Product – ADC v11

Topic: MIRANDA VERTIGO XG Render Engine (a.k.a. Miranda Intuition-XG)

A still store and animation player with a 16-layer keyer, DVE and automated CG, and optional audio clip player, video clip player, and EAS inserter.

This driver in ADC100 was written for the Miranda Vertigo XG Render Engine device.

The protocol supports this Imagestore driver (Miranda Intuition Imagestore or IS2) is Miranda Oxtel Series Automation Protocol, version 01035-08 issued on March 2005

Release Date: 9-December-2014

Revision History

Revision	Protocol	Date	Author	Company	Description
3	Miranda-Oxtel Series Automation	12/18/2008	MMartin		Stillstore driver with 16 channels
4	Miranda-Oxtel Series Automation	1/27/2009	MMartin		Developer review feedback
5	Miranda-Oxtel Series Automation	7/10/09	DSimons		Engineering feedback from review with Miranda
6	Miranda-Oxtel Series Automation	4/27/2012	JAguerrevere		Fixed incorrect pinout for the B&B converter
7		5/1/2012			Moved content to new template

Version Used

Firmware: 4.2 build 84

Protocol: v01035-03 May-2003

Manual: Miranda Vertigo XG User Manual

Connections

NOTE: To avoid ground loops, ground-pins and/or shield-pins should be connected at the device end only.

Cable Requirements using B&B RS-232/RS-422 Converter

Connect to Miranda on board Serial Comm Port -1

HAS DB-9 Female		RS-422 DB-25 Male	B & B Converter RS 422 / RS 232 Converter	RS-232 DB-25 Female		DekoCast DB-9 Female
2 (RX-)	→	2 (TX-)		2 (TD)	→	3 (TD)
3 (TX+)	→	17 (RX+)		3 (RD)	→	2 (RD)
4 Shield	→	7		7 (SG)	→	5 (SG)
7 (RX+)	→	14 (TX+)				
8 (TX-)	→	5 (RX-)				
9 Shield	→	7				

Cable Pinouts using CTI Blue Storm LP2 PCI RS-422 card

Connect to Miranda PCI Breakout Cable marked Port-1 (Comm Port 3 in Windows OS)

DB9 Female – Device	DB9 Male - Automation
3 (TX-)	2 (RX-)
4 (RX+)	8 (TX-)
1 (RX+)	3 (TX+)
2 (TX+)	7 (RX+)
5 (GND)	4, 6 (GND)

Communications Parameters

The communications parameters for this device are:

- Baud Rate: 19,200

- Data Bits: 8

- Parity: None

- Stop Bits: 1

- Flow Control: None

Device Server Set-Up

Assign a device

Launch the ADC Device Server and the Configuration Tool applications. Select the appropriate device from the Configuration window to start. Right click on the device icon on the configuration window and select Configure Devices menu to open the Configured Devices window:

IMPORTANT Configuration Note: When you have finished making changes on a configuration screen, press Apply and all changes made upon the current configuration window will be applied to the driver. Press OK, and any configuration changes made upon the various tabs will be applied, however, the configuration window will close. Press Cancel and none of the configuration changes will be applied to the driver and the configuration window will close.

Configure a Device

To configure a Vertigo XG device in ADC follow these steps:

1. From the Configuration utility, right-click on your Device Server icon and select the **Configured Devices** item to display the "Configured Devices" window.

2. From the list in the right hand pane select "MIRANDA INTUITION IMAGE STORE" from **the "Still Stores"** category. Use the mouse pointer to drag this item over the top of one of the icons in the right hand pane that has the caption "NO DEVICE," as shown below.

We get:

3. Select the **ISINT** icon you just created and press the right mouse button to bring up a menu. Select "Properties" from this menu (or double-click on the icon instead).

