

**Partner: Xperinet**  
**Model: MIRV**  
**Device Type: Audio/Video Server**



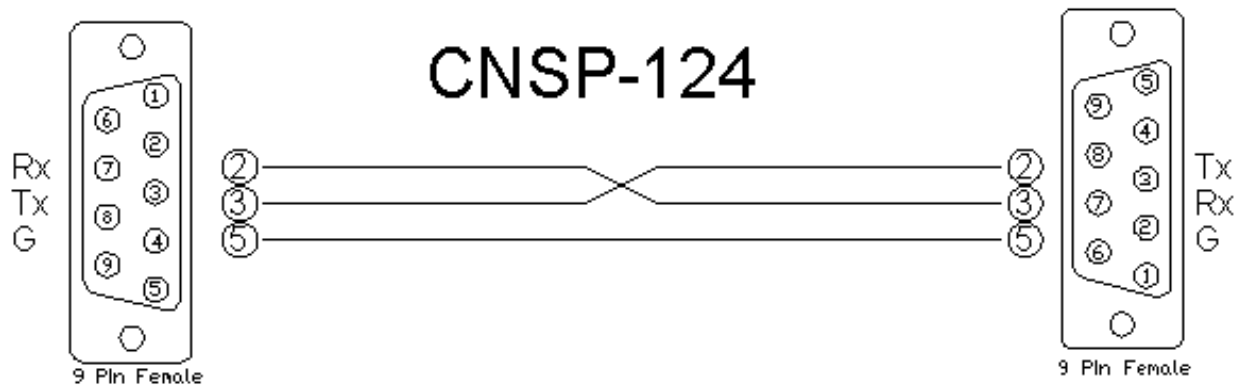
## GENERAL INFORMATION

<b>SIMPLWINDOWS NAME:</b>	Xperinet MIRV API2 Control
<b>CATEGORY:</b>	Miscellaneous
<b>VERSION:</b>	1.0
<b>SUMMARY:</b>	Provides control and feedback for the API2 as well as emulation of API1 controls.
<b>GENERAL NOTES:</b>	<p>This module is for control of the Xperinet MIRV media server.</p> <p>You can communicate with the MIRV via RS-232 or TCP/IP. If using TCP/IP, follow these instruction:</p> <p>You must open up a telnet session with the Xperinet system. Therefore you must have an Ethernet enabled control system.</p> <p>When programming the system in Simpl Windows, you should insert a TCP/IP client into the Ethernet portion of the control system in the configuration manager. In the program view, use 1234d for the port parameter field. Drive the CONNECT line on the TCP/IP port from the corresponding module output. In addition, you must enter the proper password into the "ip_login_password" parameter field in order to access the system via TCP/IP. This value must match exactly the value set in the MIRV setup menus for the "API Password". With firmware version 2.2-49, this option can be found in the Main Menu by accessing "Setup&gt;System Config" and advancing to "Step 3 of 5".</p> <p>If you are using RS-232 communication, no password is necessary, so the value contained in the parameter field "ip_login_password" does not matter.</p> <p>When an input is pulsed for a connection method, the module will attempt to connect to the unit. When a connection has been established, the module will default to "Control Panel" mode upon initially connecting. Once the connection has been established, the user can choose to use "Remote Control" mode, which emulates operation of the unit via keystrokes from a keyboard. These keystroke commands are generated via the "Xperinet MIRV API1 Commands for API2" module.</p> <p>Note that if a command is sent to the MIRV to change its output resolution, the unit will go through a partial restart that will terminate the control session. Communications should be automatically reestablished after the restart completes.</p> <p>Important Note: It is NOT recommended that the physical keyboard be used to control the MIRV unit while remote control is being used. Attempting to control the unit via a control system and the local keyboard simultaneously may cause the unit the stop responding to the remote control commands. If this occurs, communication may possibly be reestablished by pulsing the appropriate connection type input. If using Ethernet control, pulsing the "use_ethernet_connection" input will cause the connection to be broken and reestablished. If using RS-232 control, pulsing the "use_serial_connection" input will cause the control system to request a full status update.</p> <p>In testing with version 2.2-49 of firmware, the following items were noted:</p> <ol style="list-style-type: none"><li>1) During movie playback, the feedback for the pause function is not returned to the control system. The system will respond properly to the pause/resume command but the feedback will not properly indicate that playback is paused.</li></ol>

