



Visual Learning Served On Demand™

# SAFARI Montage Encoder™ Installation and Setup Guide

# Getting Started

The SAFARI Digital Encoder is a standalone or rack-mount MPEG2 or MPEG4-10/H264 video and audio encoder. It can take the video input from a variety of different source formats (Composite, S-Video, YPbPr, RGB, VGA or HDMI) and will scale the images to either SD or HD resolutions. The video and accompanying audio is then encoded into a MPEG2 or H264 data, and is then streamed onto a LAN. Separate decoder units or PC software clients can then display the video and audio at any network enabled location.

The unit has a front panel mounted LCD and push buttons to allow easy network setup and source selection, with an embedded web page providing advanced configuration features.

The SAFARI Digital Encoder may be purchased with a single or dual set of video inputs, and also with either an SD output stream resolution, or a selectable SD/HD output stream resolution.

# What's in the Box

Unpack and verify the items listed below were received. If any items are missing, please call 1.800.843.4549.

<b>SAFARI Montage SD Encoder (Standalone)</b>	<b>SAFARI Montage SD Encoder (Rack-mount)</b>	<b>SAFARI Montage HD Encoder (Standalone)</b>	<b>SAFARI Montage HD Encoder (Rack-mount)</b>
SAF10845HB encoder	SAF12383HB encoder	SAF10845HD encoder	SAF12383HD encoder
CAT-5 patch cable	CAT-5 patch cable	CAT-5 patch cable	CAT-5 patch cable
Component video cable	Component video cable	Component video cable	Component video cable
SVGA cable (15 pin)			
Audio cable	Audio cable	Audio cable	Audio cable
HDMI cable	HDMI cable	HDMI cable	HDMI cable
IR Blaster assembly	IR Blaster assembly	IR Blaster assembly	IR Blaster assembly
AC power cable		AC power cable	

## Installation

### Standalone Unit

When locating the SAFARI Montage Encoder, ensure that a clearance distance of 1" (25mm) is maintained around the ventilation grills to allow free ventilation airflow. Items that could accidentally block the ventilation grills or impede the cooling airflow must not be located near the unit.

The encoder must not be installed where there is a possibility of exposure to condensation, dripping or splashing liquids. Containers filled with fluid should not be located in the vicinity of this unit.

The encoder must be installed near an uninterrupted AC power source, that is easily accessible to disconnect the unit in the case of an emergency.

Connect the encoder to the source video device using the appropriate video and audio interface cables. A Composite video source should be input into the **GREEN** phono connector on the rear of the unit, S-Video should be input into the **GREEN (Y)** and **BLUE (C)** phono connectors (with a suitable adapter), Component should be input into the **GREEN (Y)**, **BLUE (Pb)** and **RED (Pr)** phono connectors and HDMI should be input into the **HDMI** connector. If HDMI audio is not being used, connect the analog audio source to the 3.5mm jack socket audio input using the phono adapter cable supplied.

Connect the appropriate network and control interface cables on the front side of the encoder. Connect the power cable to the rear panel of the encoder and plug the cable into a power outlet. The BLUE power indicator LED on the front of the encoder will illuminate. The LCD panel will show the boot up progress of the unit. Until the unit is fully booted, only selected setup items are available to view on the LCD.

### Rack-mount (Blade) Unit

The rack-mount SAFARI Montage Encoder must be installed in a SAFARI Montage Encoder chassis (p/n SAF10842). The encoder can be installed in the chassis with the chassis power on or off. If the chassis is powered, take care to ensure this module is aligned correctly in the plastic card guides and does not touch adjacent cards as it is slid into (or pulled out of) the chassis. If the SAFARI Montage Encoder chassis is powered down to install a new module, please remember that all video/audio services being provided by the chassis will be lost while it is powered off.

To install a rack-mount SAFARI Montage Encoder, do the following:

1. Remove the existing front panel blanking plate(s) on the chassis. This is done by unscrewing the finger-screw fasteners. Retain this blanking plate in case the encoder module is removed from the rack in the future.
2. Carefully align the top and bottom edges of the encoder's printed circuit board (PCB) into the plastic chassis guides, and gently push the encoder into the chassis. As the 'blade' reaches the back of the rack, the plastic cut-out on the rear of the rack will be pushed off. The encoder should now be properly seated in the chassis. If the rack is powered up, the encoder will automatically power up as it is seated, and the BLUE power LED on the front of the encoder will illuminate. The LCD panel will show the boot up progress of the unit. Until the unit is fully booted, only selected setup items are available to view on the LCD.
3. Tighten the top and bottom finger-screw fasteners to hold the encoder in the chassis.
4. Connect the appropriate network and control interface cables on the front side of the encoder.
5. The video and audio input connectors are located on the rear of chassis. Connect the encoder to the source video device using the appropriate video and audio interface cables. A Composite video source should be input into the **GREEN** phono connector on the rear of the unit, S-Video should be input into the **GREEN (Y)** and **BLUE (C)** phono connectors (with a suitable adapter), Component should be input into the **GREEN (Y)**, **BLUE (Pb)** and **RED (Pr)** phono connectors and HDMI should be input into the **HDMI** connector. If HDMI audio is not being used, connect the analog audio source to the 3.5mm jack socket audio input using the phono adapter cable supplied.

