

OG-SDI-DA Series

openGear Cards

Installation & Operation Guide

Version 1.1

Published: December 29, 2016



open**Gear**

AJA
VIDEO SYSTEMS

Because it matters.®

Table of Contents

Notices	4
Trademarks	4
Copyright	4
Contacting Support	4
Chapter 1: OG-SDI-DA Series	5
Card Overview	5
Features	5
OG-1x9-SDI-DA	5
OG-2x4-SDI-DA	5
Indicators	6
For OG-1x9-SDI-DA	6
For OG-2x4-SDI-DA	6
Block Diagram for OG-1x9-SDI-DA	6
Block Diagram for OG-2x4-SDI-DA in Dual 1x4 Mode	7
Block Diagram for OG-2x4-SDI-DA in 1x8 Mode	7
Connectors for	
OG-1x9-SDI-DA	7
Inverted and Non-Inverted Outputs	8
Connectors for	
OG-2x4-SDI-DA	8
Inverted and Non-Inverted Outputs	8
Connectors for	
OG-2x4-SDI-DA, 1x8 Mode	8
Inverted and Non-Inverted Outputs	8
openGear and AJA	8
Parts Lists	9
Installation	9
Summary	9
Unpacking	9
Rear BNC Card Installation	9
Front Card Installation	10
Cabling	11
Appendix A: OG-SDI-DA Series Specifications	12
OG-1x9-SDI-DA	12
Video Formats	12
Video Input Digital	12
Video Output Digital	12
Cable Equalization	12
Reclocking	12
Size	12
Weight	12
Power	12
Environment	12
OG-2x4-SDI-DA	13
Video Formats	13
Video Input Digital	13
Video Output Digital	13
Cable Equalization	13

Reclocking.....	13
Size.....	13
Weight	13
Power	13
Environment.....	13
Appendix B: Safety and Compliance	14
Federal Communications Commission (FCC) Compliance Notices	14
Class A Interference Statement	14
FCC Caution	14
Canadian ICES Statement.....	14
European Union and European Free Trade Association (EFTA)	
Regulatory Compliance.....	15
Declaration of Conformity	15
Recycling Notice	16
Korean KCC Compliance Statement	16
Taiwan Compliance Statement	16
Japanese Compliance Statement	16
Translated Warning and Caution Messages.....	17
Before Operation Please Read These Instructions	17
Warranty Information	25
Limited Warranty.....	25

Notices

Trademarks

AJA® and Because it matters.® are registered trademarks of AJA Video Systems, Inc. for use with most AJA products. AJA™ is a trademark of AJA Video Systems, Inc. for use with recorder, router, software and camera products. Because it matters.™ is a trademark of AJA Video Systems, Inc. for use with camera products.

CION®, Corvid Ultra®, Io®, Ki Pro®, KONA®, KUMO®, ROI® and T-Tap® are registered trademarks of AJA Video Systems, Inc.

AJA Control Room™, FiDO™, KiStor™, Science of the Beautiful™, TruScale™, TruZoom™, V2Analog™ and V2Digital™ are trademarks of AJA Video Systems, Inc.

AirPort, Apple, Apple logo, AppleShare, AppleTalk, FireWire, iPod, iPod touch, Mac, Macintosh and ProRes, are registered trademarks of Apple Inc. Final Cut Pro, QuickTime and QuickTime logo are trademarks of Apple Inc.

Avid, Avid DNxHD and Media Composer are registered trademarks of Avid Technology, Inc.

Adobe is a registered trademark of Adobe Systems Incorporated in the United States and/or other countries.

HDMI, the HDMI logo and High-Definition Multimedia Interface are trademarks or registered trademarks of HDMI Licensing, LLC.

DVI is a registered trademark of DDWG.

TASCAM is a registered trademark of TEAC Corporation.

Dolby and the double-D Dolby logo are registered trademarks of Dolby Laboratories Licensing Corporation.

openGear® Ross, ROSS, ROSS®, and MLE are registered trademarks of Ross Video.

DashBoard Control System™ is a trademark of Ross Video.

All other trademarks are the property of their respective holders.

Copyright

Copyright © 2016 AJA Video Systems, Inc. All rights reserved. All information in this manual is subject to change without notice. No part of the document may be reproduced or transmitted in any form, or by any means, electronic or mechanical, including photocopying or recording, without the express written permission of AJA Video Systems, Inc.

