

KALEIDO

Alto/Quad Cascade Step-by-Step Configuration Guide

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Table of Contents

1	Introduction	1
2	Pre-Configuration	2
Step 1	Network Configuration for Alto/Quad Cascade Frames.....	2
Step 2	SNMP Settings.....	3
Step 3	Output Resolution	4
Step 4	Audio and Video Settings.....	4
3	Interconnection	5
4	Cascade Configuration	6
5	Layout Creation with KEdit.....	9
6	Operation Limitations.....	11
	Contact Us!	12

1 Introduction

This guide covers the configuration of an Alto/Quad cascade, step by step. An Alto/Quad Cascade is composed of one master frame and up to two slave frames.

The option to cascade two or three Alto/Quad frames together allows you to expand input capability to up to 30 inputs feeding one display. Any Alto or Quad can be cascaded. To realize the interconnection you will need to purchase the Alto-CKIT (Daisy chaining cable kit for Kaleido-Alto/Quad). This kit can interconnect video and audio data for up to three frames.

Here are some advantages provided by the Alto/Quad cascade configuration:

- Operate all the frames with only one Kaleido-RCP, mouse and keyboard.
- Create a single layout to display up to 30 video inputs on one display.
- Use GPI inputs and outputs from all three frames. This provides up to 60 GPI inputs and 30 GPI outputs.
- Audio input cards can be installed in all three frames to provide up to 60 channels.
- Audio monitoring output from any audio source on any frame using the Alto-CKIT cable.
- Controlling the Alto/Quad over TCP/IP (XML commands) via the master frame.

2 Pre-Configuration

The frames in the Alto/Quad cascade must be configured individually before their use. For each of the frames, the pre-configuration steps must be followed. To do the pre-configuration, it is necessary to connect a keyboard, a mouse and a screen to the frame.

Step 1 Network Configuration for Alto/Quad Cascade Frames

The Kaleido Alto/Quad must be connected to a switch, and it is strongly recommended to dedicate this switch to the cascade setup. It is also required to use a static IP configuration. Each of your frames (including the master) must be assigned its own static IP address.

On the **Settings** menu, click **Network Configuration**. In **Network Configuration**, click **Specify an IP address**, and type the IP address of the frame, the subnet mask of the network and the default gateway.

Figure 2-1 Network Configuration window

Here is an example:

Unit	IP address	Subnet mask	Default gateway
Switch	192.168.0.1	255.255.255.0	The default gateway on the network connected to the uplink port of the switch.
Master A	192.168.0.2	255.255.255.0	192.168.0.1
Slave B	192.168.0.3	255.255.255.0	192.168.0.1
Slave C	192.168.0.4	255.255.255.0	192.168.0.1

Step 2 SNMP Settings

SNMP traps are sent to your SNMP manager by all frames. It is required that in the SNMP settings of each frame, you select the system alarms that you want to enable. If not, these alarms will not be published by the SNMP manager(s). The SNMP configuration is the same as in standalone mode.

