

Kameleon Series

MULTI-FUNCTION MODULES

Release Notes



SOFTWARE VERSION 5.0.1

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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.

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Kameleon Series Multi-Function Modules Release Notes

Introduction

This document provides information on the latest release of the software for use with the Kameleon Series Multi-Function modules.

Note Please read this document completely before attempting to download the latest software.

This document details:

- Software Update Overview ([page 6](#)) including:
 - KAM-AV/SD Requirements,
 - Kameleon Frame 2000NET Requirements.
 - NetConfig Requirements, and
 - Newton Control Panel Requirements.
- Kameleon Version 5.0.1 Software Release ([page 11](#)),
- Updating Software ([page 17](#)), and
- Accessing Kameleon documentation from Grass Valley ([page 26](#)).

Software Update Overview

Recent releases of the KAM-AV/SD software have increased the number of parameters that the module sends to the Newton Control Panel and Net-Config. This has added enhancements as requested by customers. It has also introduced some operational changes and requirements for system and utility software you should be aware of in order for all components to work together. The software update also requires a certain KAM-AV/SD module circuit board level and software.

Follow the steps in the order below to perform the Kameleon update:

1. Verify your Kameleon module hardware and software versions are at the proper level to update ([KAM-AV/SD Requirements on page 7](#)).
2. Acquire or update NetConfig if required ([NetConfig Requirements on page 8](#)).
3. Update the 2000NET module in the frame to version 4.0.0 if required ([Kameleon Frame 2000NET Requirements on page 8](#)).
4. Update Newton Control Panel software if required ([Newton Control Panel Requirements on page 9](#)).
5. Perform the KAM-AV/SD software update ([Version 5.0.1 Software Release on page 11](#)).

KAM-AV/SD Requirements

This version of Kameleon software can only be loaded on modules at the following assembly number and dash and letter version:

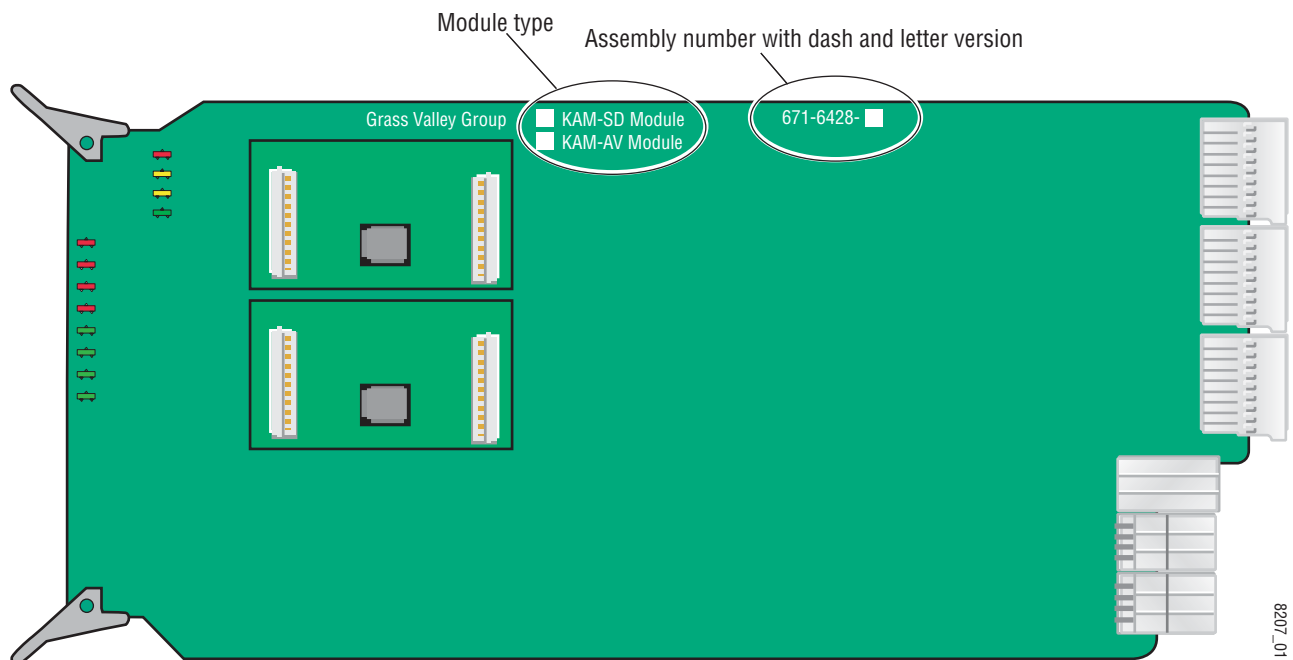
- KAM-SD, assembly number 671-6428-00, letter version S or above
- KAM-AV, assembly number 671-6428-20, letter version R or above (including the 671-6428-21 version)

To determine the assembly number and dash and letter version of your module refer to [Figure 1](#). The module type will be checked in the white box next to the module name. The dash and letter version of the module will be inked in the white box to the right of the assembly number.

Kameleon modules that do not meet this requirement cannot be updated due to a different printed circuit board now in use. Contact your Customer Service or Sales representative for information on acquiring new modules.

Kameleon modules must be running Kameleon software version 2.0.2 or later to be upgraded to the next version. Any KAM-AV/SD modules that are running the current 4.1.0 release can be updated to this latest release. The current Kameleon software version is reported on the module Status web page.

Figure 1. Locating Assembly Number and Revision Letter



NetConfig Requirements

Use the NetConfig Networking application to update all software. The latest version of the NetConfig Networking application must be at version 2.0.6 or later for proper operation.

