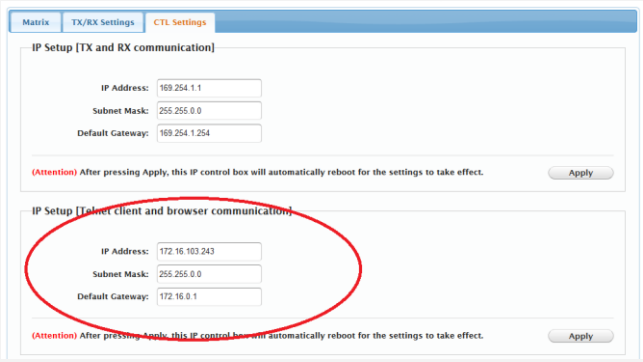
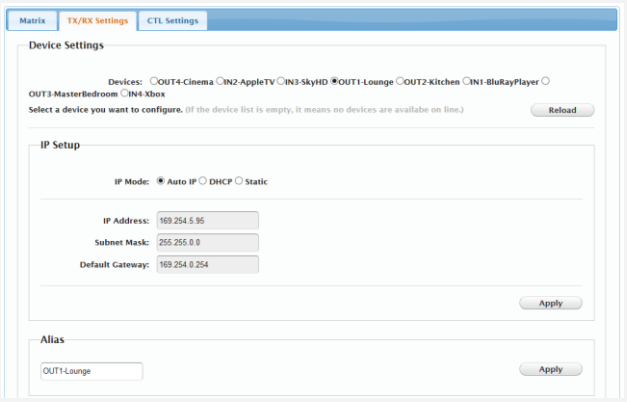
Partner: AVENVIEW
Model: C6VWIP
Device Type: AV Matrix

GENERAL INFORMATION:

SIMPLWINDOWS NAME:	Avenview HDM C6VWIP
CATEGORY:	Video Distribution – Video Wall
VERSION:	2.18
SUMMARY:	This module will control Avenview C6VWIP products, via TCP/IP.
GENERAL NOTES:	The module is comprised of the main switching driver, and three additional drivers: **Switching** – used for communication with the Avenview system, and switching of individual outputs. **Video Wall 1** – used to create, configure and control single-host video walls. **Video Wall 2** – used to create, configure and control multi-host video walls. **Serial** – used to send serial commands via a transmitter or receiver device.
CRESTRON HARDWARE REQUIRED:	Any Ethernet-enabled processor
SETUP OF CRESTRON HARDWARE:	Connect the Crestron processor to the same subnet as the Avenview Control Interface Telnet client.
VENDOR FIRMWARE:	This module has been tested with an Avenview IP CONTROL BOX, running system version 2.1.1.
VENDOR SETUP:	It is recommended that the Avenview HDMI over IP system be installed, configured and tested by a suitably qualified engineer, according to Avenview documentation, prior to integration with Crestron. Some additional, specific configuration is required to ensure correct operation of the driver: The Avenview Control Interface Telnet Client must be configured with a static IP address in the same range as the Crestron processor in order for the two to communicate: 1. Enter the IP address of the IP Control Box into the web browser of a computer connected to the same network, to display the Web Interface (the default IP address is "192.168.11.243" and default password is "admin"). 2. Choose the CTL Settings tab. 3. Enter the static IP address information into the IP Setup [Telnet client and browser communication] section, and click Apply. 

Partner: AVENVIEW
Model: C6VWIP
Device Type: AV Matrix

	It is additionally necessary to configure an Alias (name) for each transmitter (input) device and each receiver (output) device. Access the web interface as described above, this time choosing the TX/RX Settings tab. Note that the current device names are displayed in Device Settings at the top of the page. Select a device to display its current configuration:  You can edit the device name in the Alias field, clicking Apply when done. Note that the name must comply with the following conventions: For Transmitter (input) devices: IN[number]-[name] For Receiver (output) devices: OUT[number]-[name] It is important that each name begins with "IN" or "OUT", which is then followed by the input or output number. You can then optionally add a hyphen (-) followed by an appropriate description for the device (note that no spaces are allowed). For example, in the screenshot above, the first input is named IN1-BluRayPlayer, equally valid is just IN1.
CABLE DIAGRAM:	N/A

