

Kameleon HD

MULTI-FUNCTION MODULES

Release Notes



● SOFTWARE VERSION 2.1.0

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JULY 2005

the most watched worldwide

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Grass Valley Web Site

The www.thomsongrassvalley.com web site offers the following:

Online User Documentation — Current versions of product catalogs, brochures, data sheets, ordering guides, planning guides, manuals, and release notes in .pdf format can be downloaded.

FAQ Database — Solutions to problems and troubleshooting efforts can be found by searching our Frequently Asked Questions (FAQ) database.

Software Downloads — Software updates, drivers, and patches can be downloaded.

Version **2.1.0**
JULY 2005

Kameleon HD Series Release Notes

Introduction

This document provides information on the latest release of the software for use with the following modules in the Kameleon HD series:

- KAM-HD-FS HD/SD Frame Sync (assembly number 671-6415-02 only)
- KAM-HDD-PA HD/SD Down Converter and Video Processing
- KAM-HDD-FS HD/SD Frame Sync with Down Converter
- KAM-HDD HD/SD Monitoring Down Converter

Read this document completely before attempting to download the latest software.

This document details:

- System requirements ([page 4](#)),
- Version 2.1.0 Software Release Features ([page 4](#)),
- Installing the latest software ([page 9](#)), and
- Accessing Reference Documents ([page 15](#)).

System Requirements

Operation of the KAM-HD-FS modules in Kameleon 2000 Series frames has the following hardware and software requirements:

- Modules must be installed in a 2000T1DNG or 2000T3DNG Kameleon 2000 Series frame containing a 2000GEN module.
- The frame must have a 2000NET module with assembly number 671-5231-01 or later running software version 4.0.0 or later.
- Installation of this latest release of software requires a new Kameleon HD module or a KAM-HD-FS module with assembly number 671-6514-02. Currently released KAM-HD-FS modules with assembly number 671-6415-01 cannot be updated with version 2.0.2 and later, a new circuit board is required.

Version 2.1.0 Software Release

Version 2.1.0 provides the following new major feature:

- A Line sync output timing function has been added for modules without frame sync capability to provide line synchronization to a selected frame reference. When the Output Timing source is selected as **Frame Reference**, the start of any line of the output signal will sync to the start of any horizontal line in the frame reference. This assures that at power up, the video delay through the module will not change.

Output Timing Source Selection

The Output Timing control, which was previously only present on frame sync modules, is located on the System Config web page. An example of a System Config web page for the KAM-HDD-PA module is shown in [Figure 1 on page 5](#).

For all modules, an output timing source can be selected from **Frame Reference** or **Input**. When **Frame Reference** is selected, modules with frame sync capability (KAM-HD-FS and KAM-HDD-FS) can be genlocked to the frame reference from the 2000 frame. For these modules, a Frame Sync web page provides horizontal and vertical timing controls and freeze modes.

For modules without frame sync (KAM-HDD and KAM-HDD-PA), when the Output Timing source is selected as **Frame Reference**, the start of any line of the output signal will sync to the start of any horizontal line in the frame reference from the 2000 frame.

Figure 1. System Config Web Page

System Config
 Model: [KAM-HDD-PA](#) Description: [HD/SD w/ Down Cnvtr and Proc Amps](#)
 Frame Location: [Mod Lab - Bay 2](#) , Slot: [6](#)
 Input Video Standard: [1080i/59.94](#) Input Video: [SDI Input : Present](#)
 Output Timing Source: [Frame Reference](#) Split Screen: [Disabled](#)
 Last Recalled E-MEM: [Factory Defaults](#) Down Converter Output Line Rate: [525](#)

View Select Standard Advanced (VBI Config)

Input Video

Input Type	Input Rate
<input checked="" type="radio"/> HD 59.94	
<input type="radio"/> SD	
<input type="radio"/> HD 50	1080i/59.94
<input type="radio"/> HD 24	

Video Proc Amps

Processing Disable
 Enable
 Color Bars

J3 and J4 Output Selection

Standard HD Output
 SD Output

Standard Definition VBI / Data Lines

VBI View Select 480i/59.94 576i/50

Last Data Line none 21/284 22/285 23/286 24/287

Field 1 Lines	1-20	21	22	23	24	25-263
VBI Lines						
Reserved for Data						
Picture Lines						
Field 2 Lines	264-283	284	285	286	287	288-525
VBI Lines						
Reserved for Data						
Picture Lines						