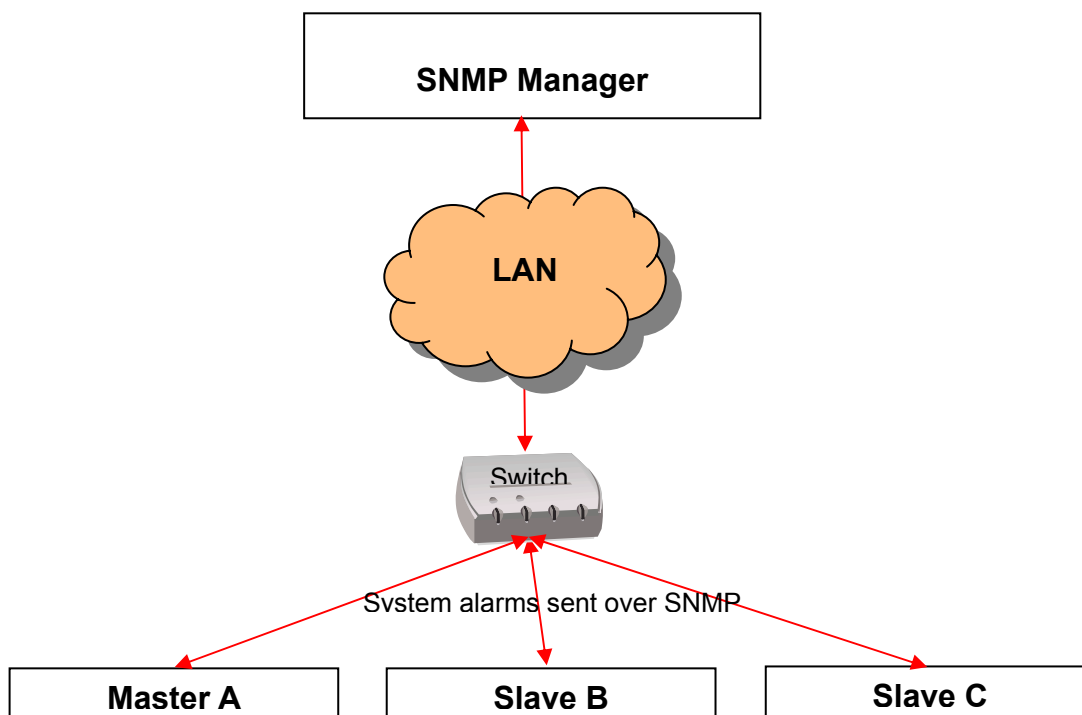


Figure 2-2 SNMP manager

On the **Settings** menu, click **SNMP Settings**. In **SNMP Settings**, click **System Alarms**.

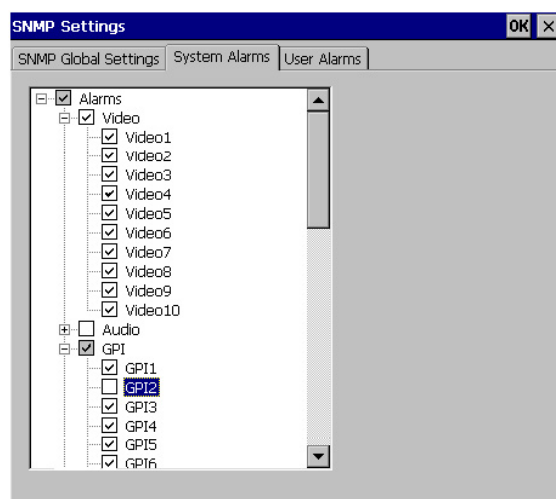


Figure 2-3 System Alarms tab

You must configure all the tabs for each Alto/Quad frame in the cascade exactly as when it works in standalone mode, but this can be done later. Please refer to the Kaleido-Alto/Quad/Quad-Dual User's Manual for the complete SNMP configuration details.

Step 3 **Output Resolution**

All the Alto/Quad frames configured in cascade mode must use the same output resolution to operate properly. In addition, because the frames are cascaded, we need to use special resolution files to replace the default resolutions shipped with the frames. The resolution file sets provided for the purposes of the Alto/Quad cascade are the same as those delivered with the standalone units, only with different timings, optimized to avoid artifacts that could be introduced in the video cascading process.

The predefined resolutions files that are suitable for cascaded systems are located on the Alto/Quad CD, in the `Kaleido-Alto-Quad Vx.xx\Resolutions\Factory\Cascade` folder.

There are two ways to replace the resolution files:

Kaleido-Alto/Quad Resolution Installation Using the CompactFlash procedure:

1. On the **Settings** menu, click **Output Configuration**, and make sure the output of the Kaleido-Alto/Quad frame is set to a different resolution than the one you wish to install.
2. Connect the CompactFlash (CF) reader to a USB port (if the reader has a USB connector) on a PC. The PC will detect the reader as a new drive (for example `E:`).
3. Remove the CF card from the frame, and insert it into the reader.
4. On the CD, browse to the folder that contains the resolution files you wish to install.
5. Extract the contents of the ZIP file located in the selected resolution folder to the `\formats` folder of the CF card.

Note: Make sure to copy all three files.