Contacting Support

When calling for support, have all information at hand prior to calling. To contact AJA for sales or support, use any of the following methods:

Telephone: +1.530.271.3190

FAX: +1.530.271.3140

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

Support Email: support@aja.com

Sales Email: sales@aja.com

Chapter 1: OG-SDI-DA Series



Card Overview

The OG-SDI-DA Series cards are state-of-the-art, openGear-compatible, 3G-SDI distribution amplifiers.

Features

- Automatic detection and re-clocking of 270Mb, 1.5Gb, and 3Gb SDI data rates
- Excellent input jitter tolerance and low jitter re-clocked outputs
- Excellent input/output return loss
- Input Present and Input SMPTE Lock LEDs (OG-1x9-SDI-DA)
- Input Present LEDs (OG-2x4-SDI-DA)
- Hot-swap capable
- Compatible with DFR-8321 and OG3 openGear frames
- Five-year international warranty with unlimited technical support

NOTE: OG-SDI-DA Series cards do not communicate with the DashBoard Control System.

OG-1x9-SDI-DA

For the OG-1x9-SDI-DA, the incoming SD, HD or 3G signal is distributed to each of the nine 3G-SDI outputs, allowing the same signal to be sent to multiple destinations simultaneously.

If the incoming SD, HD or 3G signal is one of the five SMPTE rates (270 Mbps, 1.483 Gbps, 1.485 Gbps, 2.966 Gbps, 2.970 Gbps), the signal will be reclocked, and both the SMPTE Lock LED and Signal Present LED will illuminate. Otherwise, if a non-SMPTE input is detected, the signal will bypass the reclocker and only the Signal Present LED will illuminate.

OG-2x4-SDI-DA

The OG-2x4-SDI-DA offers two modes: Dual 1x4 and 1x8. In either mode, the OG-2x4-SDI-DA allows the same signal or signals to be sent to multiple destinations simultaneously.

In Dual 1x4 Mode, the incoming SD, HD or 3G signals coming in through SDI Input 1 and SDI Input 2 are distributed to the two corresponding sets of four 3G-SDI outputs. The two DAs are completely independent.

In 1x8 Mode, the incoming SD, HD or 3G signal coming in through SDI Input 1 is distributed to the eight 3G-SDI outputs--SDI 1 Outputs 1 - 4, and SDI 2 Outputs 1 - 4. SDI Input 2 is unused.

The incoming SD, HD or 3G signal(s) will be reclocked if it is one of the five SMPTE rates (270 Mbps, 1.483 Gbps, 1.485 Gbps, 2.966 Gbps, 2.970 Gbps). Otherwise the signal(s) will bypass the reclocker and be present at the outputs.

When a SD, HD, or 3G signal is detected, whether it is SMPTE or non-SMPTE, the Signal Present 1 and/or Signal Present 2 LEDs will illuminate, depending on where the signal input is detected.

Indicators

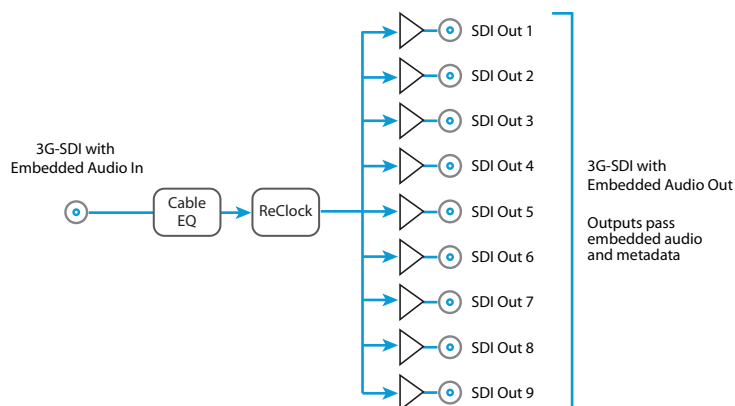
For OG-1x9-SDI-DA LEDs on the front (near door) of each card indicate, from top to bottom:

- DC power detected (green)
- Input signal present (green)
- Input reclocker locked (green)