Output Timing

Source Selection	Status	GenLock
<input checked="" type="radio"/> Frame Reference	Present	Locked
<input type="radio"/> Input	No Input	--

Split Screen

Split Enabled

Orientation	Position (%)
<input checked="" type="radio"/> Vertical	<< < 50 * > >>
<input type="radio"/> Horizontal	< >

Output Timing Source Selection

Defaults

Table 1 lists the video delay specifications for all modules in Frame sync or Line sync mode according to module type.

Table 1. Video Delays

Model Name	Format	Timing Source	Output	Reference	Video Delay
KAM-HDD	720p/50	Line sync	SD	- 26 to + 724 lines	41.46 ms
			HD	N/A	35 μ s
		Input	SD	N/A	40.96 ms
			HD		418 ns
	1080i/50	Line sync	SD	Unlimited	40.79 ms
			HD	N/A	44 μ s
		Input	SD	N/A	40.75 ms
			HD		418 ns
	720p/59.94	Line sync	SD	- 26 to + 724 lines	34.167 ms
			HD	N/A	24 μ s
		Input	SD	N/A	36.067 ms
			HD		418 ns
	1080i/59.94	Line sync	SD	Unlimited	33.827 ms
			HD	N/A	30 μ s
		Input	SD	N/A	33.807 ms
			HD		406 ns
	1080sf/24	Line sync	HD	N/A	Currently not specified
		Input			
	1080p/24	Line sync	HD	N/A	
		Input			
480i/59.94	Line sync	SD	N/A	72 μ s	
	Input			1.673 μ s	
576i/50	Line sync	SD	N/A	70 μ s	
	Input			1.673 μ s	

Table 1. Video Delays

Model Name	Format	Timing Source	Output	Reference	Video Delay
KAM-HDD-PA	720p/50	Line sync	SD	- 26 to + 724 lines	43.5 ms
			HD	N/A	35 μ s
		Input	SD	N/A	43.36 ms
			HD		1.44 μ s
	1080i/50	Line sync	SD	Unlimited	43.14 ms
			HD	N/A	46 μ s
		Input	SD	N/A	43.10 ms
			HD		1.56 μ s
	720p/59.94	Line sync	SD	- 26 to + 724 lines	35.827 ms
			HD	N/A	25 μ s
		Input	SD	N/A	35.687 ms
			HD		1.47 μ s
	1080i/59.94	Line sync	SD	Unlimited	34.847 ms
			HD	N/A	34 μ s
		Input	SD	N/A	36.087 ms
			HD		1.452 μ s
	1080sf/24	Line sync	HD	N/A	Currently not specified
		Input			
	1080p/24	Line sync			
		Input			
480i/59.94	Line sync	SD	N/A	77 μ s	
	Input			7.14 μ s	
576i/50	Line sync	SD	N/A	76 μ s	
	Input			7.14 μ s	