6. Right-click the CF drive in Windows Explorer, and then click **Eject** on the shortcut menu to be able to remove the card from the drive.
7. Remove the card from the reader and insert it back into the frame.
8. You can now set the frame output to the appropriate resolution.
9. Repeat the procedure for every frame that will be part of the cascade.

Kaleido-Alto/Quad Resolution installation Using the FTP procedure:

1. On the **Settings** menu, click **Output Configuration**, and make sure the output of the Kaleido-Alto/Quad frame is set to a different resolution than the one you wish to install.
2. Log on to the frame via FTP as user “su”, no password (e.g. <ftp://su@10.0.1.10>).
3. On the CD, browse to the folder that contains the resolution files you wish to install, and extract the content of the ZIP file to a temporary location on your PC.
4. Copy the extracted resolution files to the `\formats` folder on the frame, via the FTP session.

Note: Make sure to copy all three files.

5. Close the FTP session.
6. Reboot the frame.
7. You can now set the frame output to the appropriate resolution.
8. Repeat the procedure for every frame that will be part of the cascade.

Step 4 **Audio and Video Settings**

As for a standalone Kaleido-Alto/Quad/Quad-Dual system, the audio and video settings for each source must be calibrated. Refer to the Kaleido-Alto/Quad/Quad-Dual User’s Manual for instructions on how to calibrate the audio and video settings.

3 Interconnection

The Interconnection diagram below outlines the physical expanded input capabilities of up to 30 inputs, using up to three Kaleido-Alto/Quad daisy-chained frames.