To determine your NetConfig version, open NetConfig click on the **About** link on the top of the NetConfig Toolbar.

If you do not have NetConfig or the latest version, you can download it from the Thomson Grass Valley ftp site at this URL:

<ftp://ftp.thomsongrassvalley.com/pub/router/NetConfig/Version%202.0.6/>

1. Right-click on the latest NetConfig link to download the zipped file to the C:\temp folder or other convenient location on your PC.
2. Extract the zipped files onto your local drive:
3. Double-click on the NetConfig.EXE file to install NetConfig.

Note Installing NetConfig into the default location given in the install script (C:\Programs\Grass Valley Group) is recommended for future NetConfig and module software updates.

Kameleon Frame 2000NET Requirements

Kameleon modules must be installed in a 2000TFN frame with a 2000NET module running software version 4.0.0 or later.

Note The 2000NET software version can be read on the Frame Status web page or the 2000NET Status web page.

The latest 2000NET software can be downloaded from the Thomson Grass Valley ftp site at this URL:

<ftp://ftp.thomsongrassvalley.com/pub/modular/2000/2000net/>

This software can be installed using the NetConfig Networking application as described in the *2000NET Release Notes* available on the ftp site in PDF format.

Newton Control Panel Requirements

Both the NewtonPC and the Newton hardware control panels must be at version 2.0.0 for proper operation. The Newton Panel Configurator Plug-in that resides in the NetConfig directory must also be updated to version 2.0.2.

The Newton hardware panel software and the latest Newton Configurator Plug-in can be downloaded from the Thomson Grass Valley ftp site as described below.

Newton Hardware Control Panel

To determine the software version of your Newton Hardware Control Panel, hold down the **Ident** button (lower left button on the hardware panel) until the software version and IP address of the panel appear on the display.

The latest Newton Hardware Control Panel software can be downloaded from the Thomson Grass ftp site at this URL:

<ftp://ftp.thomsongrassvalley.com/pub/modular/Newton/v2.0.0/>

1. Download the zip file to your local drive and unzip the file.
2. Run the Newt-RM1-Setup-2.0.0.EXE application to install the hardware panel software into the default Newton directory (Programs/Grass Valley Group/Newton).

Note Do not install the NetConfig present in the **Select Components** window. Uncheck the NetConfig selection. This is an older version and should not be installed.

3. Use NetConfig to update the hardware panel software. Refer to the NetConfig or the Newton manual in PDF format in the NetConfig or Newton directory for instructions.

NewtonPC Control Panel

To determine the software version of NewtonPC, open NewtonPC and right-click on the blue bar at the top of the screen. Right-click on **About NewtonPC** in the pulldown.

Contact Customer Service for updating NewtonPC.

NetConfig Newton Panel Configurator Plug-in



The Newton Panel Configurator Plug-in must be at version 2.0.2. To view the version you currently have, open NetConfig on your PC and select the Newton Panel Configurator icon (shown at left) in the NetConfig Tool Bar. The current version is shown in the top right corner of the Configurator.

A file named **PanFigR.dll** must be downloaded from the Thomson Grass Valley ftp site and placed into the NetConfig directory to update the Configurator to version 2.0.2.

The required .dll file can be downloaded from the Thomson Grass Valley Customer Service web site at this URL:

<ftp://ftp.thomsongrassvalley.com/pub/modular/Newton/NetConfig%20Plugin%202.0.2/>

1. Right-click on the PanFigR.dll to save it to your local drive.
2. Shut down NetConfig.
3. Open the NetConfig directory on your local drive (installed by default in Programs/Grass Valley Group/NetConfig) and drag the new .dll file into the main NetConfig directory.
4. Select **Yes** to replace the current PanFigR.dll with the new one provided when the **Confirm File Replace** window comes up.
5. Open NetConfig and select the Newton Configurator icon.
6. Verify that the version is now 2.0.2.

Version 5.0.1 Software Release

This section provides information on the new feature enhancements and resolved issues with the version 5.0.1 software release for the KAM-AV/SD module.

New Features

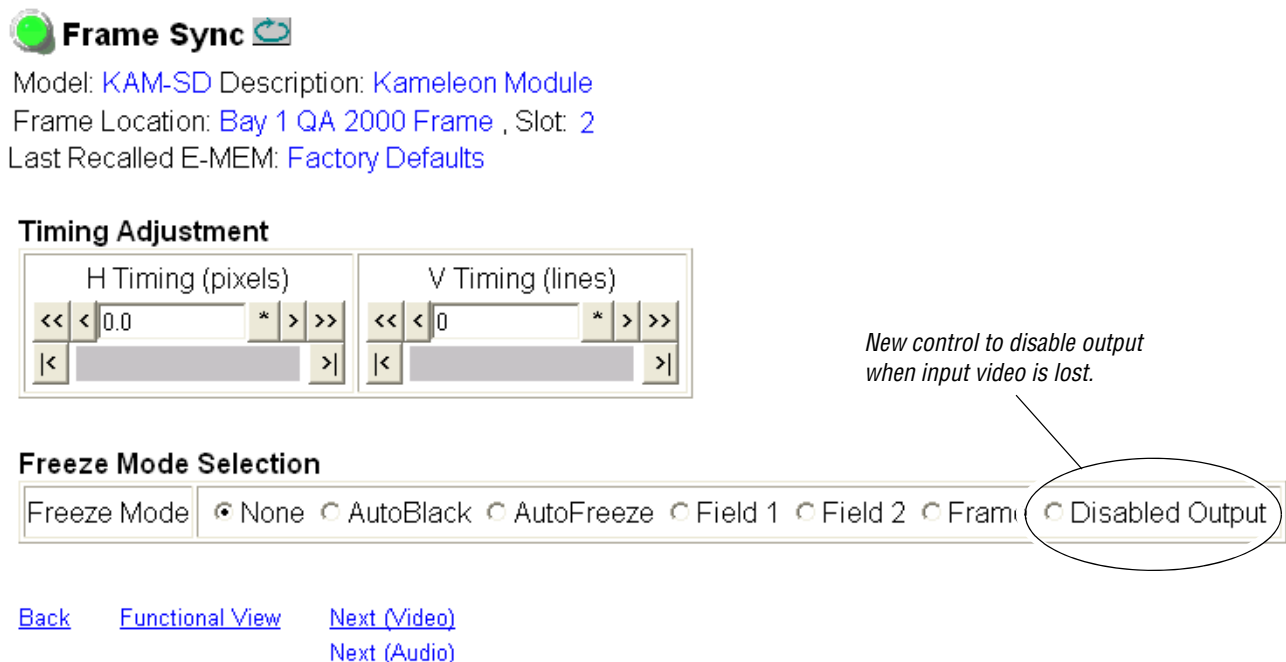
Kameleon software release 5.0.1 includes the following feature enhancements:

Disable Output Video Control

An additional control has been added on the Frame Sync web page to provide a control for disabling the SDI output video completely when video is lost on the output. Selecting the **Disabled Output** radio button on the Frame Sync web page (Figure 2) turns off this output completely. This allows for video detection devices on the output to recognize that the video on this output has been lost.

This new control appears on the Frame Sync web page when the module is set for either a Video reference or an Internal Frame Reference on the Video Input Select web page.

Figure 2. Frame Sync Web Page- Internal Frame Reference



Frame Sync

Model: [KAM-SD](#) Description: [Kameleon Module](#)
 Frame Location: [Bay 1 QA 2000 Frame](#) , Slot: [2](#)
 Last Recalled E-MEM: [Factory Defaults](#)

Timing Adjustment

H Timing (pixels)	V Timing (lines)
<input type="text" value="0.0"/>	<input type="text" value="0"/>

New control to disable output when input video is lost.

Freeze Mode Selection

Freeze Mode None AutoBlack AutoFreeze Field 1 Field 2 Frame **Disabled Output**

[Back](#) [Functional View](#) [Next \(Video\)](#)
[Next \(Audio\)](#)

Audio Mode Selection

The Audio Proc web page (Figure 3) now has a control for selecting the Audio Mode for each Audio Pair 1-4 as **Audio** or **Non-Audio** sources. Non-Audio sources include data and Dolby E streams. In particular, this function allows the AES status bits in audio sources such as Dolby E to pass correctly to the embedded or AES outputs.

Figure 3. Audio Mode Control on Audio Proc Web Page



Model: [KAM-SD](#) Description: [Kameleon Module](#)
 Frame Location: [Bay 1 QA 2000 Frame](#) , Slot: [2](#)
 Last Recalled E-MEM: [Factory Defaults](#)

Pair Selection: Pairs 1 & 2 Pairs 3 & 4

Pair 1		Pair 2	
Ch A	Silence	Ch A	Silence
Ch B	Silence	Ch B	Silence
Gain Settings	<input type="checkbox"/> Locked	Gain Settings	<input type="checkbox"/> Locked
Ch A Gain (dB) << < 0.0 * > >> < >		Ch A Gain (dB) << < 0.0 * > >> < >	
Ch B Gain (dB) << < 0.0 * > >> < >		Ch B Gain (dB) << < 0.0 * > >> < >	
	Ch A'	Ch B'	
Presence	False	False	Presence
Clip	False	False	Clip
Processing	Pass	Pass	Processing
Audio Mode	<input checked="" type="radio"/> Audio <input type="radio"/> Non-Audio		Audio Mode
AES output resolution	<input checked="" type="radio"/> 20 bit <input type="radio"/> 24 bit		AES output resolution

New control

Note: Presence = > -40 dBFS, Clip = > -0.5 dBFS

[Back](#) [Functional View](#) [Next \(MUX\)](#)
[Next \(AES Out\)](#)

KAM-AA-MIX-UR Rear Module Capability

The latest software release allows the use of the new KAM-AA-MIX-UR rear module.

The KAM-AA-MIX-UR rear I/O module (Figure 4) accepts either SDI or composite video (KAM-AV only). Four BNC connectors are provided for video—one video input, one composite output (KAM-AV only), and two SDI video outputs. Four dual terminal audio connectors are provided for analog audio I/O. A 9-pin Sub D connector is provided for unbalanced input or output AES I/O from a breakout cable that is included with the module.