## Booting Up

During boot-up, the status LED on the front of the encoder will flash **ORANGE** and the LCD display will show the boot-up progress. When booting is complete the status LED will illuminate to a steady or flashing **GREEN**, indicating whether the selected video input source signal is present or not, and the LCD display will report operational status of the encoder. After boot-up, if the status LED is illuminated to a steady **RED**, an internal error has occurred in the encoder, and the unit should be returned to SAFARI Montage for service. If the status LED is flashing **RED**, then a software upgrade is in progress, and it is important that the encoder remains powered up with a valid network connection until the unit reboots and resumes normal operation.

## Operation

### Front Panel

The front panel LCD can be used with the three adjacent push buttons to view status information and configure the encoder. The **UP** and **DOWN** buttons scroll up and down menus and change parameter values. The **OK** button selects the currently displayed menu item or confirms a parameter change. Pressing the **UP** and **DOWN** buttons and releasing them together returns up a menu level, usually aborting a parameter change.

The upper line of the LCD display shows the setting name, and the lower line show the parameter itself and any instructions on how to change the current setting.

Pressing the **UP**, **DOWN** and **OK** buttons for 5 seconds and releasing them together will present a unit RESET option. Pressing the **OK** button to confirm will them reboot the encoder.

The structure of the menus presented on the LCD are as follows:

Status	Picture Adjust	IP Settings	Unit details	Help
<b>Stream Info</b>	Move Up/Down	DHCP IP addr	MAC address	Help topics
<b>Source Select</b>	Move L/R	Static IP addr	Serial No.	
Composite	Scale Vert	IP address	Software version	
S-Video	Scale Horiz	Netmask		
YPbPr	Brightness	Gateway		
VGA	Contrast	DNS		
HDMI	Save Adjustments	Network Link		
RGB (SOG)		AUTO		
		100 BaseTX HALF duplex		
		100 BaseTX FULL duplex		
		1000 BaseT HALF duplex		
		1000 BaseT FULL duplex		

### Setting the Encoder's IP address

Each encoder is pre-configured with its IP address set to DHCP. When connected to the network the encoder will automatically obtain an IP address from the DHCP server. The IP address being used can be seen on the front panel LCD, under the IP settings menu.

If necessary, the unit's MAC address can be found under the Unit Details -> MAC address, or on the label on the bottom of the unit.

If a static IP address needs to be set, use the front panel LCD and push buttons to set the correct address. Static IP address selection will need to be activated first, and then enter the IP address, Netmask, Gateway and DNS on the appropriate menus.

Once IP connectivity is established with the unit, use a standard web browser (Internet Explorer®, Firefox®, Google Chrome or Safari® for example) to access the detailed configuration menus. Enter the IP address of unit into the address bar, to access the web-based configuration pages.

Contact your network administrator to ensure any manual IP address settings made are appropriate for your network.

## Web-based Configuration

The Encoder's web page configuration menus allow the full range of operational parameters to be set. When using the web pages, full contextual help is provided on the right side of the screen. When changes have been made, press the APPLY button at the bottom of the page to ensure these take effect.

Configuration menus include:

**Status** - shows the current status of the encoder, including the part number, Mac Address, IP Address, Netmask, Gateway, DNS, Software Version, Serial Number, Temperature, Encoder name, Encoding standard, video source, video/audio stream address and video/audio stream bandwidth. **Note:** The temperature shows the internal unit temperature and not the ambient temperature. Readings up to 70°C are normal.

**Encoding Standard** – allows for stream enablement and stream encapsulation, facilitates the selection of the video and audio encoding standards, bit rate control and the streaming address being transmitted by the encoder. Also sets the stream TTL and DSCP controls.

**Video/Audio Input** - sets the video and audio input being used.

**IP Configuration** - allows specification of the Network Connection; Static or DHCP addressing, Hostname, IP Address, Subnet Mask, DNS, and Default Gateway settings. It also allows the network link mode to be specified. Confirm these with the network administrator before configuring.

**Picture Adjustment** - allows the following parameters of the input picture to be adjusted: horizontal position, vertical position, horizontal scale, vertical scale, picture brightness and picture contrast.

**Event Log** - displays a list of events generated by the unit.

**Email Logs** - configuration of who log files are emailed to and when.

**SNMP** - allows configuration of SNMP community and trap targets.

**Enablement Code** – enter enablement codes here to reconfigure or expand the capabilities of your unit. Details can be obtained from SAFARI Montage Customer Support.

**Set Password** - A password may be set to prevent the unauthorized modification of the Encoder configuration. A password must consist of exactly six digits from 0-9. If the password gets lost, contact SAFARI Montage Customer Support for assistance. **Note:** Unit serial number is required for password reset.

**Software Upgrade** – specify the http server that the Encoder will use for software updates, [http://firmware.safarivideonetworks.com/SD\\_HD\\_Encoder/current/](http://firmware.safarivideonetworks.com/SD_HD_Encoder/current/).

