolution

Current Framerate

Current Dimension

Current Pixel Format

Current BitDepth

Current TransferFunction

Current Gamut

Current VideoLevel

Current AspektMarker

Aspect Ratio Feedback

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

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

AR_Description – Descriptive name of detected AR as a string.

License

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Thorsten Köhler; Köhler Medientechnik; thorsten.koehler@koehler-medientechnik.de