CONTROL (SWITCHING):

[OUTPUTx]	A	Switch an output to a given input.
[VIDEO_WALLS_x]	S	Links to the feedback in the video wall modules.
[SERIAL_x]	S	Links to the feedback in the serial module.
[RESET_INPUT]	A	This command is used to reset an input after it has been used as part of a multi-host video wall configuration.
REINITIALISE	D	Used to retrieve input and output alias names from the Avenview system.
[SELECT_ALL]	D	Used to select all outputs, for multi switching and favourites
[CLEAR_ALL]	D	Clears all outputs for multi switching and favourites
[SELECT_OUTPUT_x]	D	Select particular outputs for multi switching and favourites

Partner: AVENVIEW
Model: C6VWIP
Device Type: AV Matrix

[CREATE_FAV_x]	D	Create a favourite for the outputs selected using SELECT_OUTPUT_x
[RECALL_FAV_x]	D	Recall a configuration for the outputs previously stored as a favourite
[MULTI_INPUT_x]	D	Choose an input to switch the outputs selected using SELECT_OUTPUT_x to
[SYNCHRONISED]	D	0 low = (single switch) switching done on change of the output analog 1 high = change done when 'EXECUTE_MULITSWITCH' is pushed // used when sending lots of outputs to the same input,(use this instead of single switch, as will reduce switching time)
[EXECUTE COMMAND]	D	Switches all output changes that have happened since 'SYNCHRONISED' has gone high or last 'EXECUTE_MULITSWITCH' was pushed

PARAMETERS (SWITCHING):

IP ADDRESS	S	The IP address of the Avenview IP Control Box.

FEEDBACK (SWITCHING):

[aSTATUS]	A	The current status of the module. Status 1 = all ok, status 2 = all ok (currently processing) and status 3 = error.
[STATUS]	S	The description of the current status.
[FAV_FILE_ERROR]	D	Favourites file error signal
[OUTPUT_NAME_x]	S	The output name as defined in the Avenview system.
[INPUT_NAME_x]	S	The input name as defined in the Avenview system.
[SELECT_OUTPUT_FB_x]	D	Feedback of selected output(s)
[OUTPUT_STATUS_x]	A	Current input for the specified output

CONTROL (VIDEO WALL 1 – SINGLE HOST):

CREATE_VIDEO_WALL	D	Create a single host video wall using the specified parameters.
VIDEO_WALL_COMMAND	S	Using, for example, a Serial I/O, the following configuration commands can be sent to the video wall: **BEZELGAP** - This command is used to define the size of the TV frame (video edge) to correct for large bezel screens in video wall mode. Specify the overall TV size in mm, and the actual screen size in mm: *BEZELGAP [TV size x]x[TV size y]:[screen size x]x[screen size y];* For example: *BEZELGAP 600x450:550x400;* …applies a bezel gap for a TV with an overall size of 600x450mm, and an actual

Partner: AVENVIEW
Model: C6VWIP
Device Type: AV Matrix

		screen size of 550x400mm. **PICPARAM** - This command allows you to make adjustments to the screen appearance of specified outputs within a video wall. Specify the horizontal and vertical "shift" values (1 unit = 8 pixels), horizontal and vertical "scale" values (1 unit = 1 row or column), tearing delay (in microseconds) and the outputs to which the parameters are to be applied: *PICPARAM [horizontal shift],[vertical shift]:[horizontal scale],[vertical scale]:[tearing delay],[outputs];* For example: *PICPARAM 0,10:1,1:12500:1,2-4;* …shifts the image 0 pixels horizontally and 80 pixels vertically, scales the image up by 1 row and 1 column, and adjusts the tearing delay by 12,500 microseconds or outputs 1 to 4.
[INPUT]	A	Specify an input to use as the source for the video wall.

PARAMETERS (VIDEO WALL 1 – SINGLE HOST):

Wall Name	S	The name of the video wall
Wall Height	A	The number of rows in the video wall
Wall Width	A	The number of screens in each row of the video wall
Default Input	S	The input used as the source for the video wall upon creation
Outputs	S	The outputs that make up the video wall. These can be expressed as comma separated values, as a range, or as a combination of the two (so, for example, "1-4", "1,2,3,4" and "1,2-4" are all the same)

FEEDBACK (VIDEO WALL 1 – SINGLE HOST):

VIDEOWALL_COMMANDS	S	Links signal to the main switching module, under the group VIDEO_WALLS_COMMANDS..