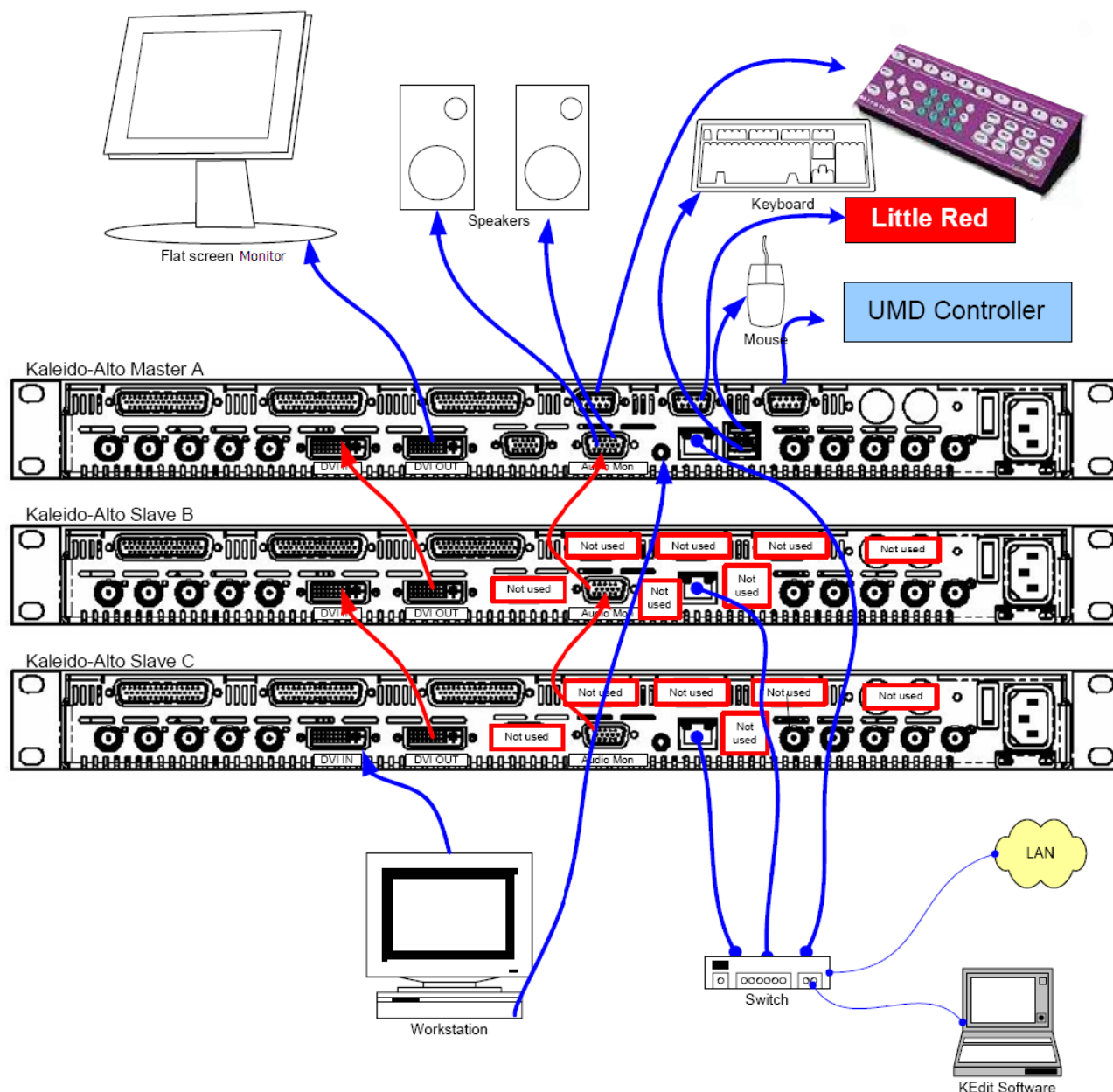


Figure 3-1 Cascade interconnection example showing 3 Kaleido-Alto frames

Note: The cascade configuration requires the DVI input of each Kaleido-Alto/Quad to be fed from the DVI output of the previous frame in the cascade (see figure above). Because the individual Quads in a Kaleido-Quad-Dual frame are not equipped with DVI inputs, the following restrictions apply:

- You cannot use both Quads from a Kaleido-Quad-Dual frame in the same cascade.
- A Quad from a Kaleido-Quad-Dual frame can only be the last frame in a cascade (e.g. slave C, or Slave B if there is no Slave C).

4 Cascade Configuration

Now that the frames are connected properly for the cascade, it is necessary to tell them to work together. This is done on the master frame. The master will then take control of the slave frames automatically.

1. Click the **K-Alto** or **Quad** button, at the bottom left corner of the screen.



Figure 4-1 K-Alto button

2. Point to **Settings**, and then click **Cascade Config**.

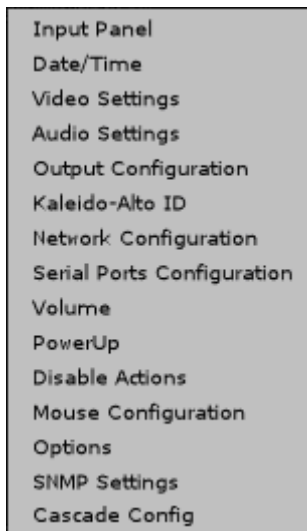


Figure 4-2 Settings menu

- Under **Device Mode**, click **Cascade**.

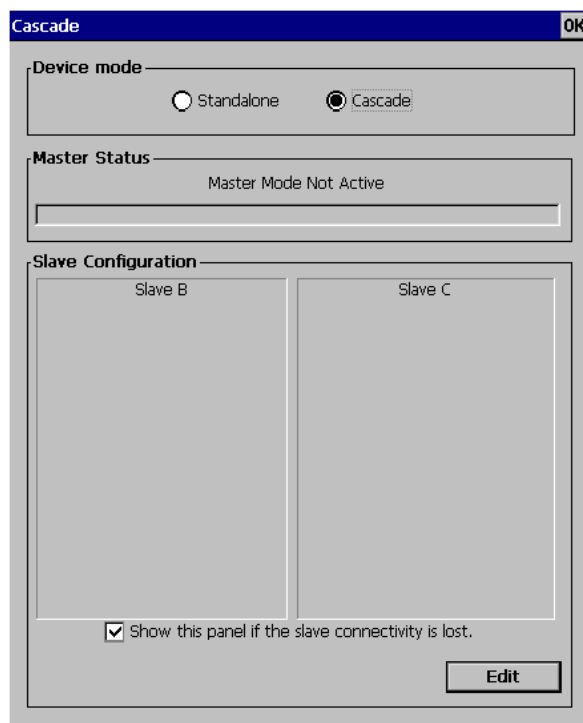


Figure 4-3 Cascade mode

- Click **Edit**.
- Type the appropriate IP addresses (if any), in the **Slave B** and **Slave C** boxes.

