

# Hi5-3G

**3G/Dual-link/HD/SD-SDI to HDMI 1.3a  
Video and Audio Converter**

Published: 12/20/10

## Installation and Operation Guide

Because it matters.

**AJA**<sup>®</sup>  
VIDEO SYSTEMS

## Trademarks

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## Notice

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## FCC Emission Information

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This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his own expense. Changes or modifications not expressly approved by AJA Video can effect emission compliance and could void the user's authority to operate this equipment.

## Contacting Support

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To contact AJA Video for sales or support, use any of the following methods:

180 Litton Drive, Grass Valley, CA. 95945 USA

Telephone: 800.251.4224 or 530.274.2048

Fax: 530.274.9442

Web: <http://www.aja.com>

Support Email: [support@aja.com](mailto:support@aja.com)

Sales Email: [sales@aja.com](mailto:sales@aja.com)

When calling for support, have all information at hand prior to calling.

## Limited Warranty

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AJA Video warrants that this product will be free from defects in materials and workmanship for a period of five years from the date of purchase. If a product proves to be defective during this warranty period, AJA Video, at its option, will either repair the defective product without charge for parts and labor, or will provide a replacement in exchange for the defective product.

In order to obtain service under this warranty, you the Customer, must notify AJA Video of the defect before the expiration of the warranty period and make suitable arrangements for the performance of service. The Customer shall be responsible for packaging and shipping the defective product to a designated service center nominated by AJA Video, with shipping charges prepaid. AJA Video shall pay for the return of the product to the Customer if the shipment is to a location within the country in which the AJA Video service center is located. Customer shall be responsible for paying all shipping charges, insurance, duties, taxes, and any other charges for products returned to any other locations.

This warranty shall not apply to any defect, failure or damage caused by improper use or improper or inadequate maintenance and care. AJA Video shall not be obligated to furnish service under this warranty a) to repair damage resulting from attempts by personnel other than AJA Video representatives to install, repair or service the product, b) to repair damage resulting from improper use or connection to incompatible equipment, c) to repair any damage or malfunction caused by the use of non-AJA Video parts or supplies, or d) to service a product that has been modified or integrated with other products when the effect of such a modification or integration increases the time or difficulty of servicing the product.

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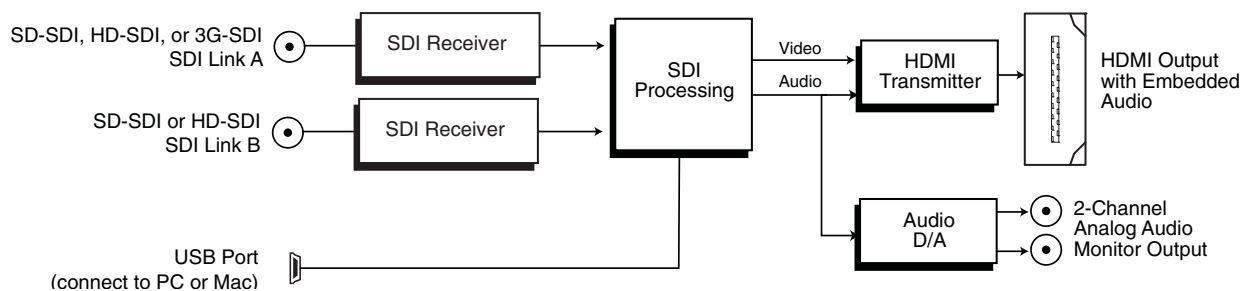
## Introduction

The Hi5-3G converts 3G-SDI, dual or single link HD-SDI, or SD-SDI to HDMI v1.3a for driving HDMI monitors. HDMI v1.3a capability at 30 bits per pixel allows full support of the latest 10 bit monitors. Audio is supported in the HDMI output allowing a convenient single cable audio/video connection. The Hi5-3G provides 2 Channel RCA style audio outputs for separate audio monitoring if needed. USB connectivity allows for easy PC/Mac setup and field upgrades.

## Features

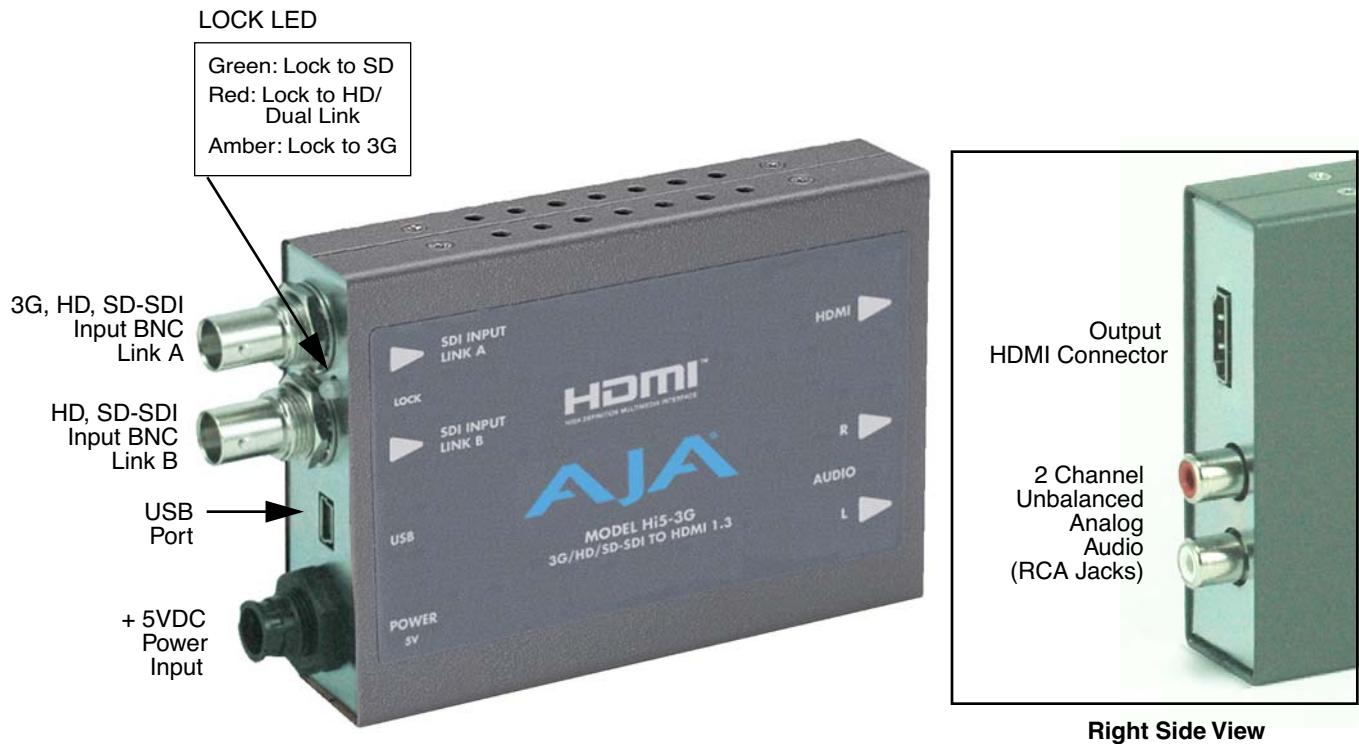
- 3G/HD/SD-SDI to HDMI
- SMPTE425M-AB input
- Full HDMI 1.3a support including:
  - Deep Color 30- and 36-bit video per pixel (24-bit also supported)
  - 2 or 8 channels of embedded audio
- Additional 2 channel RCA analog audio output (User assignable channels)
- Setup via PC/Mac using USB port and supplied USB cable (USB configuration software application supplied on CD)
- HDMI cable supplied
- Uses 5V power (supply sold separately)
- 5 year warranty