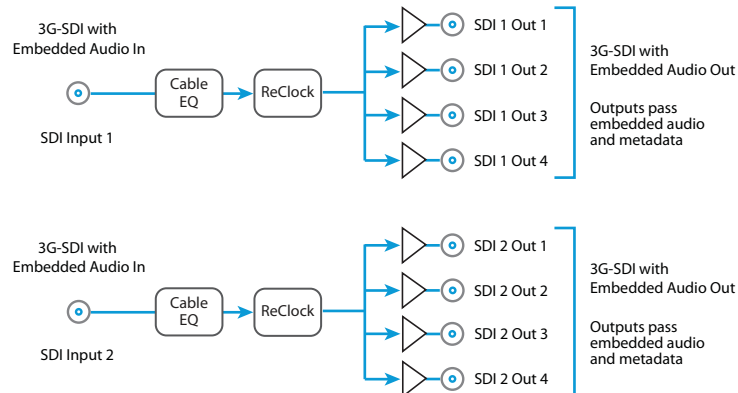
For OG-2x4-SDI-DA LEDs on the front (near door) of each card indicate, from top to bottom:

- DC power detected (green)
- Input 1 signal present (green)
- Input 2 signal present (green)

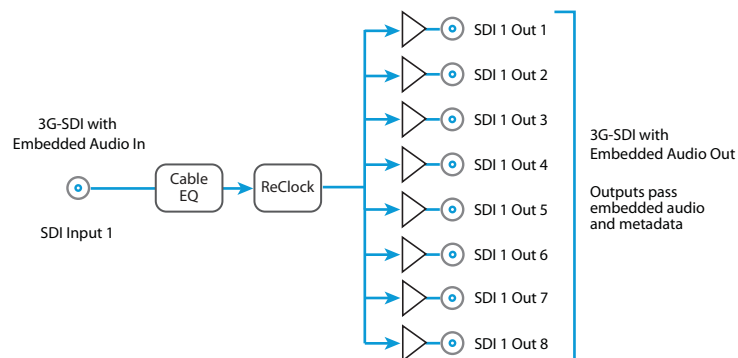
Block Diagram for OG-1x9-SDI-DA



Block Diagram for OG-2x4-SDI-DA in Dual 1x4 Mode

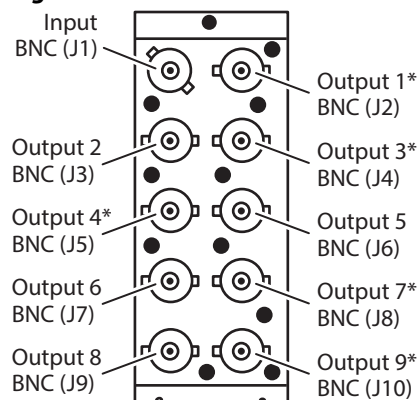


Block Diagram for OG-2x4-SDI-DA in 1x8 Mode



Connectors for OG-1x9-SDI-DA

Figure 1. Rear View of OG-1x9-SDI-DA Card Connectors



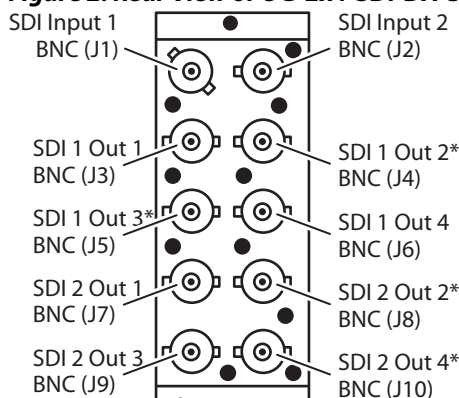
* Non Inverting Outputs

Inverted and Non-Inverted Outputs

Five of the outputs (1, 3, 4, 7, 9) are non-inverting. These are suitable for level-sensitive signaling, such as DVB-ASI. The other four outputs (2, 5, 6, 8) are identical, except inverted. All outputs are fully SDI compatible.

Connectors for OG-2x4-SDI-DA

Figure 2. Rear View of OG-2x4-SDI-DA Card Connectors, Dual 1x4 Mode



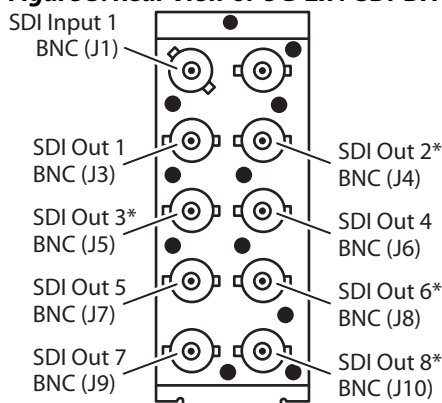
* Non Inverting Outputs

Inverted and Non-Inverted Outputs

In Dual 1x4 Mode, four of the outputs (SDI 1 Out 2, SDI 1 Out 3, SDI 2 Out 2, SDI 2 Out 4) are non-inverting. These are suitable for level-sensitive signaling, such as DVB-ASI. The other four outputs (SDI 1 Out 1, SDI 1 Out 4, SDI 2 Out 1, SDI 2 Out 3) are identical, except inverted. All outputs are fully SDI compatible.