4. Click on the **General** tab to configure the following:
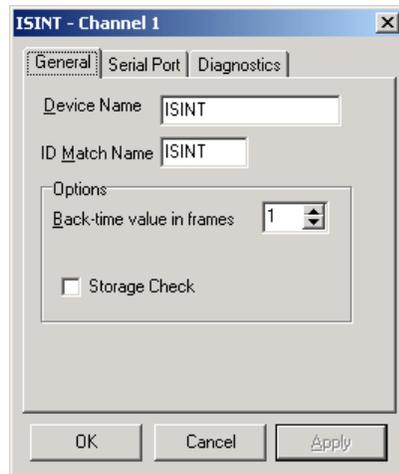
- The **Device Name** will appear in the Device Status and configuration windows on the client applications. The default name may be used but it is recommended to use unique names for easy identification later.
- The **ID Match Name** will be used in the Transmission List's **ID Field** to let the system know that the event is intended for the Miranda Vertigo XG device.
- The **Back-Time value in frames** determines when commands should be sent to the Miranda Vertigo XG. A non-zero value in this field indicates the number of frames that commands will be sent early (during preroll, before the play counter actually starts). This value is set at 1 by default, it shouldn't need to be changed. However if the timing of the Miranda Vertigo XG is off with respect to the switcher, this parameter may be changed to adjust the output timing. This parameter does not change the timing for secondary data commands.
- **Storage Check**: Enable (check) if the logo's ID is available in the device storage. Disable (uncheck) this option, if the Still Store device does not support the storage check. This lets the list blindly register the event (i.e. turn the event to blue)

5. From the resulting dialog select the **Serial Port** tab. Choose the physical port the Miranda Vertigo XG is connected to. The Device Server is now configured properly to communicate with the Miranda Vertigo XG. The device parameters may now be configured.

6. The **Diagnostics** tab contains a **Reinitialize** button, which will clean the buffers in the driver and reset the connection to the Miranda Vertigo XG. This should only be used for troubleshooting purposes. (**CAUTION**: The Reinitialize button does not remove cued events from the buffers.)

7. The Configuration Tool will show a Status of UNTHREAD. The Playlist event will not display as "good" until the list is threaded. Then the XG Device status will display CUED.

Assign the Device To A List

To assign the Imagestore Still Store driver to a list, do the following:

1. From the Configuration utility, right-click on your Device Server and select **List Configurations** to display the **List Assignments** window.

2. Locate the Miranda Vertigo XG driver in the **Available Devices** column. Left-click and drag it to the desired Transmission List in the **Lists** column. Release the mouse when the pointer is over the Icon for the list.
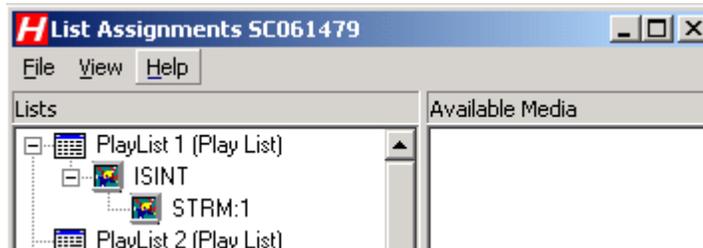
Miranda Vertigo XG AUTOMATION

The Miranda Vertigo XG is a sophisticated graphic and rendering engine. Many types of effects and styles may be crafted into the creation of a Template, or Page. Such as Fade In/Out, Squeezes, Crawls, etc.

For this reason it is very simple for the Automation to recall and air any graphic using a single command (PLAY). The Graphic will then go to Air as it was created, or designed. The "PLAY" command is entered in the TITLE field of the list.

Either primary or secondary events may be played on the Miranda Vertigo XG. When using primary events, you must configure the AUDIO/VIDEO parameters for the heads as with other devices. If the output of the Miranda Vertigo XG is not being used as a primary video feed but as possibly a key, then both a secondary key event and secondary Audio/Video event are required.

For the Miranda Vertigo XG to play a list event the ID field of the event must match the device name for the Miranda Vertigo XG (the default device name is **ISINT**). For Primary, Secondary A/V, and Backtimed A/V events the Title field of the event will contain the file number to be loaded from the Miranda Vertigo XG.

The Miranda Vertigo XG uses alphanumeric filenames. If the Automation list specifies "BUG7P", then "BUG7P" is the filename called.

Using a 'V' as a prefix to the filename is not required, as with the ImageStore. Vertigo XG also does not use ".OXA" or ".OXT" extensions used by an ImageStore.

Primary and Secondary Audio/Video (sAV) Commands

Numeric and Alphanumeric filenames are supported using the PLAY command below.

When using A/V events to recall Logo files, each of the heads for the Miranda Vertigo XG device correspond to one of the keyer layers; head 1 is the midground layer and the rest are the foreground layers.

NOTE: the XG Play utility may have Control Panel Device(s) enabled. This will usually be designated in the XG starting as Device 0. Therefore the Key, or Layer Numbers may be offset.

On the Threaded Transmission List, the Device Column will display XG:x where x is the number of the key/layer being controlled. This number may or may not match the Key/Layer number called in the TITLE field.

An event will designate a layer or head for the devices to play with format as follows:

<command ID>:<layer ID> [space<page name>]. Note – the page name is used and not the recall ID.