Figure 4. KAM-AA-MIX-UR Input/Output Connectors

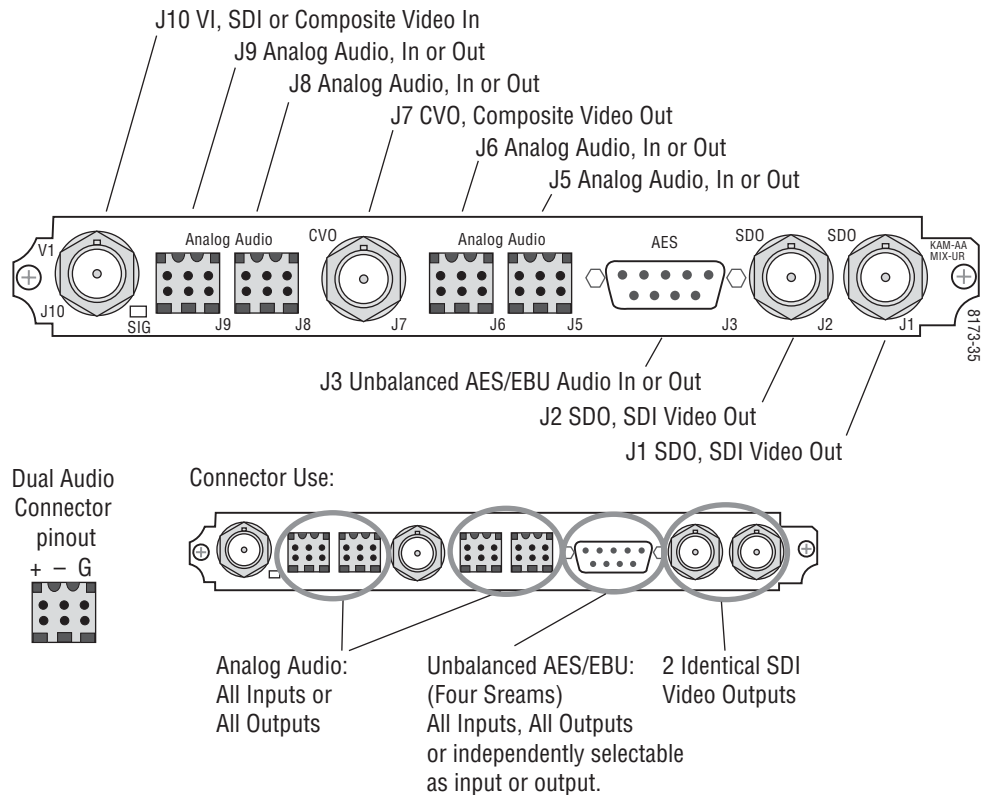


Table 1 provides the various audio input and output I/O configurations and the video outputs for the KAM-AA-MIX-UR rear module. Analog audio input or output configuration depends on the positioning of the audio ADC and DAC submodules.

AES/EBU audio input or output configuration is set by configuring the connector as an input or output on the I/O Config web page.

Note Any number of audio inputs can be configured but there is a limit of four audio output pairs with any configuration.

Table 1. KAM-AA-MIX-UR I/O Configurations

Submodule 1	Submodule 2	Video Input	Analog Audio Inputs/Outputs ¹	AES Audio Inputs/Outputs	Video Output
A to D	A to D	1 SDI or Composite ² (J10)	4 dual Analog inputs (J5, J6, J8, and J9)	4 AES/EBU (J3) unbalanced streams from breakout cable independently selectable as inputs or outputs on I/O Config web page.	2 SDI (J1 and J2), 1 Composite (J7) ²
A to D	D to A		2 dual Analog inputs (J8 and J9) and 2 dual Analog outputs (J5 and J6)		
D to A	D to A		4 dual Analog outputs (J5, J6, J8, and J9)		
D to A	A to D		2 dual Analog outputs (J8 and J9) and 2 dual Analog inputs (J5 and J6)		
A to D	None		2 dual Analog inputs (J8 and J9)		
None	A to D		2 dual Analog inputs (J5 and J6)		
D to A	None		2 dual Analog outputs (J8 and j9)		
None	D to A		2 dual Analog outputs (J5 and J6)		
None	None		None		

¹ There may be any number of audio inputs but there is a limit of four output audio pairs with any configuration.

² Only KAM-AV modules support composite video I/O.

Kameleon software release 5.0.1 resolves the following issues with the latest Kameleon software (version 4.1.2):

- (25186) In Frame Sync mode, a 1 to 2 microsecond sized defect was noticed scrolling through the analog/digital output.
- (37605) When an SDI signal with narrow blanking (such as a pathological signal) was applied to the module, the additional picture content of the signal would disturb the clamp, causing distortion to occur on the analog output.
- (41810) When switching between two properly timed sources (at line 10), a glitch was noticed on the video output.
- (46021) With an unlocked 525 composite input, an artifact caused by sample flicker was causing HANC errors to be reported in the digital output.
- (47287) When the module was first plugged in and no input signal was connected to the rear module or when the input signal was removed, the SDI output would go to green.
- (49041) Chrominance color blue had distortion on both SDI and composite outputs. When chrominance was disabled on the Composite Out web page, artifacts could also be seen on line 24 of Field 1.
- (52581) With the Flywheel Video Decoder function turned on in the Video Input Select web page, the video output would not recover synchronization when the video input white noise went from 0 dB to 60dB.
- (53754) When Internal Frame Reference was selected as the Output Timing Source on the Video Input Select web page and the 2000GEN module providing the reference was removed, the Status web page did not report the loss of reference. The loss of reference is now properly reported by showing the Reference Input arrow as yellow and reporting a warning message on the Status web page.
- (57157) Green flashes were occurring after a direct switch or after a Saturn routing switch.
- (57170) When switching from a composite 625 to 525 format, EAV and SAV would double. This will now re-synchronize correctly when the format is changed.
- (57520) FAULT LED would erroneously light in a steady state when a rear module mismatch was detected. This is now only reported as a warning state on the Status web page as it should.
- (57693) High level noise bursts were reported on the AES output streams from embedded audio sources about every 10-15 seconds when there was no SDI input.