## Block Diagram



**Hi5-3G Converter, Simplified Block Diagram**

## I/O Connections



**Hi5-3G Converter**

## Installation

Typically, Hi5-3G installation consists of the following steps:

1. Ensure the Hi5-3G is disconnected from power.
2. Connect video equipment to the converter BNCs and HDMI connector.
3. Connect audio equipment to RCA connectors (optional)
4. Apply +5VDC power to the converter (AJA power supply model DWP or DWP-U).
5. The Hi5-3G will now run using the default factory settings. If you wish to alter the factory settings, you'll need to install the AJA Mini Config software (supplied on CD) on a computer, attach the Hi5-3G via USB to the computer, and then make your changes. This process is detailed on the following pages.

## USB Control and Setup—Using AJA Mini Config

The Hi5-3G can usually be used right out of the box for most applications since it is designed to recognize inputs and perform standard actions automatically by default. However you can also manually configure the Hi5-3G using a supplied software application for PCs and Macs called “Mini Config.” This same application can be used to update software on the Hi5-3G in the event newer software is released by AJA.

### Installing Mini Config on a Mac

To install the application on a Mac, simply insert the CD supplied with the Mini-Converter into the computer, drag the “AJA Mini Config” application for your platform (Mac or PC) to your desktop or an applications folder.



**Note:** Macintosh computers must be Intel-based (G5, G4 and earlier models will not work with Mini Config).

AJA MiniConfig

### Installing Mini Config on a PC



To install the application on a Windows PC, simply insert the CD supplied with the Mini-Converter into the computer, locate the “MiniInstaller” application, and then double-click it.

A Setup Wizard will guide you through the installation. Just click Next to begin.

Answer all questions in the subsequent dialogues; when you’re done, you will be able to locate the Mini Config application in the AJA folder in the Programs listing.

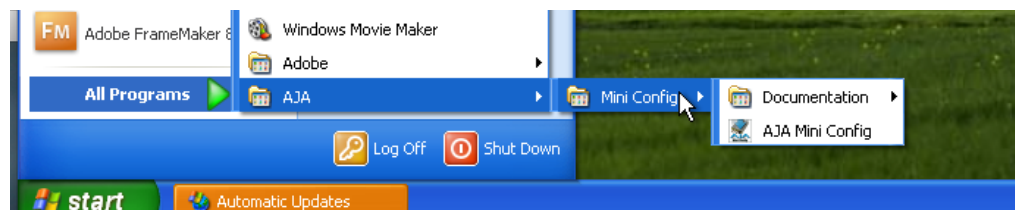
### Running Mini Config

Connect a Hi5-3G Mini-Converter to the PC or Mac via the supplied USB cable. Connect power to the Mini-Converter (DWP or DWP-U recommended).



**Note:** On a Mac, when the Mini-Converter is connected to the USB port, you may see an alert like that shown following. If you do, press Cancel—this alert can be ignored.

To run Mini Config on a PC, find the AJA Mini Config in the program list and locate the AJA Mini Config application.



To run Mini Config on a Mac, double-click the Applications folder and locate the AJA Mini Config application. Double-click the AJA Mini Config application to launch it.

Once AJA Mini Config is running (PC or Mac), it looks pretty much the same, regardless of the platform.

A *File* menu at the top of the Mini Config application menu bar allows you to *Save* the current state of the Mini-Converter—with all the settings you’ve made—to a file for later recall. This allows you to set up the converter for different applications, storing each (with *Save*) to a unique name for easy recall later—using the *Open* menu item. A *Revert to Factory Settings* menu item similarly allows you to change the settings back to AJA’s factory defaults. An *Edit* menu allows you to cut and paste values to/from fields, just as in other applications.