Connectors for OG-2x4-SDI-DA, 1x8 Mode

Figure 3. Rear View of OG-2x4-SDI-DA Card Connectors, 1x8 Mode



* Non Inverting Outputs

Inverted and Non-Inverted Outputs

In 1x8 Mode, four of the outputs (SDI Out 2, SDI Out 3, SDI Out 6, SDI Out 8) are non-inverting. These are suitable for level-sensitive signaling, such as DVB-ASI. The other four outputs (1, 4, 5, 7) are identical, except inverted. All outputs are fully SDI compatible.

openGear and AJA

openGear is an open-architecture, modular frame system designed by Ross Video and supported by a diverse range of terminal equipment manufacturers, including AJA. Ross Video manufactures the frames, power supplies and network cards for openGear.

AJA Video is a leading manufacturer of video interface technologies, converters, digital video recording solutions and professional cameras, bringing high-quality, cost-effective products to the professional, broadcast and post-production markets. AJA products, including openGear cards, are designed and manufactured at our facilities in Grass Valley, California.

Parts Lists

Quantity	Description
1	SDI DA Front Card in ESD bag
1	BNC Rear Card

Installation

Summary

Installing an OG-SDI-DA Series card into a DFR-8321 or OG3 openGear frame consists of the following steps:

- Install the Rear BNC Card into the frame,
- insert the Front DA Card in the right (even numbered) slot of the pair,
- connect the BNC cabling.

	ESD Susceptibility - Static discharge can cause serious damage to sensitive semiconductor devices. Avoid handling circuit boards in high static environments such as carpeted areas, and when wearing synthetic fiber clothing. Always exercise proper grounding precautions when working on circuit boards and related equipment.
--	---

Unpacking

Unpack each openGear product you received from the shipping container and ensure that all items are included. If any items are missing or damaged, contact your sales representative or AJA directly.

Rear BNC Card Installation

1. Power down the openGear frame.
2. Ensure that the frame is properly installed.
3. Locate the card frame slot on the rear of the openGear frame into which you wish to install the openGear card.

NOTE: *An OG-SDI-DA Series card occupies two slots in the frame.*

4. Using a Phillips screwdriver, unscrew the top screw from the desired blank rear plate and remove the rear plate.
5. Seat the bottom of the Rear Card in the seating slot at the base of the frame back plane ([Figure 4](#)).

Figure 4. Rear Card Inserted Into Frame Seating Slot



6. Align the top screw of the Rear Card with the screw hole on the top edge of the frame back plane.
7. Ensure the Rear Card aligns with the desired card slot before tightening the screw.
8. Using a Phillips screwdriver, fasten the Rear Card to the frame back plane. Do not over tighten.
9. Ensure proper frame cooling and ventilation by having all rear frame slots covered with rear modules or blank metal plates if plates are not pre-installed.

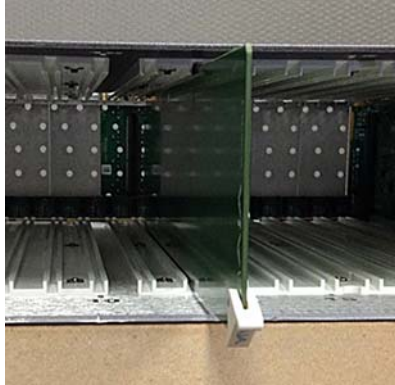
Front Card Installation

1. Open the openGear frame door as follows:
 - A. Gently pull the side door tabs towards the center of the door, releasing the door from the frame.
 - B. Using both hands, pull the door towards you. The door extender arms prevent the door from falling.
2. Locate the Rear Card you installed as described above. The interior slot number is dependent on the slot combinations into which you installed the Rear Card. This allows adequate spacing to avoid damaging the card, the cards installed in the neighboring slots, or both.
3. Hold the card by the edges and carefully align the card edges with the rails inside the frame. The slots are numbered starting from the left-most slot when facing the frame front.