- (59905) When an AES source was changed on the AES Output web page, an error message would appear, preventing the ability to change the source.
- (60157) The video output of the module would go to black when an audio replacement (Mux) function was attempted.
- (60331) On the VBI Decode web page, selecting a Blanking checkbox to remove blanking from a VBI line had no effect.
- (60334) When a rear module was removed and replaced, the Status web page would report that the rear module was missing.
- (60893) An audio phase shift was occurring between the left and right channels of an audio pair when a stereo pair was demuxed. Channels are now synchronized.
- (60894) An audio phase shift was occurring between the left and right channels of an audio pair when auto tracking was enabled or disabled on the Audio Sync web page. Channels are now synchronized.

Updating Software

This section describes how to obtain and install the latest software.

Acquiring Software

To acquire the latest Kameleon software, connect to the Thomson Grass Valley ftp site at the following URL:

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

1. Create a temporary folder on your C:\ drive if one does not exist.
2. Select the link to either KAM-AV or KAM-SD. If a README file is present, open it and read the information before attempting to download the files.

Download the following files to the C:\temp directory or other convenient location on your PC by right-clicking on the file link and selecting **Save Target As...** :

- KAM-AV-SD.sw2 (required for NetConfig download)

Note Do not save this file as a text document. Select **All Files** under the **Save As Type** pulldown. NetConfig will not recognize this file if it has a .txt extension.

- KAM-AV-SD_5.0.1_appli_only.fld (first .fld download file with application only). (This file is only needed for upgrading from version 2.0.2.)
- KAM-AV-SD_5.0.1.fld (second .fld download file with application plus complete Xilinx firmware package).

Updating Software With NetConfig

Updating from v2.0.2 to v5.0.1

For updating Kameleon software version 2.0.2, use the complete download procedure given next. This involves downloading two .fld files.

Updating from v4.1.0 and Later to v5.0.1

If you are currently running software version 4.1.0 or 4.1.2 on your KAM-AV or KAM-SD module, you will only need to do the second download of the KAM-AV-SD_5.0.1.fld, starting with [Step 19](#) on [page 23](#).

NetConfig Upgrade Procedure

Use the following procedure to upgrade using NetConfig:

1. Copy all Kameleon 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.

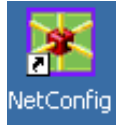
If you have installed NetConfig in another location, find the location of the NetConfig directory by right-clicking on the NetConfig shortcut. Select **Properties** and note the location in the **Start In** field. Download the package to the NetConfig directory.

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 two KAM-AV-SD .fld files you copied into the main NetConfig directory (KAM-AV-SD_5.0.1_appli_only.fld and KAM-AV-SD_5.0.1.fld) into this **modular** folder.
4. Verify that the KAM-AV-SD.sw2 file is somewhere in the main NetConfig directory (not in the **modular** folder). This file should not have a .txt extension or it will not work properly.

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 reset it and begin the upgrade.

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

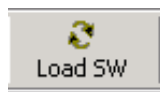


6. Open NetConfig.
7. Navigate to the frame containing the KAM-AV or KAM-SD module you wish to upgrade on the left of the screen.

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. Open the module link and select the link to the module's Status page and verify you the following software and firmware versions:

- Firmware Version: X1=48, X2=47
- Software Version: 2.0.2



9. Click on the **Load SW** button on the top of the NetConfig toolbar.

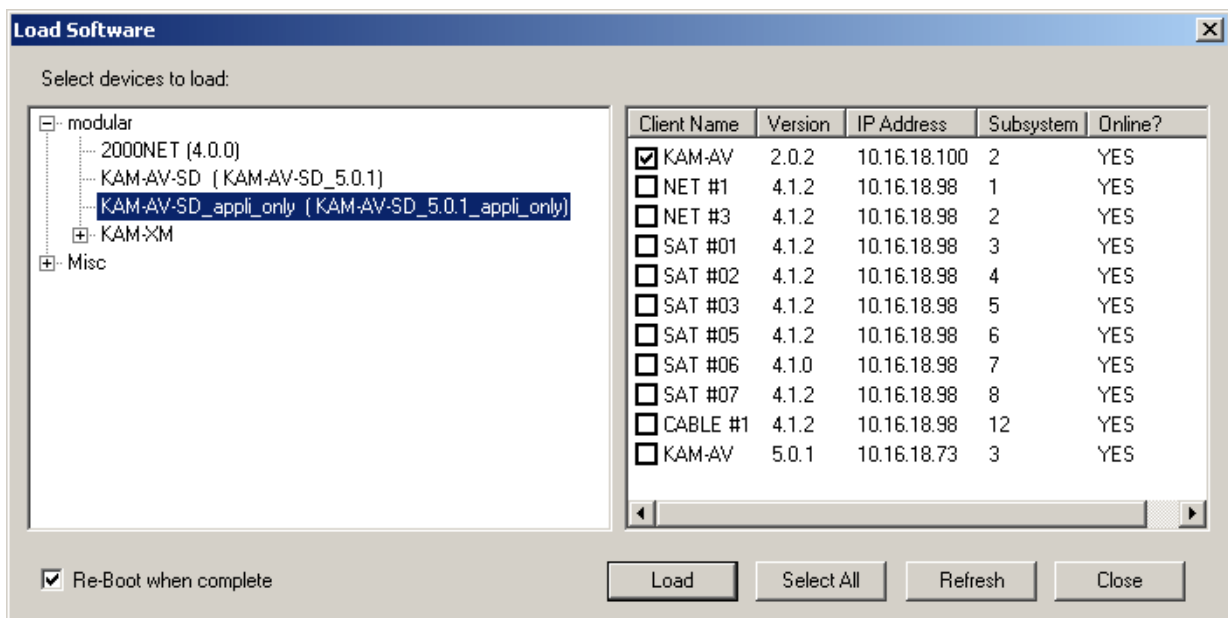
10. This will bring up the Load Software screen (Figure 5). This manual illustrates the latest version of NetConfig, v2.0.6.