## Operating Mini Config

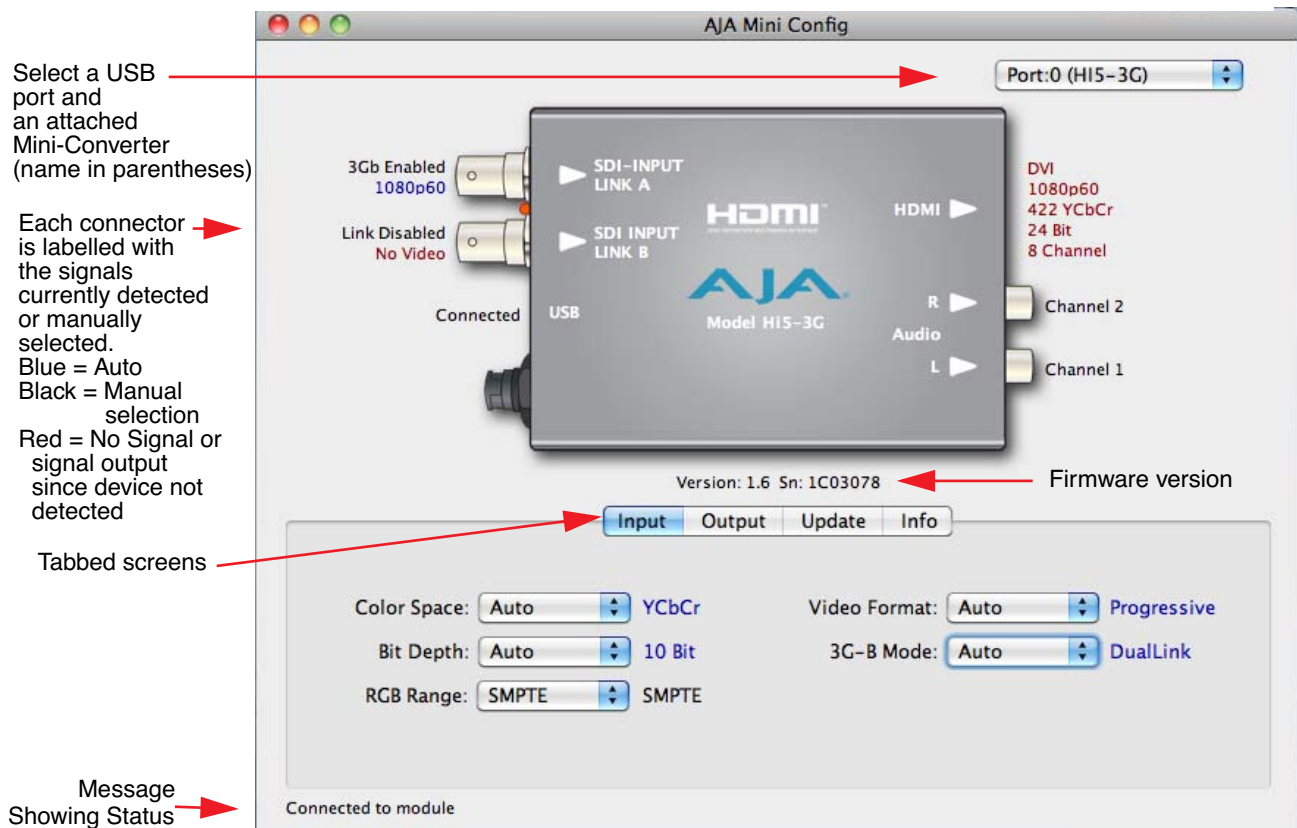
When the application is running, you’ll see a simple graphical interface for viewing settings and updating software. This user interface consists of an information area at the top that shows the available Mini-Converters attached to the computer via USB (in this case your Hi5-3G), with a graphical rendering of the selected Mini-Converter showing all the BNCs and connectors and their current state.

Colored text by connectors provides an indication of signal type and what the Hi5-3G is doing. Text in blue shows the values automatically selected, while text in black shows values that you have manually selected. Text in red shows that Hi5-3G is not detecting a signal or cannot negotiate with the attached device (even if can’t detect an output device, it still shows the signal it is outputting).

**Note:** configuration settings in red will change based on the attached output device as well as input signals. For improved accuracy and reliability, you should configure the Mini-Converter only when the target output device is attached and input signals are supplied at the inputs.

Screens are virtually the same on both PC and Mac, with subtle differences that reflect the general look of the platform environment.

Mini Config can manage multiple AJA Mini-Converters connected via USB—even when they are of differing types. However it only connects to one at a time. You can choose which Mini-Converter you wish to control using the pulldown menu in the upper right hand corner. If you want to configure and update multiple Mini-Converters in parallel, you can do it by running multiple instances of the Mini Config application and have each control a different Mini-Converter.



### Mini Config, Video Screen

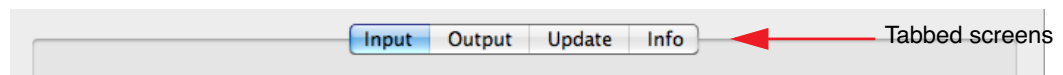
The name of each Mini-Converter found can be seen in the menu pulldown at the top right hand side of the screen (in the example above, it shows "Port:0 (HI5-3G)". This allows you to select a desired Mini-Converter when there are more than one. Selecting a Mini-Converter with this dropdown menu causes this application to connect to the selected converter. The type of Mini-Converter and serial number will be shown in the graphic and text below it.

A status field at the bottom of the screen shows whether you are connected and communicating with the Mini-Converter shown using Mini-Config.

When configuring the Hi5-3G Mini-Converter, select it from the top pulldown, view the current settings and change any values. Making a change communicates that new value to the Mini-Converter's non-volatile memory.

### Tabbed Screens

The Tabs delineate groups of controls for each type of task to be performed.