Table 1. Video Delays

Model Name	Format	Timing Source	Output	Reference	Video Delay
KAM-HDD-FS	720p/50	Frame sync	SD	Unlimited	80 ms + 1.13 μ s
			HD	N/A	40 ms + 6.689 μ s
		Input	SD	N/A	80 ms + 980 μ s
			HD		40 ms - 300 ns
	1080i/50	Frame sync	SD	Unlimited	80 ms + 750 μ s
			HD	N/A	40 ms + 8.72 μ s
		Input	SD	N/A	80 ms + 750 μ s
			HD		40 ms + 3.32 μ s
	720p/59.94	Frame sync	SD	Unlimited	66.733 ms + 492 μ s
			HD	N/A	33.367 ms + 3.00 μ s
		Input	SD	N/A	66.733 ms + 412 μ s
			HD		33.367 ms - 180 ns
	1080i/59.94	Frame sync	SD	Unlimited	66.733 ms + 430 μ s
			HD	N/A	33.367 ms + 2.71 μ s
		Input	SD	N/A	66.733 ms + 430 μ s
			HD		33.367 ms - 1.12 μ s
	1080sf/24	Frame sync	HD	N/A	Currently not specified
		Input			
	1080p/24	Frame sync			
		Input			
480i/59.94	Frame sync	SD	N/A	33.367 ms - 340 μ s	
	Input			33.367 ms - 144 μ s	
576i/50	Frame sync	SD	N/A	40 ms + 6.09 μ s	
	Input			40 ms + 2.38 μ s	
KAM-HD-FS (no down conversion from HD input)	720p/50	Frame sync	HD	N/A	40 ms + 6.689 μ s
		Input	HD		40 ms - 300 ns
	1080i/50	Frame sync	HD	N/A	40 ms + 8.72 μ s
		Input	HD		40 ms + 3.32 μ s
	720p/59.94	Frame sync	HD	N/A	33.367 ms + 3.00 μ s
		Input	HD		33.367 ms -180 ns
	1080i/59.94	Frame sync	HD	N/A	33.367 ms + 2.71 μ s
		Input	HD		33.367 ms - 1.12 μ s
	1080sf/24	Frame Sync	HD	N/A	Currently not specified
		Input			
	1080p/24	Frame Sync			
		Input			
	480i/59.94	Frame Sync	SD	N/A	33.367 ms - 340 μ s
		Input			33.367 ms - 144 μ s
	576i/50	Frame Sync	SD	N/A	40 ms + 6.09 μ s
		Input			40 ms + 2.38 μ s

Acquiring and Updating Software

The KAM-HD software upgrade package for this release is available from the Grass Valley FAQ database or the public FTP site. The fastest and easiest method for installing this software is using NetConfig, a networking application option available from Grass Valley. Before performing this upgrade, read the Important Notes below.

Important Notes

- This upgrade will disable the video outputs from the module being upgraded. Make sure your module is off-air before beginning the upgrade process.
- If you do not have the recommended NetConfig networking application, a free version of the latest NetConfig software can be downloaded from the Customer Service FAQ database as described in [Acquiring NetConfig on page 10](#). Using the latest version of NetConfig is recommended for best results. If using an older version of NetConfig is not successful, download the latest NetConfig and use it instead. NetConfig software download procedures are slightly different between versions 1.0 to 2.0.4 and 2.0.5 and later. Both procedures are described in these instructions.
- If you have previously used an ftp server and the Software Update web page for upgrading software to modular products, you may use this method to do this upgrade.

In this case, you would move the .fld files listed in [Step 3 on page 10](#) into the ftp server directory and follow the same instructions to download the first .fld, allow the module to reboot, then install the second .fld file.

Note This method is only recommended if you have the ftp server set up and have used this procedure before. Instructions for this type of download are covered in the *2000NET Instruction Manual* available online.

Acquiring Software

To acquire the latest Kameleon software, first connect to the Grass Valley Customer Service FAQ database from the following URL:

<http://gvg.custhelp.com>

If you cannot find the software you need, go directly to the Grass Valley Customer FTP site at the following URL:

<ftp://ftp.thomsongrassvalley.com/pub/modular>

1. Create a temporary folder on your C:\ drive if one does not exist.
2. In the ftp directory, select the link to **Kameleon**. From this directory select the link to **KAM-HD-FS**.
3. Download the following files to the C:\temp directory on your PC:
 - KAM-HD_2.1.0.fld
 - KAM-HD_2.1.0.sw2 (required for NetConfig download)
4. If you have NetConfig running on a PC on the same subnet as the KAM-HD modules you are updating, proceed to *Updating Software With NetConfig* on page 11.

Acquiring NetConfig

If you do not have NetConfig on your PC, you may download a free version from the Grass Valley Customer Service FAQ database from the following URL:

<http://gvg.custhelp.com>

1. This link will take you to the Customer Service FAQ database. From the FAQ web page, select the first FAQ in the list, **Download the Latest Software?**
2. From the first FAQ, go to the **Answer** sections and select the **Software Utilities** selection at the bottom of the list.
3. Click on NetConfig to bring up the utilities available.
4. Click on the NetConfig (v2.0.6) link to access a zipped file for download. Download the zipped file to the C:\temp folder on your PC.
5. Extract the files into the following default location on your local drive:
C:\Program Files\Grass Valley Group
6. Double-click on the NetConfig.exe file to install NetConfig.