NOTE: *OG-SDI-DA Series cards are installed into the right (even numbered) slot of the pair.*

4. Fully insert the card into the frame until the card is properly seated in the Rear Card. ([Figure 5](#)).

Figure 5. Front Card Inserted Into Slot



5. Close the frame door as follows:
 - A. Slide the door into the frame.
 - B. Pull and release the door tabs to ensure the frame door is securely locked to the frame.

Cabling

Refer to the following figures to identify the input and output signal connectors:

- [Figure 1 on page 7](#) for OG-1x9-SDI-DA
- [Figure 2 on page 8](#) for OG-2x4-SDI-DA (Dual 1x4 Mode)
- [Figure 3 on page 8](#) for OG-2x4-SDI-DA (1x8 Mode)

Appendix A: OG-SDI-DA Series Specifications

OG-1x9-SDI-DA

Video Formats	• 125 Mbps - 3 Gbps, format agnostic
Video Input Digital	• 1 x 3G-SDI BNC, SMPTE-259/292/424
Video Output Digital	• 9 x 3G-SDI BNC, SMPTE-259/292/424 • 5 outputs non-inverting
Cable Equalization	(Belden 1694A coax) • 270 Mbps, 350m • 1.5 Gbps, 200m • 3 Gbps, 120m
Reclocking	• 270 Mbps, 1.483 Gbps, 1.485 Gbps, 2.966 Gbps, 2.970 Gbps - Auto Select • All other rates are passed through and not reclocked
Size	• openGear standard form-factor, front slot and rear card • Slots: Two slots required for each card • Rear Card: OG-10-BNC-Rear • 10 x BNC, SMPTE-259/292/424
Weight	• 0.25 lb, 0.1 Kilograms
Power	• openGear frame compatible, 2.0 watts max per card
Environment	• Operating Temperature: 0C to 40C (32F to 104F) • Storage Temperature: -40C to 60C (-40F to 140F) • Operating Relative Humidity: 10-90% non-condensing • Operating Altitude: <3,000m (<10,000ft)

OG-2x4-SDI-DA

Video Formats

- 100 Mbps - 3 Gbps, format agnostic

Video Input Digital

- 1x8 Mode (Single 1x8 DA)
- 1 x 3G-SDI BNC, SMPTE-259/292/424
- Dual 1x4 Mode (Dual 1x4 DA)
- 2 x 3G-SDI BNC, SMPTE-259/292/424

Video Output Digital

- 1x8 Mode (Single 1x8 DA)
- 8 x 3G-SDI, SMPTE-259/292/424
- 4 outputs non-inverting
- Dual 1x4 Mode (Dual 1x4 DA)
- 8 x 3G-SDI, SMPTE-259/292/424
- 2 outputs non-inverting (each DA)

Cable Equalization

(Belden 1694A coax)

- 270 Mbps, 350m
- 1.5 Gbps, 200m
- 3 Gbps, 120m

Reclocking

- 270 Mbps, 1.483 Gbps, 1.485 Gbps, 2.966 Gbps, 2.970 Gbps - Auto Select
- All other rates are passed through and not reclocked

Size

- openGear standard form-factor, front slot and rear card
- Slots: Two slots required for each card
- Rear Card: OG-10-BNC-Rear
- 10 x BNC, SMPTE-259/292/424

Weight

- 0.25 lb, 0.1 Kilograms

Power

- openGear frame compatible, 2.0 watts max per card

Environment

- Operating Temperature: 0C to 40C (32F to 104F)
- Storage Temperature: -40C to 60C (-40F to 140F)
- Operating Relative Humidity: 10-90% non-condensing
- Operating Altitude: <3,000m (<10,000ft)

Appendix B: Safety and 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 residential 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. 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:* EN 60065: 2002 + A1: 2006 + A11: 2008 + A2: 2010 + A12: 2011 (Bauart License)
IEC 60065: 2001 + A1: 2005 + A2: 2010 (CB Scheme Report/Certificate)
Additional licenses issued for specific countries available on request.
- Emissions:* EN 55032: 2012, CISPR 22: 2008, EN 55022: 2010, EN 61000-3-2: 2009, EN 61000-3-3:2008
- Immunity:* EN 55103-2: 2009, EN 61000-4-2:2009, EN 61000-4-3:2010, EN 61000-4-4:2010, EN 61000-4-5:2005, EN 61000-4-6:2009 , EN 61000-4-11:2004
- Environments: E2, E3 and E4
- 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.