**Partner: Xperinet**  
**Model: MIRV**  
**Device Type: Audio/Video Server**



	<ol style="list-style-type: none"> <li>2) Feedback for the status of movie subtitles is returned to the system.</li> <li>3) When a command is sent to the system for a music sort, the MIRV may respond with feedback indicating that music is playing even though there is no music playing at the time.</li> <li>4) The feedback indication for "current resolution" may occasionally be returned to the control system improperly.</li> <li>5) When a change is made to the visualizer setting, the user will not see the change on the system if the system is currently within the music menus. If a change is made to the visualizer setting while in a music menu, stop playback and return to the main menu. After doing this, the new visualizer setting should be seen the next time music playback is initiated.</li> </ol>
<b>CRESTRON HARDWARE REQUIRED:</b>	CNX-COM2, ST-Com, C2-COM6, CNMSX Internal Com Port, C2-COM2, C2-COM3
<b>SETUP OF CRESTRON HARDWARE:</b>	RS232 Baud: 9600 Parity: N Data Bits: 8 Stop Bits: 1 Ethernet Port 2134
<b>VENDOR FIRMWARE:</b>	2.2-49
<b>VENDOR SETUP:</b>	API Password must be setup for IP control
<b>CABLE DIAGRAM:</b>	CNSP-124



**Partner: Xperinet**  
**Model: MIRV**  
**Device Type: Audio/Video Server**


**CONTROL:**

<b>Use_*_connection</b>	D	Pulse to set the module for the desired control method.
<b>Set_mode_remote_control(1-way)</b>	D	Pulse to use one-way control (keyboard emulation) available in API1.
<b>Set_mode_control_panel (2-way)</b>	D	Pulse to use two-way controls associated with API2. This is the default method for the module.
<b>Zone_select_in_analog</b>	A	Drive this input with an analog initialize symbol to determine the zone to be controlled. If the MIRV system indicates that an invalid zone has been selected for control, the module will default to controlling zone 1. This will be indicated in the feedback signal "zone_select_fb_analog".
<b>Report_all_status</b>	D	Requests that all status for the current zone be sent to the control system.
<b>Report_*_status</b>	D	Pulse to request the desired status for the current zone be sent to the control system.
<b>Enable/disable_auto_update</b>	D	Pulse to enable and disable auto update. Auto update will be enabled by default when a connection is established or when a new zone is selected.
<b>Jump_to_*_mode</b>	D	Pulse to jump directly to the movie or music options menu.
<b>Select_menu_line</b>	D	Pulse to select the corresponding menu line.
<b>Navigate_menu_*</b>	D	Pulse to navigate through the menus.
<b>Sort_movies_by_*</b>	D	Provides direct access to movie sorting options without a search term.
<b>Movie_stop</b>	D	Pulse to stop the currently playing movie.
<b>Movie_pause/resume</b>	D	Pulse to pause or resume the currently playing movie.
<b>Movie_ffwd/rewind_speed_*</b>	D	Pulse to fast-forward or rewind the currently playing movie at the selected interval.
<b>Movie_toggle_subtitles</b>	D	Pulse to toggle the subtitles on and off.
<b>Movie_advance_audio_sync</b>	D	Pulse to advance the audio in relation to video playback.
<b>Movie_retard_audio_Sync</b>	D	Pulse to retard the audio in relation to video playback.
<b>Music_stop/resume/pause</b>	D	Pulse to start and stop the currently playing music track.

**Partner: Xperinet**  
**Model: MIRV**  
**Device Type: Audio/Video Server**



<b>Music_previous/next_track</b>	D	Pulse to move to the next or previous music track.
<b>Music_forward/reverse_scan</b>	D	Scan within the currently playing music track.
<b>Random_on/off</b>	D	Pulse to turn the random visualization on and off. With random visualization on, the visualization will change with each song.
<b>Music_visual_*</b>	D	Pulse to choose between large and small visualization options.
<b>Visualization_*</b>	D	Pulse to select desired visualization. See note above.
<b>Set_resolution_*</b>	D	Pulse to set the output resolution. See note above.
<b>Audio_*</b>	D	Pulse to choose between the available audio playback options.
<b>Surround_Pref_*</b>	D	Pulse to set the order of preference for movie audio playback.
<b>Dvd_language_*</b>	D	Pulse to select the default dvd playback language.
<b>Set_aspect_*</b>	D	Pulse to set the desired output aspect ratio.
<b>Open/close_tray</b>	D	Pulse to open or close the disc tray.
<b>Play_disc_in_tray</b>	D	Pulse to play the disc in the tray.
<b>Search_movie/music_by_*_with_search_string</b>	D	Pulse to perform a movie or music search with a target text string.
<b>Play_movie/music_with_search_string</b>	D	Pulse to play a movie or music specified by a target text string.
<b>Music_randomplay_*_with_search_string</b>	D	Pulse to play music specified by a target text string in random mode.
<b>Search\$</b>	S	The target text string that is used with the above search and direct select options. This text string should be generated by Crestron's IBM Full Keyboard module or an equivalent string generator.
<b>Api1_command\$</b>	S	API 1 commands (for keyboard control emulation without feedback). This input should be driven by the output of the "Xperinet MIRV API1 Commands for API2" module.
<b>Power_off</b>	D	Pulse to shut the MIRV down. Use of this input is NOT recommended in normal operation.
<b>From_Device\$</b>	S	Serial signal to be routed from a 2-way serial com port or from the TCP/IP client.