The following files names should appear in the modular directory (if not, check the Misc directory):

- KAM-AV-SD_Appli_only (KAM-AV-SD_5.0.1_Appli_only)
- KAM-AV-SD (KAM-AV-SD_5.0.1)

11. For updating to a module with version 2.0.2 software only, highlight the KAM-AV-SD_appli_only selection (Figure 5). This will bring up all of the KAM-AV and KAM-SD modules accessible on this network in the window on the right. Their current software version and frame IP Address will be displayed.

Figure 5. NetConfig Load Software Screen – First .fld Download



12. Find the KAM-AV or KAM-SD module with version 2.0.2 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.

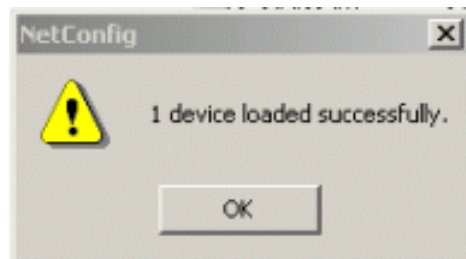
13. Check the **Re-Boot when complete** checkbox in the lower left corner of the screen.



14. Click on the **Load** button in the NetConfig Load Software window to begin the update.

15. If the load has been successful, a popup will appear as shown in [Figure 6](#). Click the **OK** button.

Figure 6. Load Successful Popup



16. Allow the reboot to complete.

17. Open the Status web page of the module.

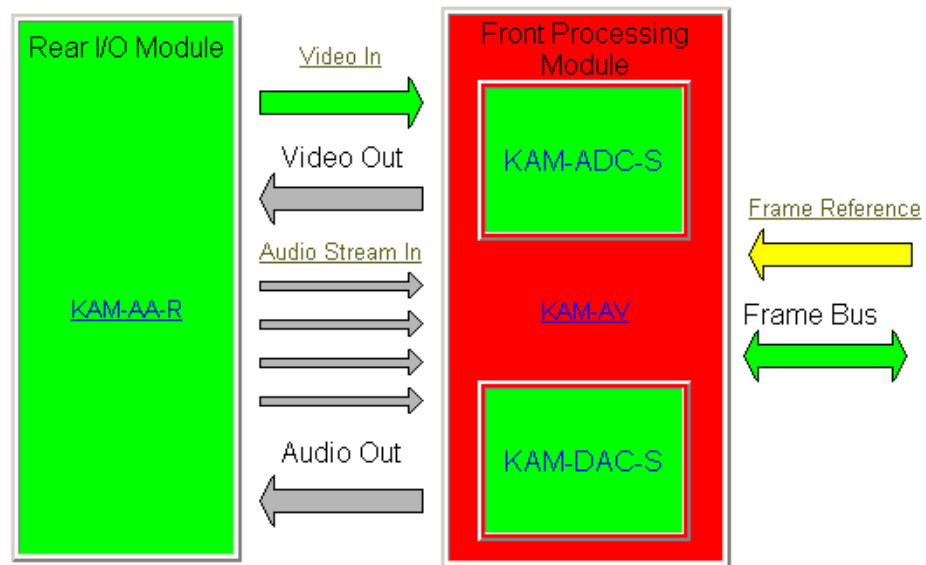
If the KAM-AV is fed with composite video (or no video input), the firmware version should be reported as X1=159.159.159, X2=47 and Software Version: 5.0.1 as shown in Figure 7.

Figure 7. KAM-AV with Composite In Status Page – First Download



Model: [KAM-AV](#) Description: [Kameleon Module](#)
 Frame Location: [Factory](#) , Slot: [3](#)
 Last Recalled E-MEM: [Factory Defaults](#)

Kameleon Module Physical Structure



FAULT : Missing Xilinx 1 3D Image
WARNING : Missing Xilinx 2 KAM-EXTEND Image
 WARNING - Internal frame reference is not present

Status:

Front Module: **FAULT**
 Rear Module: [PASS](#)
 Sub Module 1: [PASS](#)
 Sub Module 2: [PASS](#)

Front Module:

Part Number: [671-6428](#)
 Serial Number: [VR02375856](#)
 Hardware Revision: [20U](#)
 Firmware Version: [X1=159.159.159, X2=47](#)
 Software Version: [5.0.1](#)
 Asset Tag.

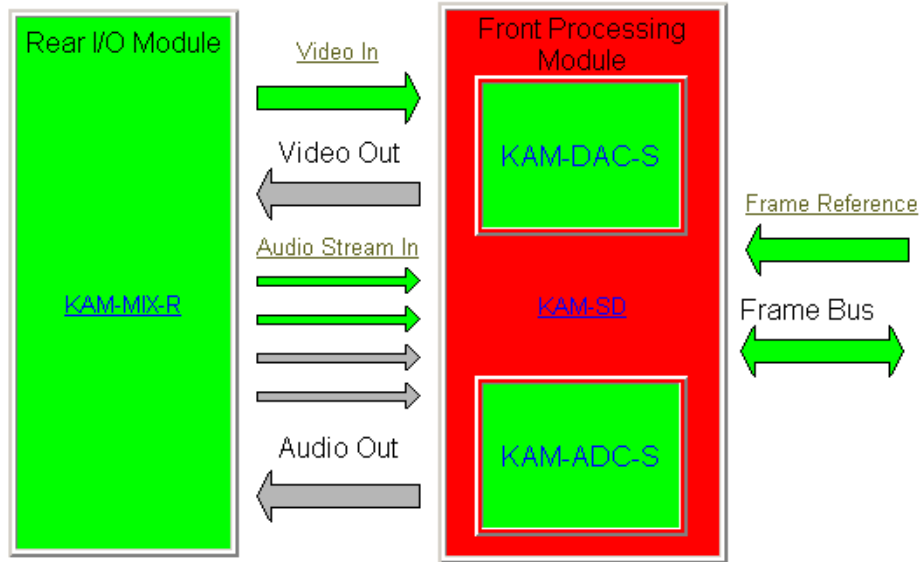
If the KAM-AV is fed with an SDI video input or if this is a KAM-SD module (-00R), the firmware version should be reported as X1=48, X2=47 and Software Version: 5.0.1 as shown in Figure 8.