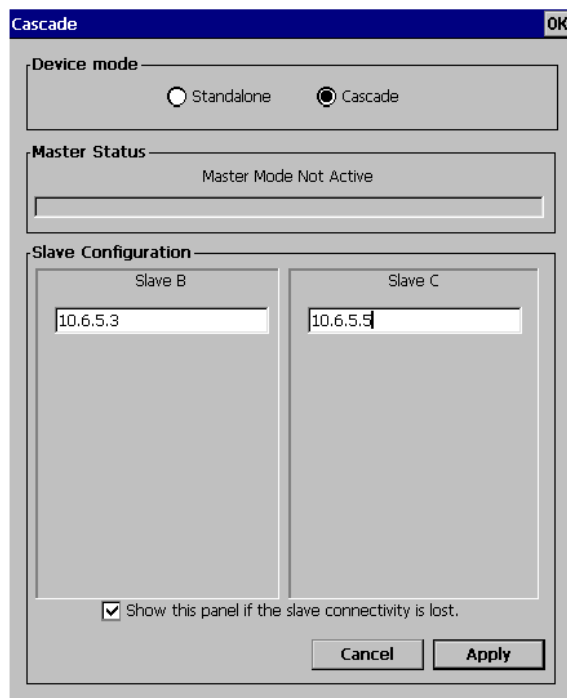


Figure 4-4 Slave IP addresses

6. Click **Apply**.

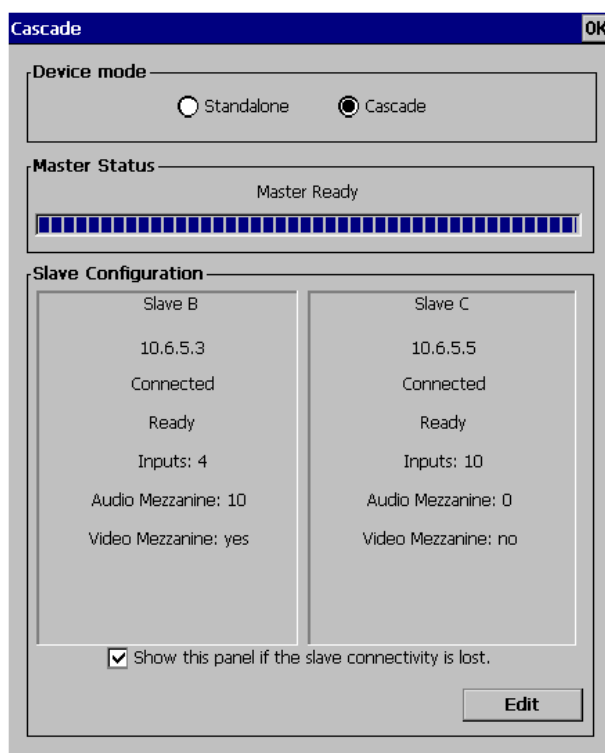


Figure 4-5 Configuration updated

7. Select **Show this panel if the slave connectivity is lost**, if you want the master Kaleido-Alto/Quad frame to notify the operator about network failure between the master and a slave frame, by showing this panel on the monitor.

5 Layout Creation with KEdit

Based on the configuration, an Alto/Quad cascade layout can have up to a maximum of 30 video inputs. To create new layouts, you must use KEdit version 5.40 or higher. The layouts created with KEdit (including channels, images and audio scales) must be exported to the master frame only. The slave frames do not need the layouts.

The difference between normal layouts and cascade layouts is that the frame's inputs and outputs must be prefixed by the frame letter when used (**A** for the master, **B** and **C** for the slaves). This applies to:

- Video input number
- Audio input number
- GPI in
- GPI out

If no letter is specified, **A** is the default.

For instance, if you want to have the video input 1 of the master displayed on a monitor, you can use **1** or **A1** as the source address. However if you want the video input 2 of the slave B on your monitor, you must use **B2** as the source address.