### Mini Config, Tabbed Screens

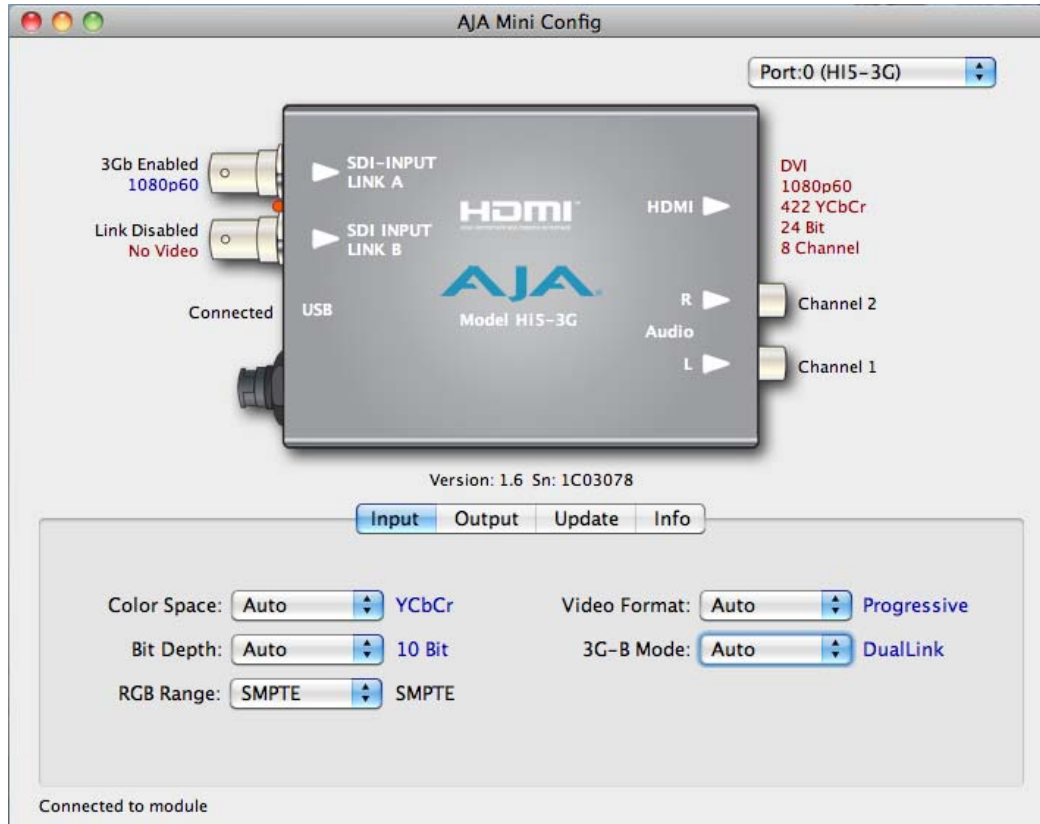
The controls for the actual configuration parameters are specific to each Mini-Converter type. Click on any of the tabbed buttons (Input/Output/Update/Info) and the screen below will change to match. Each of these screens are described on the following pages.



## Input Tab Screen

With a Hi5-3G connected and selected, you'll click on the Input tab to view and make changes to the Hi5-3G input settings.

Any changes you make will be saved, overwriting previous settings.



**Mini Config, Input Tab Screen**

## Input Video Selections

**Color Space**—Selects the Input Video Color Space. Choose Auto, YCrCb, RGB, or XYZ. Choosing "Auto" lets the Hi5-3G automatically select color mode based on the input video parameters and the payload ID.

**Bit Depth**—Selects the input video bit depth. Choose Auto, 10-bit or 12-bit. Choosing "Auto" lets the Hi5-3G automatically select the bit depth based on the input video parameters and the payload ID.

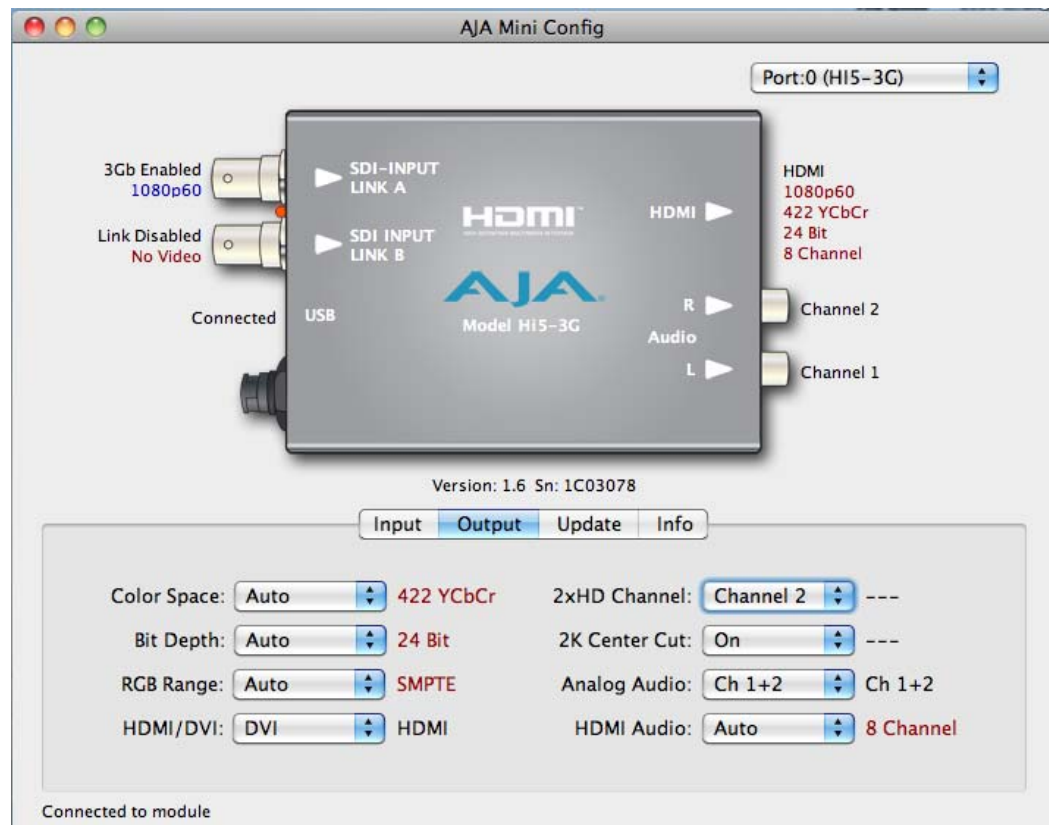
**RGB Range**—Selects the Input Video Color Range. Choose SMPTE or Full color range.