Figure 8. KAM-AV with SDI Video In or KAM-SD Status Page



Model: [KAM-SD](#) Description: [Kameleon Module](#)
Frame Location: [Factory](#) , Slot: [3](#)
Last Recalled E-MEM: [Factory Defaults](#)

Kameleon Module Physical Structure



WARNING : Missing Xilinx 2 KAM-EXTEND Image
FAULT : Firmware Version Out Of Date

Status:

Front Module: **FAULT**
Rear Module: [PASS](#)
Sub Module 1: [PASS](#)
Sub Module 2: [PASS](#)

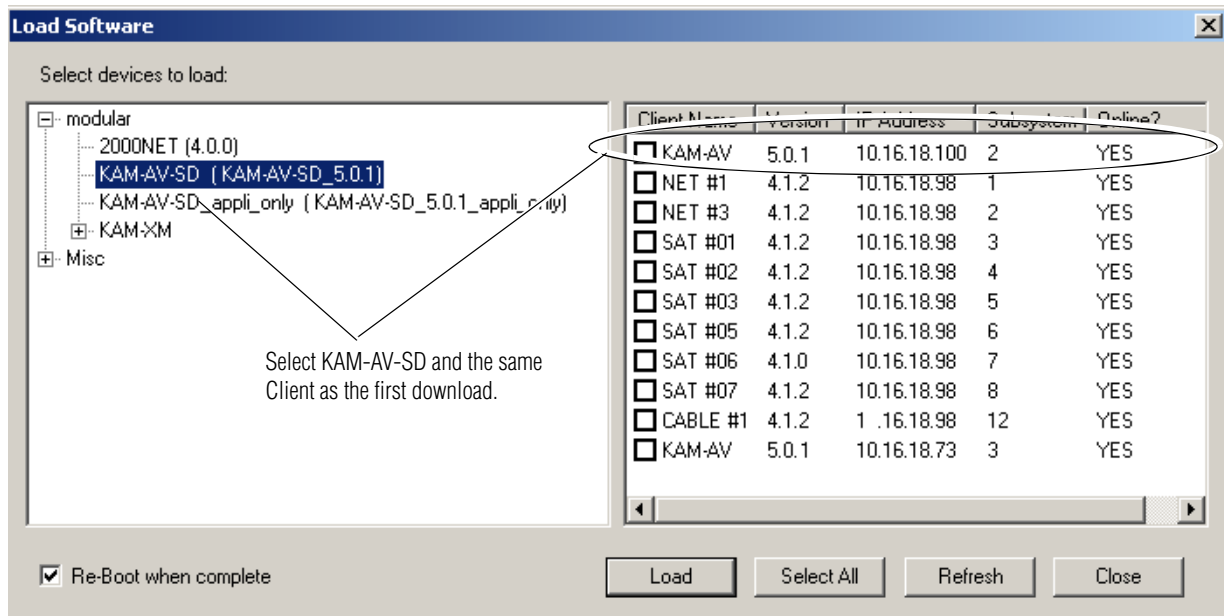
Front Module:

Part Number: [671-6428](#)
Serial Number: [VR02181041](#)
Hardware Revision: [00S](#)
Firmware Version: [X1=48, X2=47](#)
Software Version: [5.0.1](#)
Asset Tag:



18. Bring up NetConfig again and click on the **Discover** button in the top menu bar. Then click on the **Load Sw** button.
19. Now select the KAM-AV-SD (KAM-AV-SD_5.0.1) selection in the modular directory on the left (Figure 9).
20. Select the same Client Name as the first download. Note that its Version will now report 5.0.1.
If you are updating other modules that are currently at version 4.1.0 and later, you may also select their Client Name(s) on the right of the screen to update at this point.
21. Check the **Re-Boot when complete** checkbox in the lower left corner of the screen.
22. Press the **Load** button to download the full package to the KAM-AV module(s) selected.
23. If the load has been successful, a popup will appear as shown in Figure 6 on page 20. Click the **OK** button in the popup.
24. Allow the reboot to complete.

Figure 9. NetConfig Load Full Package



- Open the Status web page of the module again.