For example:

PLAY:3 123   or   PLAY: 3 TV14

(meaning load and take to air the page ID 123 or TV14 to channel 3 of XG box)

A command is sent to load the desired still, or switch to the live signal when the event is cued. This occurs when an event comes into the look ahead count and a head is free to play the event. When the event actually plays, the keyer for that layer is turned on. When it finishes playing the keyer is turned off.

IMPORTANT: The still will remain loaded on the keyer layer until another event is cued on the corresponding head, or a secondary data event loads another still.

Secondary Data Commands

Secondary data events may be used to send commands for a particular layer directly to the Miranda Vertigo XG. If a start time is not given for a Secondary data event the command is sent to the Miranda Vertigo XG when the associated primary event plays. If a start time is specified the time is used as an offset from the start time of the primary event. For secondary data events, head 1 is the midground layer and head 2 is the foreground layer i.e. independent of primary or secondary A/V events. They may be sent while other events are playing.

These events may contain pre-defined commands that are translated and sent to the device, or literal strings that are sent directly to the device.

Pre-defined Commands

All of the pre-defined commands can be sent to any of the keyer layers independently. The keyer layer is selected by adding a colon (:) to the end of the command followed by keyer layer number. Layer 0 is the midground layer and layer 1 is the foreground layer. If a layer isn't specified it defaults to layer 1.

Not all commands are valid for both levels, and the valid commands change according to the Miranda Vertigo XG's mode. Consult the Miranda Vertigo XG User's manual for more information.

- **CUP**: Cut keyer up

- **CDN**: Cut keyer down

- **LOAD**: Load a file number on the specified layer. The file number to load follows this command. E.g. "LOAD:1 BUG7P" loads file number BUG7P on the layer 1.

Example

 "CUP" or "CUP:1"   : Cuts the key in for level 1.

Playlist Entries

Both the sAV and the sDAT commands will work within the same event in playlists to work to the customer's advantage.

For example, it is desired to insert a station bug to come in at the :10 second mark of a program segment, and fade out 5 seconds before the end of the program segment, but the segment duration is not always known at the time the playlist is created.

Use two secondary lines.

Air Time   Secondary   Type   ID Title

00:00:10:00   sAV   PT=   XG   PLAY:3 BUG

00:00:05:00   sDAT PT>   XG   FDN:3

The first sAV commands the Miranda Vertigo XG to bring in the bug "BUG" :10 seconds into the segment on layer 3 for the duration of the primary event. (PT=)

The second line issues a "Fade DowN layer 3" command 5 seconds before the end of the primary event. (PT>)

Operation Notes

The Miranda Vertigo XG responds to each command with an ACK (acknowledgment that it received the command). If the Miranda Vertigo XG does not ACK a command within five seconds or a NAK (negative acknowledgment) is received, the command is resent. If the Miranda Vertigo XG still doesn't respond correctly after two more failed attempts to communicate with the device, the device status will change to "NO DEV" and an error will be logged that communication was lost with the device. If this occurs, the interface software tries to communicate with the Miranda Vertigo XG every five seconds; when it gets a reply, the status returns to "UNTHREAD".

When the Miranda Vertigo XG receives a command it only verifies that the format of the command is correct and that the CRC is valid, it does not check the validity of a command before returning an ACK. Invalid commands or commands containing invalid file numbers will be ignored.

Test Procedures

1. Ensure that the serial RS-422 cable is attached to both the server and the Miranda Vertigo XG.

2. Load a list into the transmission window containing primary events with IDs matching the Name of the Miranda Vertigo XG, and with a valid file number in the Title field.

3. Make sure the Miranda Vertigo XG is properly set up from its control panel.

4. Run the play list.

Error Conditions and Recovery

If the Miranda Vertigo XG fails to communicate, go to the Device Server and go through the following sequence of menus.

1. Select the System Menu from the main menu bar.

2. Select the Diagnostics item from the System menu.

3. Select Miranda Vertigo XG and choose Reinitialize

If this fails to solve the problem, check the cables. Verify that the cable conforms to the specification given earlier in this document and that all the signal lines are good.

Test the Miranda Vertigo XG operation manually through its control panel, check its configuration; or power it off, then wait twenty seconds and power back on.

If the Miranda Vertigo XG still fails to communicate you may have a problem with the device itself. If this is the first time you've attempted to use this device the device may have some internal jumpers set incorrectly for RS422 communications, or there may be an actual hardware error. Contact Miranda for assistance (514) 333-1772 in North America.

Internal Document

xxxxx

File

xxxxx