Recycling Notice

	This symbol on the product or its packaging indicates that this product must not be disposed of with your other household waste. Instead, it is your responsibility to dispose of your waste equipment by handing it over to a designated collection point for the recycling of waste electrical and electronic equipment. The separate collection and recycling of your waste equipment at the time of disposal will help conserve natural resources and ensure that it is recycled in a manner that protects human health and the environment. For more information about where you can drop off your waste for recycling, please contact your local authority, or where you purchased your product.
---	---

Korean KCC Compliance Statement

A급 기기 (업무용 방송통신기자재) Class A (Broadcasting Communication Equipment for Office Use)	이 기기는 업무용(A급) 전자파적합기기로서 판매자 또는 사용자는 이 점을 주의하시기 바라며, 가정외의 지역에서 사용하는 것을 목적으로 합니다. As an electromagnetic wave equipment for office use (Class A), this equipment is intended to use in other than home area. Sellers or users need to take note of this.
---	---

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. In a domestic environment this product may cause radio interference in which case the user may be required to take adequate measures.

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-3/2015.04). 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 Warning and Caution Messages

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



Warning Symbol



Hazard Symbol



Caution Symbol

Before Operation Please Read These Instructions

	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 objectos 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.
	Warning! Disconnect the external AC power supply line cord(s) from the mains power before moving the unit. Avertissement! Retirez le ou les cordons d'alimentation en CA de la source d'alimentation principale lorsque vous déplacez l'appareil. Warnung! Trennen Sie die Wechselstrom-Versorgungskabel vom Netzstrom, bevor Sie das Gerät verschieben. ¡Advertencia! Cuando mueva la unidad desenchufe de la red eléctrica el/los cable(s) de la fuente de alimentación CA tipo brick. Advertência! Remova os cabos CA de alimentação brick da rede elétrica ao mover a unidade. Avvertenza! Scollegare il cavo dell'alimentatore quando si sposta l'unità.

	Hazard Warning! High Voltage. This situation or condition can cause injury due to electric shock. Avertissement! Tension élevée. Cette situation ou condition peut causer des blessures dues à un choc électrique. Warnung! Hochspannung. Diese Situation oder Bedingung kann zu Verletzungen durch Stromschlag führen. ¡Advertencia! Alto voltaje . Esta situación o condición puede causar lesiones debidas a una descarga eléctrica. Aviso! Alta Tensão . Esta situação ou condição pode causar danos devido a choques elétricos. Avviso! Alta tensione. Questa situazione o condizione può causare lesioni a causa di scosse elettriche.
	Warning! Only use attachments and accessories specified and/or sold by the manufacturer. Avertissement! Utilisez seulement les attaches et accessoires spécifiés et/ou vendus par le fabricant. Warnung! Verwenden Sie nur Zusatzgeräte und Zubehör angegeben und / oder verkauft wurde durch den Hersteller. ¡Advertencia! Utilice solamente los accesorios y conexiones especificados y/o vendidos por el fabricante. Aviso! Utilize apenas equipamentos/acessórios especificados e/ou vendidos pelo fabricante. Avviso! Utilizzare soltanto i collegamenti e gli accessori specificati e/o venduti dal produttore.

**Warning!**

Do not defeat the safety purpose of the polarized or grounding-type plug. A polarized plug has two blades with one wider than the other. A grounding type plug has two blades and a third grounding prong. The wide blade or the third prong are provided for your safety. If the provided plug does not fit into your outlet, consult an electrician for replacement of the obsolete outlet.

Avertissement! La sécurité de la prise polarisée ou de la prise de type mise à la terre ne doit en aucun cas être empêchée de fonctionner. Une prise polarisée a deux broches, l'une étant plus large que l'autre. Une prise de type mise à la terre a deux broches et une troisième broche pour la mise à la terre. La broche large ou la troisième broche sont fournies pour votre sécurité. Si la prise fournie ne s'insère pas dans votre prise femelle, consultez un électricien pour le remplacement de la prise femelle obsolète.

Warnung! Der Sicherheitszweck des gepolten bzw. Schukosteckers ist zu berücksichtigen. Ein gepolter Stecker verfügt über zwei Pole, von denen einer breiter als der andere ist. Ein Schukostecker verfügt neben den zwei Polen noch über einen dritten Pol zur Erdung. Der breite Pol bzw. der Erdungspol dienen der Sicherheit. Wenn der zur Verfügung gestellte Stecker nicht in Ihren Anschluss passt, konsultieren Sie einen Elektriker, um den veralteten Anschluss zu ersetzen.