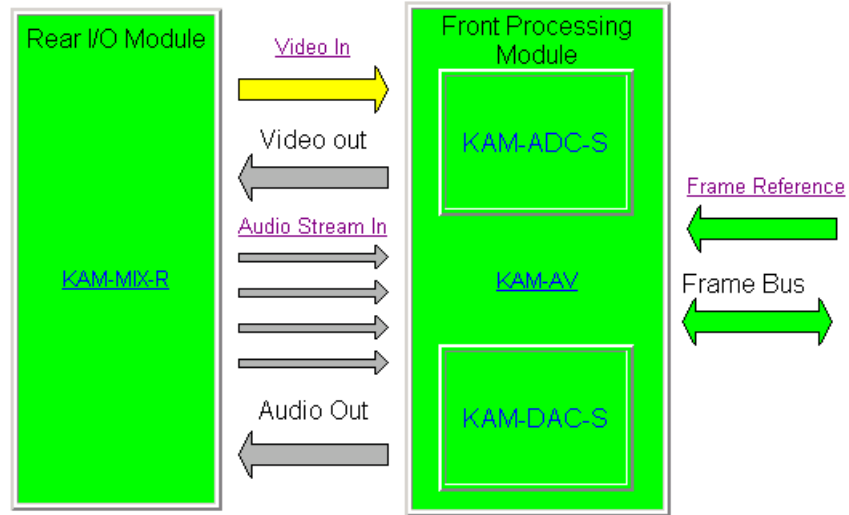
If the KAM-AV is fed with composite video (or no input video), the firmware version should now be reported as X1=2.4.9 (3D version), X2=3.0.7 and Software Version: 5.0.1 as shown in [Figure 10](#).

Figure 10. KAM-AV with Composite In Full Package



Model: [KAM-AV](#) Description: [Kameleon Module](#)
 Frame Location: [Bay 1 QA 2000 Frame](#) , Slot: [2](#)
 Last Recalled E-MEM: [Factory Defaults](#)

Kameleon Module Physical Structure



WARNING - Video Input Signal Not Detected

Status:

Front Module: [PASS](#)
 Rear Module: [PASS](#)
 Sub Module 1: [PASS](#)
 Sub Module 2: [PASS](#)

Front Module:

Part Number: [671-6428](#)
 Serial Number: [TT03467514](#)
 Hardware Revision: [20S](#)
 Firmware Version: [X1=2.4.9, X2=3.0.7](#)
 Software Version: [5.0.1](#)
 Asset Tag:

Sub Module 1:

Part Number: [671-6419](#) Serial Number: [VR02450725](#) Hardware Revision: [00C](#)

Sub Module 2:

Part Number: [671-6420](#) Serial Number: [VR03429815](#) Hardware Revision: [00C](#)

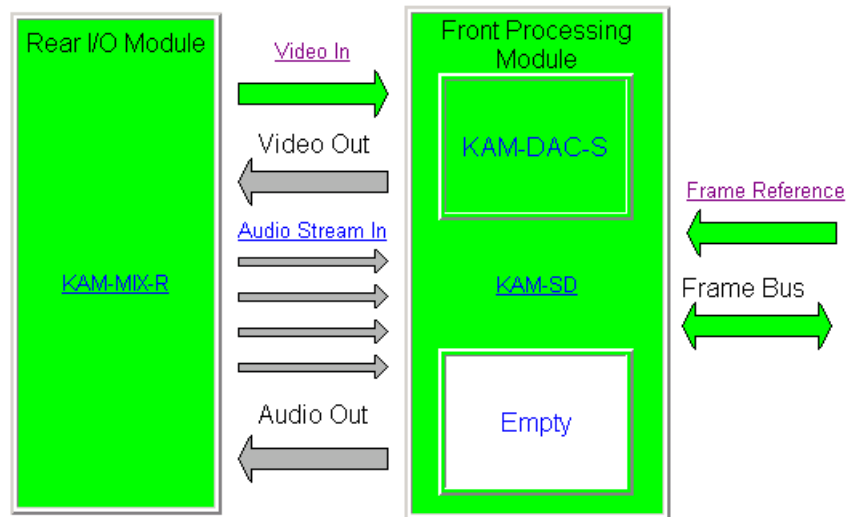
If the KAM-AV is fed with an SDI video input or if this is a KAM-SD module (-00R), the firmware version should be reported as X1=2.2.76 (SD version), X2=3.0.7 and Software Version: 5.0.1 as shown in [Figure 11](#).

Figure 11. KAM-AV with Composite In Full Package

Status

Model: [KAM-SD](#) Description: [Kameleon Module](#)
 Frame Location: [Bay 1 QA 2000 Frame](#) , Slot: 1
 Last Recalled E-MEM: [Factory Defaults](#)

Kameleon Module Physical Structure



Status:
 Front Module: [PASS](#)
 Rear Module: [PASS](#)
 Sub Module 1: [PASS](#)
 Sub Module 2: [EMPTY](#)

Front Module:
 Part Number: [671-6428](#)
 Serial Number: [TT03466792](#)
 Hardware Revision: [00T](#)
 Firmware Version: [X1=2.2.76, X2=3.0.7](#)
 Software Version: [5.0.1](#)
 Asset Tag:

Sub Module 1:
 Part Number: [671-6420](#) Serial Number: [VR03429854](#) Hardware Revision: [00C](#)

26. Go to the E-MEM web page and select the **Recall** button to restore factory settings.
27. Verify proper operation of the module.

This completes the upgrade. If you have upgraded from version 2.0.2 to version 5.0.1, refer to these Release Notes for an overview on new functionality for this software release and the *Kameleon Instruction Manual v5.0.1* for an updated instruction manual. Also refer to the version 4.1.0 and 4.1.2 Release Notes for a summary of changes.

Refer to [Accessing Reference Documents](#), below for information on finding these documents on the Thomson Grass Valley web site.

Accessing Reference Documents

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

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

Select **Broadcast Products**, then the **Modular Products** selection in the table. Scroll to the **Kameleon SD Modules** section to find the KAM-AV and KAM-SD Instruction Manual for version 4.1.0. For the 2000NET module, scroll to the **Control and Monitoring** section to find the 2000NET Network Interface Module.

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 on page 2* at the front of this document.