**Video Format**—Selects the Input Video Format. Choose from Auto, Progressive (P), Interlaced, or PsF (progressive segmented frame). Choosing "Auto" lets the Hi5-3G automatically select the format based on the input video parameters and the payload ID.

**3G-B Mode**—Selects the 3G level B Video Mode. Choose Auto, Dual Link, or 2xHD.



**Output Tab Screen** Click on the Output tab to view and make changes to the Hi5-3G Output settings.



### Mini Config, Output Tab Screen

**Color Space**—Selects the desired output video format. Choose from Auto, 4:2:2 YCrCb, 4:4:4 RGB, or 4:4:4 YCrCb. Choosing “Auto” lets the Hi5-3G automatically select the video format based on the input video and the attached device's capabilities.

**Bit Depth**—Choose from Auto, 24-bit, 20/30-bit, or 36-bit. Choosing “Auto” lets the Hi5-3G automatically select the bit depth based on the input video and the attached device's capabilities.

**RGB Range**—Choose Auto, Limited or Full. Choosing “Auto” causes the Hi5-3G to follow the *input* color range setting.

**HDMI/DVI**—Choose Auto, HDMI, or DVI. Choosing “Auto” lets the Hi5-3G automatically select the output mode based on the input video and the attached device's capabilities.

**2xHD Channel**—Provides output channel selection when in 3G level B 2xHD mode. Choose Ch 1 or 2.

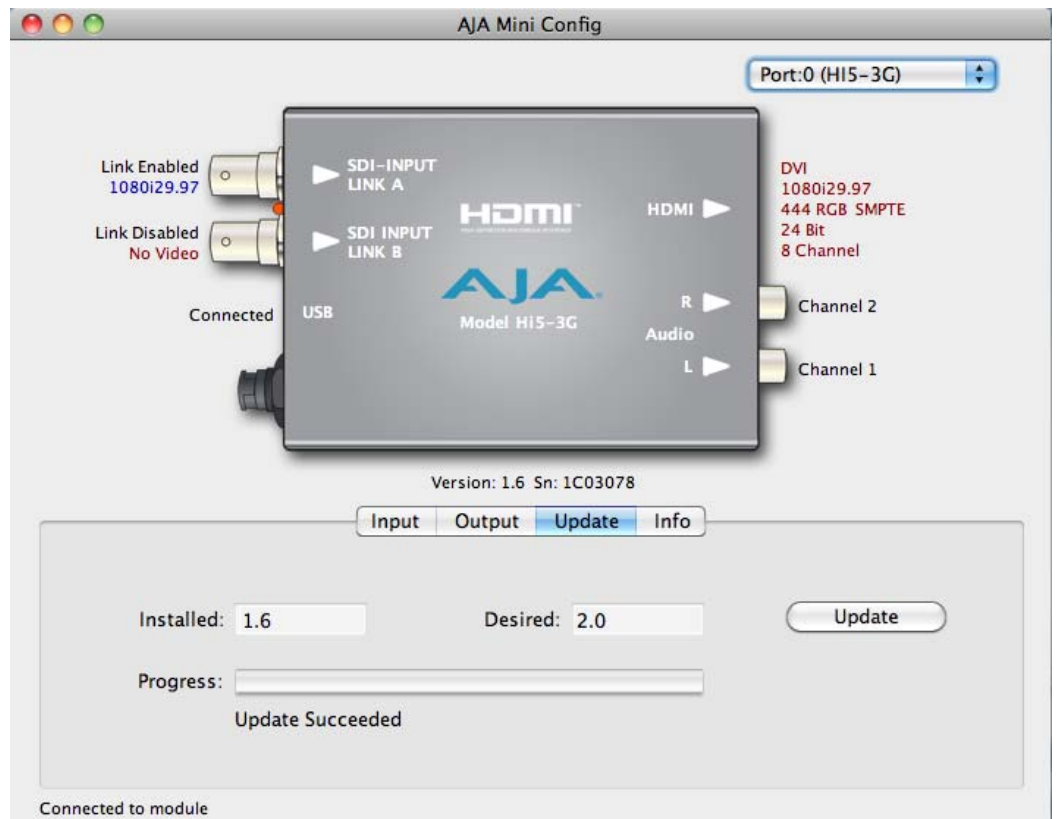
**2K Center Cut**—Provides the option of center cutting 2Kx1080 video signals to comply with the HDMI standard. Checkbox selects On or Off (not selected).

**Analog Audio**—Choose which 2 embedded audio channels are routed to the RCA output pair: Ch 1+2, Ch 3+4, Ch 5+6, or Ch 7+8.

**HDMI Audio**—Choose Auto, 2-channel or 8-channel embedded audio. Choosing “Auto” lets the Hi5-3G automatically select the audio channels based on the attached device's capabilities.

## Update Tab Screen

Use this Update screen to view the software version currently installed on the Hi5-3G or install new software.



### Mini Config, Update Screen

**Note:** When discussing Mini-Converters, “Firmware” is software that will be stored in the Mini-Converter’s non-volatile memory and used when it is powered up. This is something different than the Mini Config application software. The version numbers shown in the Update screen refer only to the firmware.

The following fields and control are present in this screen:

**Installed**—this field shows the version of the firmware currently installed inside the Mini-Converter.

**Desired**—this field shows the version of firmware embedded in the Mini-Config application which you can install into the Mini-Converter by clicking the *Update* button.

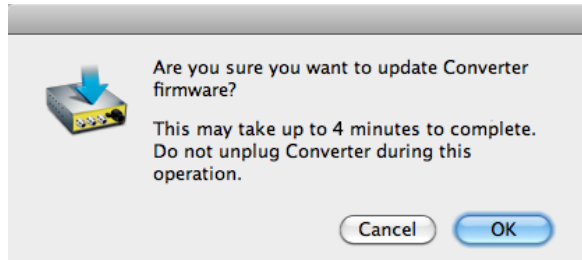
**Update**—this button initiates a software update operation loading the “Desired” version of firmware into the Mini-Converter’s non-volatile memory.