**Partner: Xperinet**  
**Model: MIRV**  
**Device Type: Audio/Video Server**


**FEEDBACK:**

use_ethernet_connection_fb	D	Indication that the module is currently setup to use an Ethernet connection.
Use_serial_connection_fb	D	Indication that the module is currently setup to use a serial connection.
To_TCP/IP_client_connect	D	Digital signal to be connected to the "connect" line on the TCP/IP client when using Ethernet control.
Set_mode_remote_control (1way)_fb	D	Real feedback indicating that the current zone is currently in "remote control" mode (API 1 emulation).
Set_mode_control_panel (2way)_fb	D	Real feedback indicating that the current zone is currently in "control panel" mode (API 2 functionality). This is the default mode of operation when a connection is made or the zone specification is changed.
Zone_select_fb_analog	A	Analog signal indicating the number of the zone that is currently being controlled.
Enable_auto_update_fb	D	Real feedback indicating that auto update is enabled.
Disable_auto_update_fb	D	Real feedback indicating that auto update is disabled.
Nothing_playing_fb	D	Real feedback indicating that neither a movie nor music is currently playing.
Movie_playing_fb	D	Real feedback indicating a movie is currently playing.
Music_playing_fb	D	Real feedback indicating that music is currently playing.
Current_menu_title\$	S	Text indicating the current menu title. This should be routed to an indirect text field.
Current_menu_line*\$	S	Text indicating the content of the specified menu line. This should be routed to an indirect text field.
Current_movie_title\$	S	Text indicating the current movie title for a video selection. This should be routed to an indirect text field.
Current_song_title\$	S	Text indicating the current song title for a music selection. This should be routed to an indirect text field.
Current_genre\$	S	Text indicating the current genre for music or movie. This should be routed to an indirect text field.
Current_artist\$	S	Text indicating the current artist for a music selection. This should be routed to an indirect text field.
Current_album\$	S	Text indicating the current album for a music selection. This should be routed to an indirect text field.
Currently_stopped_fb	D	Real feedback indicating that music and video playback is stopped.
Currently_playing_fb	D	Real feedback indicating that music or video playback is in progress.
Currently_paused_fb	D	Real feedback indicating that music or video playback is paused.
Subtitles_disabled_fb	D	Real feedback indicating that video subtitles are disabled.
Subtitles_enabled_fb	D	Real feedback indicating that video subtitles are enabled.
Random_on_fb	D	Real feedback indicating that the music visualizer random function is on.
Random_off_fb	D	Real feedback indicating that the music visualizer random function is off.
Visualization_*_fb	D	Real feedback indicating the currently selected visualization for music playback.
Current_visualization_setting\$	S	Text indicating the current visualization for a music selection. This should be routed to an indirect text field.

**Partner: Xperinet**  
**Model: MIRV**  
**Device Type: Audio/Video Server**



Resolution_*_fb	D	Real feedback indicating the currently selected display resolution.
Current_resolution\$	S	Text indicating the currently selected display resolution. This should be routed to an indirect text field.
Audio_*_fb	D	Real feedback indicating the currently selected audio playback mode.
Surround_pref_*_fb	D	Real feedback indicating the currently selected surround playback order preference.
Current_surround_preference\$	S	Text indicating the currently selected surround playback order preference. This should be routed to an indirect text field.
Dvd_language_*_fb	D	Real feedback indicating the currently selected default DVD playback language.
Current_language\$	S	Text indicating the currently selected default DVD playback language. This should be routed to an indirect text field.
Aspect_ratio_*_fb	D	Real feedback indicating the currently selected display aspect ratio.
Current_aspect_ratio\$	S	Text indicating the currently selected display aspect ratio. This should be routed to an indirect text field.
Mirv_shutdown_pulse	D	This signal will pulse to indicate that the MIRV is going to shutdown or reboot.
Mirv_rebooted_pulse	D	This signal will pulse to indicate that the MIRV has rebooted. This indication is only available when using serial communication.
Error_pulse	D	This signal will pulse when the control system has received a message indicating that an error has occurred. This signal can be used to temporarily display the error message on a touch panel if desired.
Error_response\$	S	Text indicating the error condition returned by the MIRV. This can be routed to an indirect text field.
To_Device\$	S	Serial string to be routed to a 2 way serial com port or TCP/IP client.

## PARAMETERS:

ip_login_password	This parameter is necessary when using TCP/IP communication in order to allow the control system to login to the MIRV system. This value must match exactly the value set in the MIRV setup menus for "API Password". With firmware version 2.2-49 this option can be found from the Main Menu by accessing "Setup>System Config" and advancing to "Step 3 of 5".
-------------------	---

## TESTING:

<b>OPS USED FOR TESTING:</b>	PRO2: 3.137 CNMSX: 5.14.02x
<b>COMPILER USED FOR TESTING:</b>	2.06.22
<b>SAMPLE PROGRAM:</b>	Xperinet MIRV API2 Demo
<b>REVISION HISTORY:</b>	V. 1.0