Updating Software With NetConfig

To update with NetConfig you must have the following:

- PC with NetConfig Networking application installed,
- IP connection between the frame containing the Kameleon modules and your PC, and
- 2000NET module in the Kameleon frame with software 4.0.0 or later.

NetConfig Upgrade Procedure

Begin the upgrade procedure by moving the KAM-HD files you have downloaded into your Temp directory into the correct NetConfig directories (these steps apply to all versions of NetConfig).

1. Copy all KAM-HD software download files from the C:\temp directory into the main NetConfig directory on your PC. This is normally in the default location in C:\Program Files\Grass Valley Group\NetConfig.

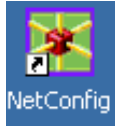
If you have installed NetConfig in another location, find the location of the NetConfig directory by right-clicking on the NetConfig shortcut. Select **Properties** and note the location in the **Start In** field. Download the package to the NetConfig directory.

2. In the main NetConfig directory, locate a folder named **modular**. If this folder does not exist, create a folder called **modular** in the main NetConfig directory.
3. Move the .fld file you copied into the main NetConfig directory into this **modular** directory.
4. Verify that the KAM-HD_2.1.0.sw2 file is somewhere in the main NetConfig directory (not in the **modular** directory).

Note NetConfig reads each .sw2 file in its main directory and navigates to the directory given in these files to find the .fld files available. There may be a number of .sw2 and .fld files in your NetConfig directory for other modular products. These will not interfere with the update.

5. Locate the module to be upgraded in your frame and unplug it. Plug it back in to begin the upgrade.

CAUTION During the download, the module will have no video output, so be sure the module is off-air before upgrading.



6. Open NetConfig.
7. Navigate to the frame containing the KAM-HD module you wish to upgrade on the left of the screen.

Note If you have not used NetConfig before, refer to the *NetConfig Instruction Manual* included during installation in the main NetConfig directory in pdf format (NetConfig.pdf).