**Progress**—this indicator bar shows the progress of software being installed.

### Software Update Procedure

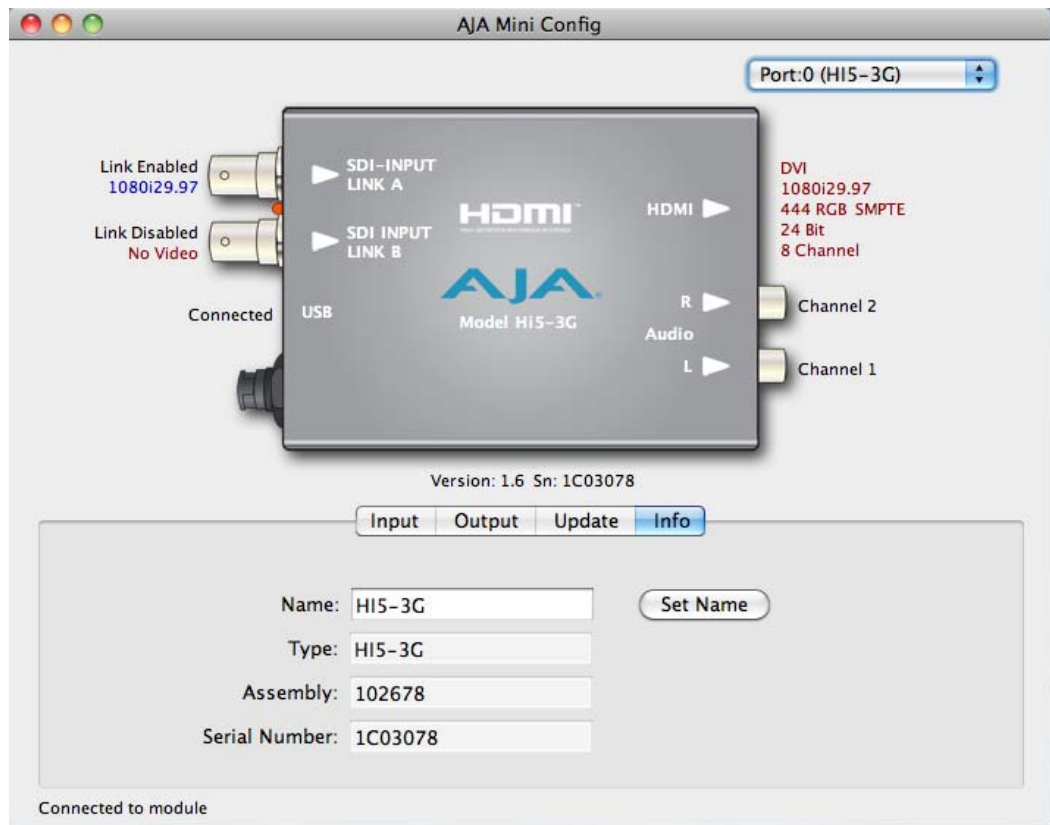
1. Check the AJA website for new Mini-Config software for your Mini-Converter. If new software is found, download it and uncompress the file archive (zip). Here is the URL to use when checking:  
*<http://www.aja.com/support/converters/converters-mini-rackmount.php>*
2. Connect the Mini-Converter to a Mac or PC via a USB port on the computer and run the new Mini-Config software just downloaded.
3. Click on the Update tab screen.

4. Check the Installed version level against the Desired version level. If the Desired is newer, then click the *Update* button to download the new firmware to the Mini-Converter; progress will be shown via the “Progress” thermometer bar. When you click Update, Mini Config will provide a dialog asking you to confirm that you really want to update the firmware (see below).



## Info Tab Screen

This screen provides basic information about the Mini-Converter. This information is mostly useful when calling AJA Support for service or technical support.



### Mini Config, Info Screen

**Name**—this field allows you to give your Mini-Converter a name. This may be useful if you have several Mini-Converters attached to a Mac/PC via USB so you can distinguish one of them easily (especially if they’re the same model). In the example show previously, the Hi5-3G has been named “Hi5-3G.”

**Type**—this is the factory set model name of the Mini-Converter (Hi5-3G).

**Assembly** —this is the factory assembly number.

**Serial Number**—this is the factory set unique serial number of your Hi5-3G. If you ever call AJA Support for service, you may be asked for this number.

## Specifications

Item	Specification
Input Formats	525i, 625i, 720p 50/59.94/60, 1080i 50/59.94/60, 1080p 23.98/24/25/29.97/30/50/59.94/60 1080psF 23.98/24/25/29.97/30 2048x1080 is supported in all the above frame rates YCbCr/RGB/XYZ 10/12-bit
Video Inputs	3G, HD, and SD-SDI (auto-selected), SMPTE-259/274/292/296/372/424/425, 2x BNC
HDMI Output	Standard Type A connector  Video: HDMI 1.3a/DVI 1.0 4:2:2 YCbCr and 4:4:4 YCbCr/RGB 24/30/36-bit  Audio: 24-bit, with 2 or 8 embedded channels RCA-style analog outputs at -10dBV (User Selectable channels)
HDCP	The Hi5-3G does not encode the HDMI output with HDCP encryption. By definition, SDI/HD-SDI inputs to the Hi5-3G are unencrypted. The HDMI specification requires HDMI monitors to support unencrypted inputs.
User Controls	USB port used with supplied cable and software application to configure device via PC/Mac
Size	5.8" x 3.1" x 1 (147mm x 79mm x 25mm)
Power	+5 VDC regulated, 5 watts Requires Power Supply (AJA power supply model DWP or DWP-U recommended)

# Appendix A: Safety & Compliance

## Federal Communications Commission (FCC) Compliance Notices

### Class A Interference Statement

This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to Part 15, Subpart B of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a commercial installation. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his own expense. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

### FCC Caution

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

## Canadian ICES Statement

Canadian Department of Communications Radio Interference Regulations

This digital apparatus does not exceed the Class A limits for radio-noise emissions from a digital apparatus as set out in the Radio Interference Regulations of the Canadian Department of Communications. This Class A digital apparatus complies with Canadian ICES-003.