**Locator LED** - allows the status LED to be flashed ORANGE/GREEN to identify the physical encoder unit.

## Customer Support

If you have any difficulties with installation or need further information, please visit [www.SAFARIMontage.com/support](http://www.SAFARIMontage.com/support) or call a support representative at 800.782.7230. When calling, please have the encoder's serial number available. The serial number can be found on the label on the bottom of the unit.

Serial Number: \_\_\_\_\_

# Specifications (SAF10845HB / SAF10845HD)

Feature	Support
Physical	220 x 190 x 44mm, 1.4 Kg
Ambient operating temperature range	0° - 40° C
Power Supply	Input: 100-240VAC, 47-63Hz, 0.3 – 0.15A, 20W
LAN	10/100/1000 Base-T, Auto MDIX
Video Inputs supported (on each input set)	Composite, S-Video - NTSC, PAL  YPbPr, RGB - 480i, 576i, 720p50, 720p60, 1080i50, 1080i60, 1080p25, 1080p30, 1080p50, 1080p60  VGA – 640x480@60, 800x600@60, 1024x768@60, 1280x720@60, 1600x1200@60, 1920x1080@60, 1920x1200@60(RB)  HDMI – VGA resolutions listed plus 480i, 576i, 720p50, 720p60, 1080i50, 1080i60, 1080p50, 1080p60
HDMI Stereo	Single channel stereo digital audio
Analogue Audio	Stereo (2.2V pk-pk into a 10K Ohm load)
Video Encoding	MPEG2 TS with MPEG2 MP@HL encoded stream MPEG2 TS with MPEG4-10/H264 MP@L4 encoded stream
Audio Encoding	MPEG1-Layer 2 - 32, 44.1, 48 KHz sampling, 32 - 448 Kbps Stereo AAC/LC encoding – 32, 44.1, 48, 88.2, 96 KHz sampling, 16 – 576 Kbps Stereo
Encoded Stream Formats	480i, 576i, 720p50, 720p60, 1080i50, 1080i60, 1080p25, 1080p30
USB Host	1 x USB 2.0 High Speed Host (Used for software upgrades with a USB memory stick)
USB Comms	USB Serial Comms device for external configuration/control
RS232 Port(s)	Rx, Tx CTS, RTS up to 115200 Baud  Configured for SIPI external configuration/control or IP to RS232 bi-directional pass through for external device control (2 x RS232 ports on 779-D-xx units)
Temperature Monitoring	Operating temperature available remotely via web interface
External IP control interface	Command/configuration via IP interface, USB comms and RS232 comms interfaces
SNMP traps	Defined 'Events' sent to third party SNMP manager
Field Software Upgrade	From remote HTTP server or from USB memory stick inserted in front panel USB host connector
Automatic email of Event logs	Via external SMTP server

# Specifications (SAF12383HB / SAF12383HD)

Feature	Support
Physical	225 x 130 x 41mm, 500g
Ambient operating temperature range	0° - 40° C
Power Supply	Input: 100-240VAC, 47-63Hz, 0.3 – 0.15A, 20W
LAN	10/100/1000 Base-T, Auto MDIX
Video Inputs supported (on each input set)	<p>Composite, S-Video - NTSC, PAL</p> <p>YPbPr, RGB - 480i, 576i, 720p50, 720p60, 1080i50, 1080i60, 1080p25, 1080p30, 1080p50, 1080p60</p> <p>VGA – 640x480@60, 800x600@60, 1024x768@60, 1280x720@60, 1600x1200@60, 1920x1080@60, 1920x1200@60(RB)</p> <p>HDMI – VGA resolutions listed plus 480i, 576i, 720p50, 720p60, 1080i50, 1080i60, 1080p50, 1080p60</p>
HDMI Stereo	Single channel stereo digital audio
Analogue Audio	Stereo (2.2V pk-pk into a 10K Ohm load)
Video Encoding	<p>MPEG2 TS with MPEG2 MP@HL encoded stream</p> <p>MPEG2 TS with MPEG4-10/H264 MP@L4 encoded stream</p>
Audio Encoding	<p>MPEG1-Layer 2 - 32, 44.1, 48 KHz sampling, 32 - 448 Kbps Stereo</p> <p>AAC/LC encoding – 32, 44.1, 48, 88.2, 96 KHz sampling, 16 – 576 Kbps Stereo</p>
Encoded Stream Formats	480i, 576i, 720p50, 720p60, 1080i50, 1080i60, 1080p25, 1080p30
USB Host	1 x USB 2.0 High Speed Host (Used for software upgrades with a USB memory stick)
USB Comms	USB Serial Comms device for external configuration/control
RS232 Port(s)	<p>Rx, Tx CTS, RTS up to 115200 Baud</p> <p>Configured for SIPI external configuration/control or IP to RS232 bi-directional pass through for external device control (2 x RS232 ports on 779-D-xx units)</p>
Temperature Monitoring	Operating temperature available remotely via web interface
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SNMP traps	Defined 'Events' sent to third party SNMP manager
Field Software Upgrade	From remote HTTP server or from USB memory stick inserted in front panel USB host connector
Automatic email of Event logs	Via external SMTP server



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