¡Advertencia! No eche por tierra la finalidad del tipo de enchufe polarizado con conexión a tierra. Un enchufe polarizado tiene dos espigas, una más ancha que la otra. Un enchufe con conexión a tierra tiene dos espigas iguales y una tercera espiga que sirve para la conexión a tierra. La espiga ancha, o la tercera espiga, sirven para su seguridad. Si el enchufe suministrado no encaja en el tomacorriente, consulte con un electricista para reemplazar el tomacorriente obsoleto.

Aviso! Não anule a finalidade da segurança da ficha polarizada ou do tipo ligação terra. Uma ficha polarizada tem duas lâminas sendo uma mais larga do que a outra. Uma ficha do tipo de ligação à terra tem duas lâminas e um terceiro terminal de ligação à terra. A lâmina larga ou o terceiro terminal são fornecidos para sua segurança. Se a ficha fornecida não couber na sua tomada, consulte um electricista para a substituição da tomada obsoleta.

Avviso! Non compromettere la sicurezza della spina polarizzata o con messa a terra. Una spina polarizzata ha due spinotti, di cui uno più largo. Una spina con messa a terra ha due spinotti e un terzo polo per la messa a terra. Lo spinotto largo o il terzo polo sono forniti per motivi di sicurezza. Se la spina fornita non si inserisce nella presa di corrente, contattare un elettricista per la sostituzione della presa obsoleta.

	Warning! Since the Mains plug is used as the disconnection for the device, it must remain readily accessible and operable. Avertissement! Puisque la prise principale est utilisée pour débrancher l'appareil, elle doit rester aisément accessible et fonctionnelle. Warnung! Da der Netzstecker als Trennvorrichtung dient, muss er stets zugänglich und funktionsfähig sein. ¡Advertencia! Puesto que el enchufe de la red eléctrica se utiliza como dispositivo de desconexión, debe seguir siendo fácilmente accesible y operable. Aviso! Dado que a ficha principal é utilizada como a desconexão para o dispositivo, esta deve manter-se prontamente acessível e funcional. Avviso! Poiché il cavo di alimentazione viene usato come dispositivo di sconnessione, deve rimanere prontamente accessibile e operabile.
	Warning! Protect the power cord from being walked on or pinched particularly at plugs, convenience receptacles, and the point where they exit from the device. Avertissement! Protégez le cordon d'alimentation pour que l'on ne marche pas dessus ou qu'on le pince, en particulier au niveau des prises mâles, des réceptacles de convenance, et à l'endroit où il sort de l'appareil. Warnung! Vermeiden Sie, dass auf das Netzkabel getreten oder das Kabel geknickt wird, insbesondere an den Steckern, den Steckdosen und am Kabelausgang am Gerät. ¡Advertencia! Proteja el cable de energía para que no se le pise ni apriete, en especial cerca del enchufe, los receptáculos de conveniencia y el punto del que salen del equipo. Aviso! Proteja o cabo de alimentação de ser pisado ou de ser comprimido particularmente nas fichas, em tomadas de parede de conveniência e no ponto de onde sai do dispositivo. Avviso! Proteggere il cavo di alimentazione in modo che nessuno ci cammini sopra e che non venga schiacciato soprattutto in corrispondenza delle spine e del punto in cui esce dal dispositivo.
	Warning! Unplug this device during lightning storms or when unused for long periods of time. Avertissement! Débranchez cet appareil pendant les orages avec éclairs ou s'il est inutilisé pendant de longues périodes. Warnung! Das Gerät ist bei Gewitterstürmen oder wenn es über lange Zeiträume ungenutzt bleibt vom Netz zu trennen. ¡Advertencia! Desenchufe este dispositivo durante tormentas eléctricas o cuando no se lo utilice por largos periodos del tiempo. Aviso! Desconecte este dispositivo da tomada durante trovoadas ou quando não é utilizado durante longos períodos de tempo. Avviso! Utilizzare soltanto i collegamenti e gli accessori specificati e/o venduti dal produttore, quali il treppiedi e l'esoscheletro.

**Warning!**

Ensure Mains Power is disconnected before installing the OG-3-FR modules into the frame, or installing and removing options. If a Mains switch is not provided, the power cord(s) of this equipment provide the means of disconnection. The socket outlet must be installed near the equipment and must be easily accessible.

Avertissement ! Avant d'installer des modules OG-3-FR dans la structure, ainsi qu'avant d'installer ou d'enlever des options, assurez-vous d'avoir déconnecté l'alimentation électrique. S'il n'y a pas d'interrupteur électrique, il faut débrancher les câbles électriques de l'équipement. La prise électrique doit être située à proximité de l'équipement et doit être aisément accessible.