Règlement sur le brouillage radioélectrique du ministère des Communications

Cet appareil numérique respecte les limites de bruits radioélectriques visant les appareils numériques de classe A prescrites dans le Règlement sur le brouillage radioélectrique du ministère des Communications du Canada. Cet appareil numérique de la Classe A est conforme à la norme NMB-003 du Canada.

## European Union and European Free Trade Association (EFTA) Regulatory Compliance

This equipment may be operated in the countries that comprise the member countries of the European Union and the European Free Trade Association. These countries, listed in the following paragraph, are referred to as The European Community throughout this document:

AUSTRIA, BELGIUM, BULGARIA, CYPRUS, CZECH REPUBLIC, DENMARK, ESTONIA, FINLAND, FRANCE, GERMANY, GREECE, HUNGARY, IRELAND, ITALY, LATVIA, LITHUANIA, LUXEMBOURG, MALTA, NETHERLANDS, POLAND, PORTUGAL, ROMANIA, SLOVAKIA, SLOVENIA, SPAIN, SWEDEN, UNITED KINGDOM, ICELAND, LICHTENSTEIN, NORWAY, SWITZERLAND

## Declaration of Conformity

Marking by this symbol indicates compliance with the Essential Requirements of the EMC Directive of the European Union 2004/108/EC.



This equipment meets the following conformance standards:

### Safety:

CB- IEC 60065:2001 + A1:2005

NRTL - UL 60065:2003 R11.06, CSA C22.2 NO. 60065:2003 + A1:06

GS - EN 60065:2002 + A1

Additional licenses issued for specific countries available on request.

### Emissions:

EN 55103-1: 1996

EN61000-3-2:2006, EN61000-3-3:1995 +A1:2001 +A2:2005

### Immunity:

EN 55103-2: 1996

EN61000-4-2:1995 + A1:1999 + A2:2001, EN61000-4-3:2006, EN61000-4-4:2004,

EN 61000-4-5: 2005, EN 610004-6:2007, EN61000-4-11:2004

The product is also licensed for additional country specific standards as required for the International Marketplace.



### Warning!

This is a Class A product. In a domestic environment, this product may cause radio interference, in which case, the user may be required to take appropriate measures.

**Achtung!** Dieses ist ein Gerät der Funkstörgrenzwertklasse A. In Wohnbereichen können bei Betrieb dieses Gerätes Rundfunkstörungen auftreten, in welchen Fällen der Benutzer für entsprechende Gegenmaßnahmen verantwortlich ist.

**Attention!** Ceci est un produit de Classe A. Dans un environnement domestique, ce produit risque de créer des interférences radioélectriques, il appartiendra alors à l'utilisateur de prendre les mesures spécifiques appropriées.

## Korea KCC Compliance Statement

### 1) Class A ITE

<p>A급 기기 (업무용 방송통신기기)</p>	<p>이 기기는 업무용 (A 급) 으로 전자파적합등록을 한 기기이오니 판매자 또는 사용자는 이 점을 주의하시기 바라며, 가정외의 지역에서 사용하는 것을 목적으로 합니다.</p>
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### 1) Class A device

<p>Class A (Broadcasting and Communication Equipment for Business Use)</p>	<p>Please note that this equipment has obtained EMC registration for business use (Class A), and it is intended to use in other than home area.</p>
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## Taiwan Compliance Statement

警告使用者：  
這是甲類的資訊產品，在居住的環境中使用時，可能會造成射頻干擾，在這種情況下，使用者會被要求採取某些適當的對策。

This is a Class A product based on the standard of the Bureau of Standards, Metrology and Inspection (BSMI) CNS 13438, Class A.

## Japanese Compliance Statement

1. Class A ITE

この装置は、クラスA 情報技術装置です。この装置を家庭環境で使用すると電波妨害を引き起こすことがあります。この場合には使用者が適切な対策を講ずるよう要求されることがあります。VCCI-A

This is a Class A product based on the standard of the VCCI Council (VCCI V-3/2008.04). If this equipment is used in a domestic environment, radio interference may occur, in which case, the user may be required to take corrective actions.

## Translated caution statements, warning conventions and warning messages

The following caution statements, warning conventions, and warning messages apply to this product and manual.



Warning Symbol



Caution Symbol

## Before operating your unit, please read the instructions in this document



### Warning!

Read and follow all warning notices and instructions marked on the product or included in the documentation.

**Avertissement !** Lisez et conformez-vous à tous les avis et instructions d'avertissement indiqués sur le produit ou dans la documentation.

**Warnung!** Lesen und befolgen Sie die Warnhinweise und Anweisungen, die auf dem Produkt angebracht oder in der Dokumentation enthalten sind.

**¡Advertencia!** Lea y siga todas las instrucciones y advertencias marcadas en el producto o incluidas en la documentación.

**Aviso!** Leia e siga todos os avisos e instruções assinalados no produto ou incluídos na documentação.

**Avviso!** Leggere e seguire tutti gli avvisi e le istruzioni presenti sul prodotto o inclusi nella documentazione.



**Warning!**

Do not use this device near water and clean only with a dry cloth.

**Avertissement!** N'utilisez pas cet appareil près de l'eau et nettoyez-le seulement avec un tissu sec..

**Warnung!** Das Gerät nicht in der Nähe von Wasser verwenden und nur mit einem trockenen Tuch säubern.

**¡Advertencia!** No utilice este dispositivo cerca del agua y límpielo solamente con un paño seco.

**Aviso!** Não utilize este dispositivo perto da água e limpe-o somente com um pano seco.

**Avviso!** Non utilizzare questo dispositivo vicino all'acqua e pulirlo soltanto con un panno asciutto.

**Warning!**

Do not block any ventilation openings. Install in accordance with the manufacturer's instructions.