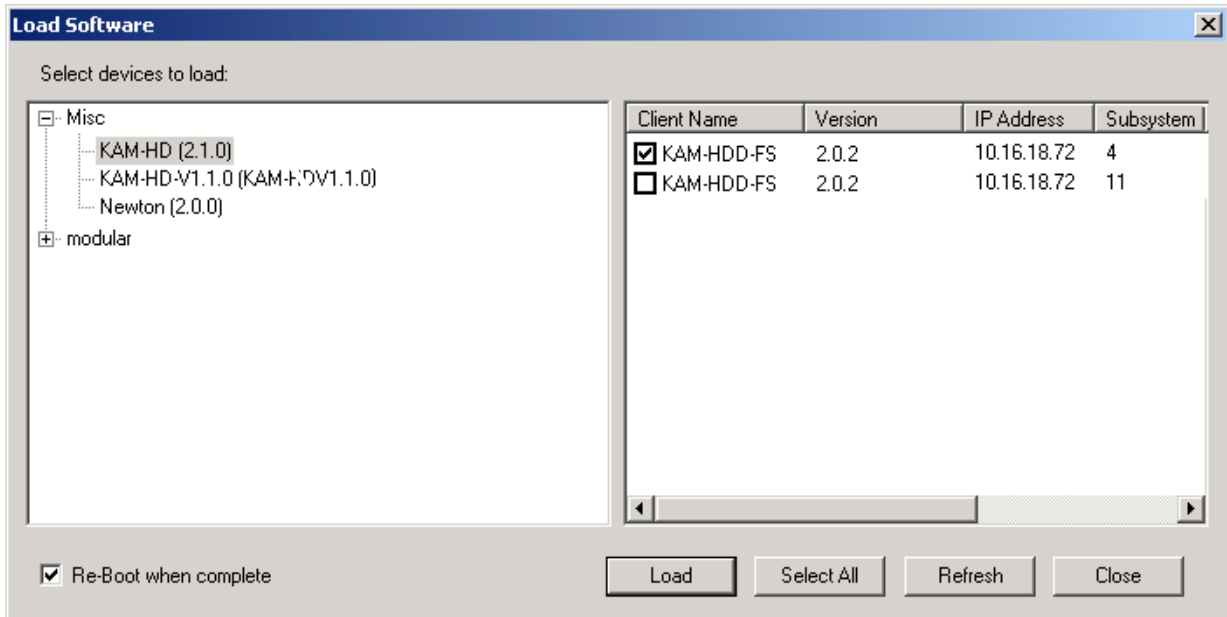


8. Click on the **Load SW** button on the top of the NetConfig toolbar.
9. This will bring up the Load Software screen (Figure 2). This screen shows NetConfig version 2.0.6. If you are using an earlier version of NetConfig, refer to [Using NetConfig Versions 2.0.4 and Earlier](#) on page 13.
10. Highlight the KAM-HD (2.1.0) Device Type. All KAM-HD modules accessible on this subnet will be displayed in the window on the right with their current software version and frame IP Address.
11. Find the KAM-HD module you are updating in the Client Name list. Check the corresponding checkbox in the window on the right to indicate you wish to update this device.

Note You may upgrade all modules at once with this application by checking all of the Client Name checkboxes. We recommend upgrading one module first to understand the process before attempting to upgrade all of the modules at once.

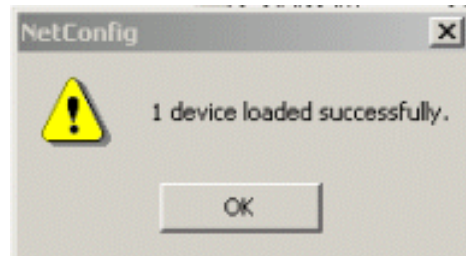
12. Check the **Re-Boot when complete** checkbox in the lower left corner of the screen.

Figure 2. NetConfig Load Software Screen – .fld Download



13. Click on the **Load** button to begin the update.
14. If the load has been successful, a popup will appear as shown in [Figure 3](#). Click the **OK** button.

Figure 3. Load Successful Popup



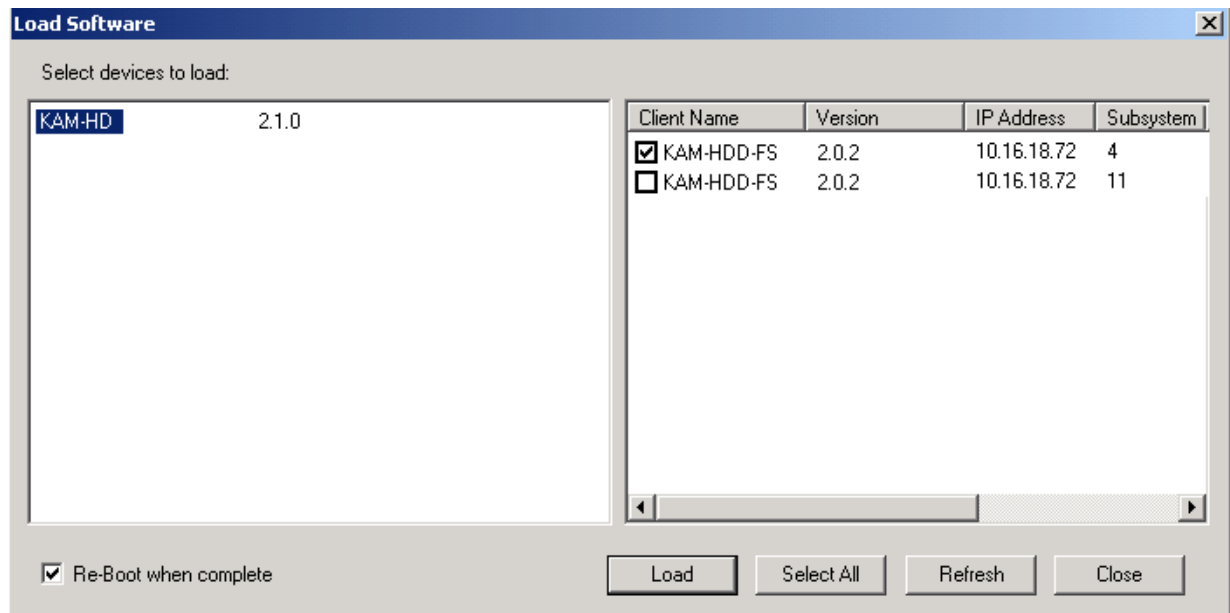
15. Allow the reboot to complete.
16. Complete the same steps for the rest of the KAM-HD modules listed, allowing the reboot to complete each time.