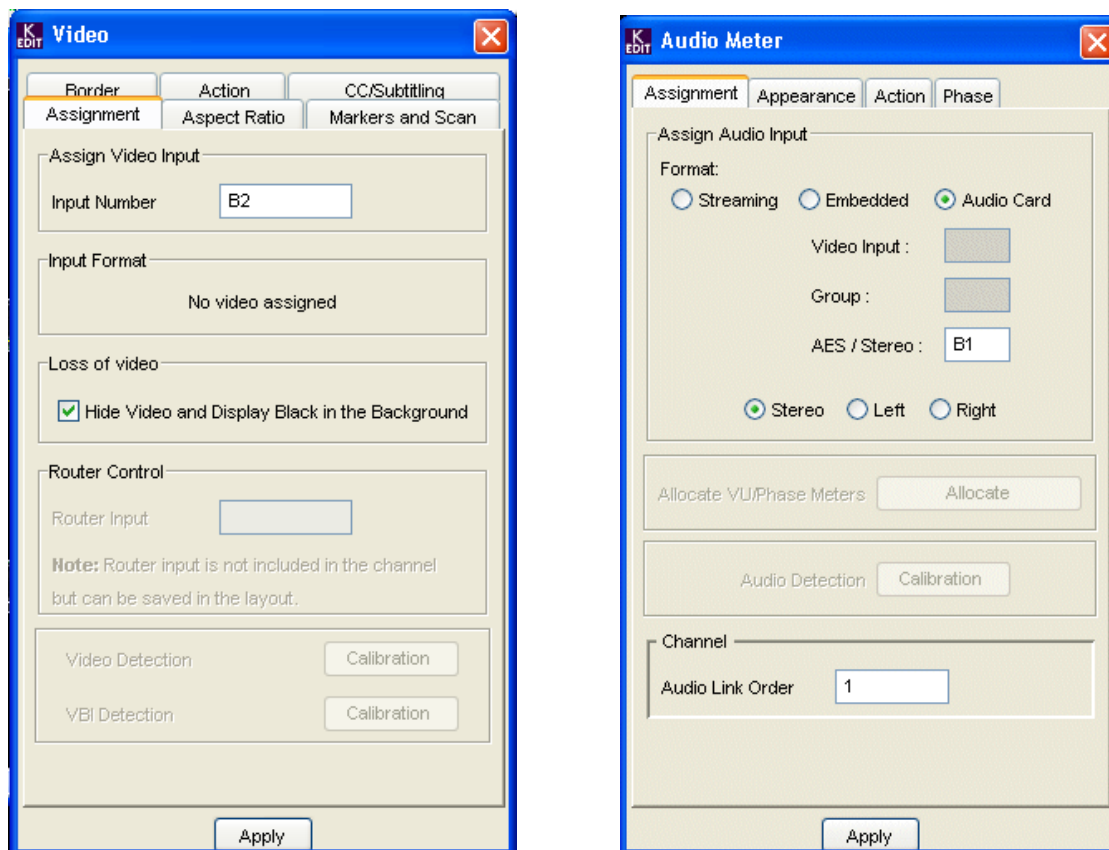


Figure 5-1 Audio and Video configuration windows in KEdit

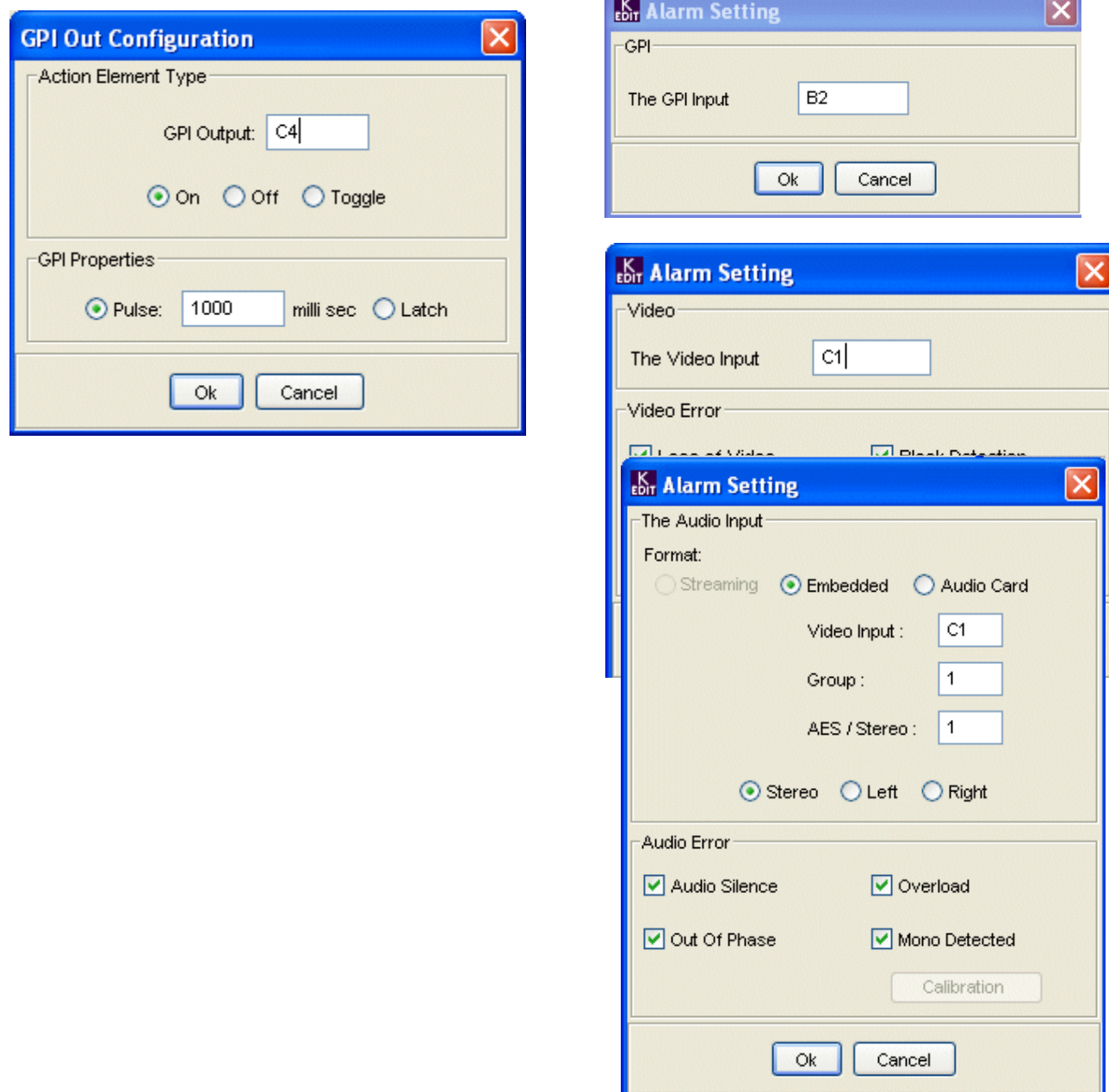


Figure 5-2 More configuration windows in KEdit

Frame	Prefix to use	Example:
Master A	A	A1, A2, A3, ... A10
Slave B	B	B1, B2, B3, ... B10
Slave C	C	C1, C2, C3, ... C10

Note: Refer to the Kaleido User's Manual for detailed instructions on creating layouts.

6 Operation Limitations

- During the boot-up of Kaleido-Alto/Quad frames in a cascade configuration, only the master frame will display video images.
- Video monitoring (mezzanine) is not supported on slave units.
- The System Status window only reports the master frame's status.
- Custom audio scales exported to the master frame must be copied manually from the master to each slave unit's /Layouts/Audioscales/ directory.
- When a layout is exported along with other objects (alarms, channels, actions, images and audio scales) the layout may not be automatically loaded by the system.
Workaround: Either load the new layout manually on the frame, or re-export the layout without any other object.



Figure 6-1 Layout export window

- Audio meters on a slave unit cannot have a transparent label background since the slave units do not have the background information (wallpaper or background color). If background label transparency is selected for a slave audio meter, the background will be black.
Workaround: Set the label background to DVI pass-through, and to feed the background (color or wallpaper) via a PC connected to the DVI input of the last slave.

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