**Avertissement !** Ne bloquez aucune ouverture de ventilation. Suivez les instructions du fabricant lors de l'installation.

**Warnung!** Die Lüftungsöffnungen dürfen nicht blockiert werden. Nur gemäß den Anweisungen des Herstellers installieren.

**¡Advertencia!** No bloquee ninguna de las aberturas de la ventilación. Instale de acuerdo con las instrucciones del fabricante.

**Aviso!** Não obstrua nenhuma das aberturas de ventilação. Instale de acordo com as instruções do fabricante.

**Avviso!** Non ostruire le aperture di ventilazione. Installare in conformità con le istruzioni del fornitore.

**Warning!**

Do not install near any heat sources such as radiators, heat registers, stoves, or other apparatus (including amplifiers) that produce heat.

**Avertissement !** N'installez pas l'appareil près d'une source de chaleur telle que des radiateurs, des bouches d'air de chauffage, des fourneaux ou d'autres appareils (amplificateurs compris) qui produisent de la chaleur.

**Warnung!** Nicht in der Nähe von Wärmequellen wie Heizkörpern, Heizregistern, Öfen oder anderen Wärme erzeugenden Geräten (einschließlich Verstärkern) aufstellen.

**¡Advertencia!** No instale cerca de fuentes de calor tales como radiadores, registros de calor, estufas u otros aparatos (incluidos amplificadores) que generan calor.

**Aviso!** Não instale perto de nenhuma fonte de calor tal como radiadores, saídas de calor, fogões ou outros aparelhos (incluindo amplificadores) que produzam calor.

**Avviso!** Non installare vicino a fonti di calore come termosifoni, diffusori di aria calda, stufe o altri apparecchi (amplificatori compresi) che emettono calore.

**Warning!**

Refer all servicing to qualified service personnel. Servicing is required when the device has been damaged in any way, such as power-supply cord or plug is damaged, liquid has been spilled or objects have fallen into the device, the device has been exposed to rain or moisture, does not operate normally, or has been

dropped.

**Avertissement !** Référez-vous au personnel de service qualifié pour tout entretien. L'entretien est exigé quand l'appareil a été endommagé de quelque manière que ce soit, par exemple lorsque le cordon d'alimentation ou la prise sont endommagés, que du liquide a été versé ou des objets sont tombés dans l'appareil, que l'appareil a été exposé à la pluie ou à l'humidité, ne fonctionne pas normalement ou est tombé.

**Warnung!** Das Gerät sollte nur von qualifizierten Fachkräften gewartet werden. Eine Wartung ist fällig, wenn das Gerät in irgendeiner Weise beschädigt wurde, wie bei beschädigtem Netzkabel oder Netzstecker, falls Flüssigkeiten oder Objekte in das Gerät gelangen, das Gerät Regen oder Feuchtigkeit ausgesetzt wurde, nicht ordnungsgemäß funktioniert oder fallen gelassen wurde.

**¡Advertencia!** Consulte al personal calificado por cuestiones de reparación. El servicio de reparación se requiere cuando el dispositivo ha recibido cualquier tipo de daño, por ejemplo cable o espigas dañadas, se ha derramado líquido o se han caído objetos dentro del dispositivo, el dispositivo ha sido expuesto a la lluvia o humedad, o no funciona de modo normal, o se ha caído.

**Aviso!** Remeta todos os serviços de manutenção para o pessoal de assistência qualificado. A prestação de serviços de manutenção é exigida quando o dispositivo foi danificado mediante qualquer forma, como um cabo de alimentação ou ficha que se encontra danificado/a, quando foi derramado líquido ou caíram objetos sobre o dispositivo, quando o dispositivo foi exposto à chuva ou à humidade, quando não funciona normalmente ou quando foi deixado cair.

**Avviso!** Fare riferimento al personale qualificato per tutti gli interventi di assistenza. L'assistenza è necessaria quando il dispositivo è stato danneggiato in qualche modo, ad esempio se il cavo di alimentazione o la spina sono danneggiati, è stato rovesciato del liquido è stato rovesciato o qualche oggetto è caduto nel dispositivo, il dispositivo è stato esposto a pioggia o umidità, non funziona correttamente o è caduto.



**Caution!**

This device is a Class A product. Operation of this equipment in a residential area is likely to cause harmful interference, in which case users will be required to take whatever measures may be necessary to correct the interference at their own expense.

**Attention!** Le périphérique est un produit de Classe A. Le fonctionnement de cet équipement dans une zone résidentielle risque de causer des interférences nuisibles, auquel cas l'utilisateur devra y remédier à ses propres frais.

**Achtung!** Dies ist ein Gerät der Klasse A. Bei Einsatz des Geräts in Wohngebieten kann es Störungen des Radio- und Fernsehempfangs verursachen. In diesem Fall muss der Benutzer alle notwendigen Maßnahmen ergreifen, die möglicherweise nötig sind, um die Störungen auf eigene Rechnung zu beheben.

**¡Precaución!** Este es un producto clase A. El uso de este equipo en áreas residenciales puede causar interferencias nocivas, en cuyo caso, se requerirá que los usuarios tomen cualquier medida necesaria para corregir la interferencia por cuenta propia.

**Cuidado!** Este dispositivo é um produto Classe A. Operar este equipamento em uma área residencial provavelmente causará interferência prejudicial; neste caso, espera-se que os usuários tomem as medidas necessárias para corrigir a interferência por sua própria conta.

**Attenzione!** Questo dispositivo è un prodotto di Classe A. Il funzionamento di questo apparecchio in aree residenziali potrebbe causare interferenze dannose, nel cui caso agli utenti verrà richiesto di adottare tutte le misure necessarie per porre rimedio alle interferenze a proprie spese.