Using NetConfig Versions 2.0.4 and Earlier

For NetConfig version 2.0.4 and earlier (the latest version downloadable from the Customer Service FAQ database is version 2.0.6), the Load Software window will show a directory structure similar to the one shown in [Figure 4](#).

Follow the same download instructions starting with [Step 8](#) on [page 12](#). Be sure to allow the module to reboot after each .fld file has been downloaded.


Figure 4. NetConfig .fld Download – Version 2.0.4 and Earlier



Confirm Download Status

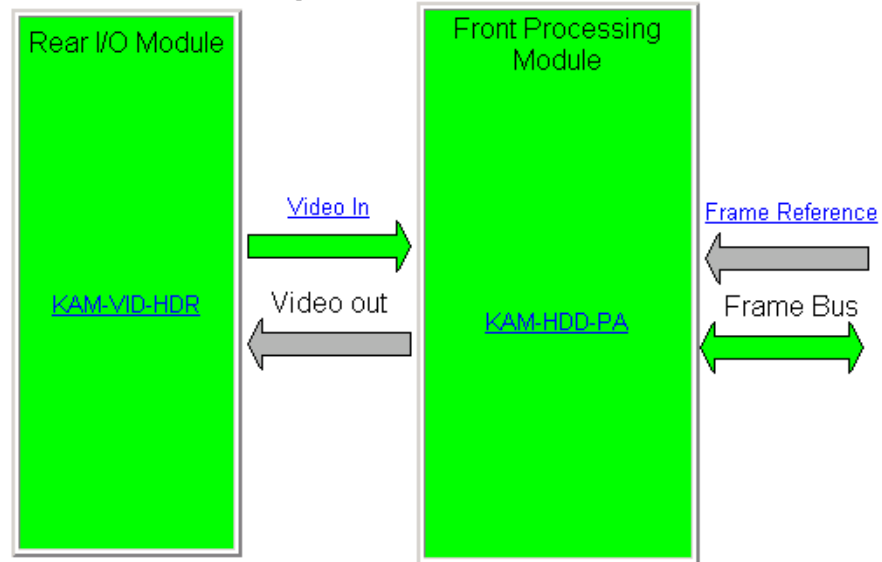
When the entire download has been completed, refer to the KAM-HD module Status web page to check that the Software Version reports the updated version as illustrated in Figure 5.

Figure 5. KAM-HD Status Web Page

Status 

Model: [KAM-HDD-PA](#) Description: [HD/SD w/ Down Cnvtr and Proc Amps](#)
Frame Location: [Mod Lab - Bay 2](#) , Slot: [6](#)
Input Video Standard: [1080i/59.94](#) Input Video: [SDI Input : Present](#)
Output Timing Source: [Frame Reference](#) Split Screen: [Disabled](#)
Last Recalled E-MEM: [Factory Defaults](#) Down Converter Output Line Rate: [525](#)

Kameleon Module Physical Structure



Status:
Front Module: [PASS](#)
Rear Module: [PASS](#)

Front Module:
Part Number: [671-6514-10K](#)
Serial Number:
Hardware Revision: [10K](#)
Firmware Image 1 Version: [Inactive](#)
Firmware Image 2 Version: [Inactive](#)
Firmware Image 3 Version: [2.13](#)
Firmware Image 4 Version: [Inactive](#)
Software Version: [2.1.0](#)
Asset Tag:

Confirm Download Status

Accessing Reference Documents

For on-line access to other reference documents referred to in these Release Notes, navigate to the following URL:

<http://www.thomsongrassvalley.com/docs>

Select the **Modular Products** link and scroll through the available documents. All of the documents referred to may also be ordered in hard copy from any Grass Valley Sales or Customer Service source. Refer to [Contacting Grass Valley](#) at the front of this document.