Achtung! Sicherstellen, dass die Netzleitung entkoppelt ist, bevor die OG-3-FR Module in das Gestell eingebaut oder Wahlteile eingebaut bzw. ausgebaut werden. Wenn kein Netzschalter vorgesehen ist, dient das bzw. dienen die Netzkabel dieser Vorrichtung als Entkopplungsmittel. Die Steckdose muss in der Nähe der Vorrichtung installiert und leicht zugänglich sein.

Avvertenza. Accertarsi che l'alimentazione di rete sia scollegata prima di installare i moduli OG-3-FR nel frame o di installare e rimuovere componenti opzionali. Se non è presente un interruttore di accensione/spengimento, occorre scollegare il cavo (o i cavi) di alimentazione di questo apparecchio dalla presa di corrente. La presa di corrente deve essere situata presso l'apparecchio e facilmente accessibile.

Aviso! Certifique-se que a fonte principal de energia elétrica está desconectada antes de instalar os módulos OG-3-FR no bastidor ou antes de instalar e remover opções. Se o interruptor principal não existir, o cabo elétrico deste equipamento proporciona o meio de desconexão. A tomada elétrica deverá ser instalada perto do equipamento e deverá ser de fácil acesso.

¡Advertencia! Asegúrese que la red de alimentación está desconectada antes de instalar los módulos OG-3-FR en el marco, o la instalación y extracción de opciones. Si no se proporciona un conmutador de red, el cable de alimentación de este equipo proporciona los medios de desconexión. El zócalo tomacorriente debe estar instalado cerca del equipo y debe ser fácilmente accesible.

	Warning! Dual Power Cord Notice-please read this. To reduce the risk of electrical shock,disconnect both power cords before servicing equipment. Avertissement ! Avis concernant la double alimentation électrique - à lire soigneusement. Pour éviter tout risque d'électrocution, débranchez les deux câbles électriques avant d'intervenir sur l'équipement. Achtung! Hinweis auf Doppel-Netzkabel-bitte lesen. Um das Risiko eines Elektroschocks zu verringern, müssen beide Netzkabel ausgestöpselt werden, bevor die Vorrichtung gewartet wird. Avvertenza. Avviso concernente il cavo di alimentazione doppio - leggere attentamente. Per ridurre il rischio di elettrocuzione, scollegare entrambi i cavi di alimentazione prima di eseguire la manutenzione o riparazioni di questo apparecchio. Aviso! Aviso de Cabo Elétrico Duplo - por favor, leia isto. Para reduzir o risco de choque elétrico, desconecte ambos os cabos elétricos antes de fazer manutenção ao equipamento. ¡Advertencia! Aviso del doble cable de alimentación - leer esto por favor. Para reducir el riesgo de descarga eléctrica, desconecte ambos cables de alimentación antes de dar servicio al equipo.
---	---

	Caution! The OG-3-FR front fan door is heavy. Remove with Caution. Attention! La porte du ventilateur avant OG- 3 - FR est lourde. Retirer avec précaution. Achtung! Die OG -3- FR -Frontlüfter Tür ist schwer. Bitte vorsichtig entfernen. ¡Precaución! La puerta del ventilador frontal OG- 3 -FR es pesado. Extraer con precaución. Atenção! A porta do ventilador frontal OG -3- FR é pesado. Remova com cuidado. Attenzione! La porta ventola anteriore OG -3 - FR è pesante. Rimuovere con cautela.
--	---

Warranty Information

Limited Warranty

AJA Video Systems, Inc. (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.

THIS WARRANTY IS GIVEN BY AJA VIDEO IN LIEU OF ANY OTHER WARRANTIES, EXPRESS OR IMPLIED. AJA VIDEO AND ITS VENDORS DISCLAIM ANY IMPLIED WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE. AJA VIDEO'S RESPONSIBILITY TO REPAIR OR REPLACE DEFECTIVE PRODUCTS IS THE WHOLE AND EXCLUSIVE REMEDY PROVIDED TO THE CUSTOMER FOR ANY INDIRECT, SPECIAL, INCIDENTAL OR CONSEQUENTIAL DAMAGES IRRESPECTIVE OF WHETHER AJA VIDEO OR THE VENDOR HAS ADVANCE NOTICE OF THE POSSIBILITY OF SUCH DAMAGES.