CONTROL (VIDEO WALL 2 – MULTI HOST):

CREATE_VIDEO_WALL	D	Create a mulit-host video wall using the specified parameters.
VIDEO_WALL_COMMAND	S	Using, for example, a Serial I/O, the following configuration commands can be sent to the video wall: **BEZELGAP** - This command is used to define the size of the TV frame (video edge) to correct for large bezel screens in video wall mode. Specify the overall TV size in mm, and the actual screen size in mm: *BEZELGAP [TV size x]x[TV size y]:[screen size x]x[screen size y];* For example:

Partner: AVENVIEW
Model: C6VWIP
Device Type: AV Matrix

		BEZELGAP 600x450:550x400; …applies a bezel gap for a TV with an overall size of 600x450mm, and an actual screen size of 550x400mm. **PICPARAM** - This command allows you to make adjustments to the screen appearance of specified outputs within a video wall. Specify the horizontal and vertical "shift" values (1 unit = 8 pixels), horizontal and vertical "scale" values (1 unit = 1 row or column), tearing delay (in microseconds) and the outputs to which the parameters are to be applied: *PICPARAM [horizontal shift],[vertical shift]:[horizontal scale],[vertical scale]:[tearing delay],[outputs];* For example: *PICPARAM 0,10:1,1:12500:1,2-4;* …shifts the image 0 pixels horizontally and 80 pixels vertically, scales the image up by 1 row and 1 column, and adjusts the tearing delay by 12,500 microseconds or outputs 1 to 4.
[INPUT_ROWx]	A	Specify an input to use as the source for each row of the video wall.

PARAMETERS (VIDEO WALL 2 – MULTI HOST):

Wall Name	S	The name of the video wall
Wall Height	A	The number of rows in the video wall
Wall Width	A	The number of screens in each row of the video wall
Default Input	S	The inputs used as the sources for the video wall upon creation. An input must be defined for each row within the wall, separated by commas (for example, "1,4,6" defines a three row wall using input 1 for row 1, input 4 for row 2 and input 6 for row 3)
Outputs	S	The outputs that make up the video wall. These can be expressed as comma separated values, as a range, or as a combination of the two (so, for example, "1-4", "1,2,3,4" and "1,2-4" are all the same)

FEEDBACK (VIDEO WALL 2 – MULTI HOST):

VIDEOWALL_COMMANDS	S	Links signal to the main switching module, under the group VIDEO_WALLS_COMMANDS.

CONTROL (SERIAL):

TX	S	The serial string to be sent.

PARAMETERS (SERIAL):

IN_PORT_NUMBERS	S	The input numbers of the transmitters to which the serial string is to be sent.

Partner: AVENVIEW
Model: C6VWIP
Device Type: AV Matrix

OUT_PORT_NUMBERS	S	The output numbers of the receivers to which the serial string is to be sent.
BAUD_RATE	D	The baud rate, in bits per second.
PARITY	D	The parity bit setting.
DATABITS	D	The number of data bits.
STOPBITS	D	The number of stop bits.

FEEDBACK (SERIAL):

SERIAL_CMD	S	Links signal to the main switching module, under the group SERIAL_COMMANDS.

TESTING:

OPS USED FOR TESTING:	MC3 1.007.0019
SIMPL WINDOWS USED FOR TESTING:	4.02.48
CRESTRON DB USED FOR TESTING:	46.00.004.00
DEVICE DB USED FOR TESTING:	57.05.001.00
SAMPLE PROGRAM:	Avenview HDM C6VWIP V2_00
REVISION HISTORY:	V. 1.00 – initial release. V. 1.02 – favourites and multi-switching functionality added. V. 1.03 – synchronized switching added. V. 1.05 – fix for serial string length issue. V. 2.00 – serial commands sent in hex mode V. 2.11 – added Serial fix V. 2.18 – Increases available outputs to 200 Fixes buffer overload to due to large number of devices Added validation for input and output numbers Increased Favorites file size & improved overwrite