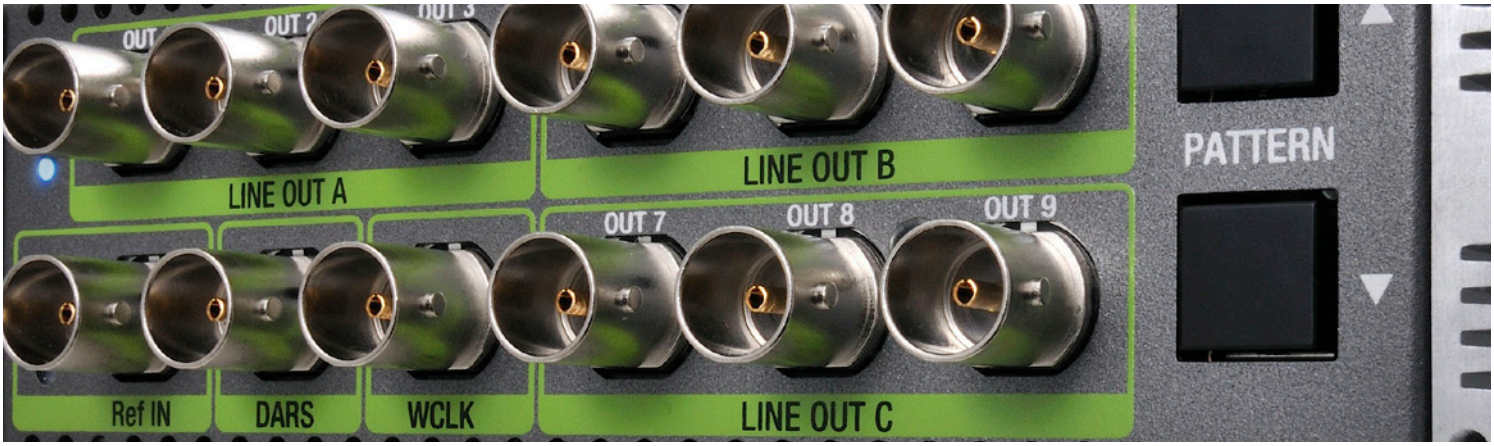
Datasheet

ADVC G-Series

Multipurpose Digital Video Converters



The ADVC G-Series of multipurpose digital video converters represent leading-edge technology as a part of Grass Valley's signal management solutions. Housed in a practical and compact 1/3 RU form factor, these four converters tackle a variety of different AV tasks and are particularly well suited to support events and staging, corporate AV centers and broadcast display applications.

ADVC G1: Any In to SDI (3G) with Frame Sync

ADVC G2: HDMI & SDI to Analog & SDI (3G) with Frame Sync

ADVC G3: 2 x SDI to HDMI with Multiplexing

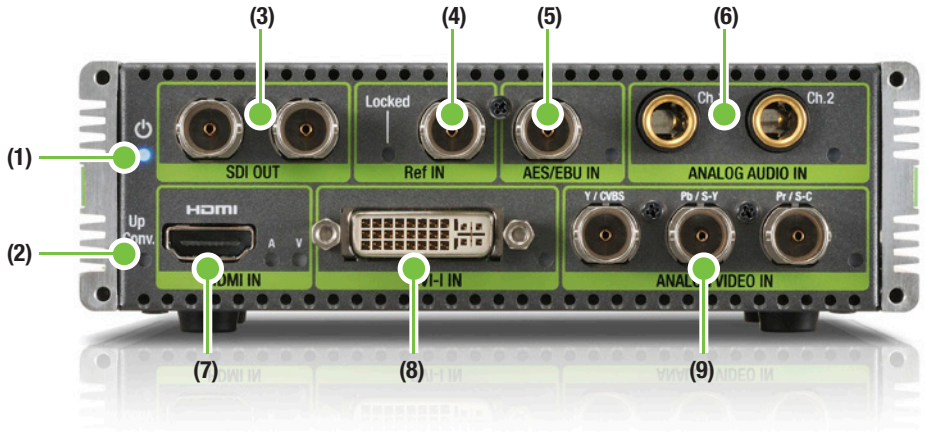
ADVC G4: Sync Generator with Reference In

ADVC G1

Any In to SDI Multifunctional Converter/Upconverter with Frame Synchronizer

The ADVC G1 from Grass Valley, a Belden Brand, is a compact and competitively priced converter, designed to convert and/or upconvert professional/broadcast signals to HD/SD-SDI supporting the latest 3G technology.

The ADVC G1 will convert and/or upconvert sources from HDMI, DVI, component, composite, S-Video, AES/EBU and analog audio to HD/SD-SDI (3G/1.5G support). The ADVC G1 can also be used as an audio embedder. It features a Reference In port which can serve as a frame synchronizer for analog inputs, eliminating the need to purchase separate expensive equipment.



(1) Power LED – Lights when the ADVC G1 is operating.

(2) Up Conv. LED – Lights in upconversion mode.

(3) SDI OUT – 3G/HD/SD-SDI output ports.

(4) Ref IN – Reference signal input port. The LED is lit when REF is selected for reference signal source, and if the reference signal input via Ref IN can be synchronized.

(5) AES/EBU IN – AES/EBU digital audio input port. The LED is lit when AES/EBU digital is selected for audio input.

(6) ANALOG AUDIO IN (1/4" TRS 2ch) – Balanced audio input ports. The LED is lit when balanced analog is selected for audio input.

(7) HDMI IN – HDMI input port. The LED marked with "V" blinks when HDMI is selected for video input, and the LED is lit when a stable signal input is detected. The LED marked with "A" is lit when HDMI embedded is selected for audio input.

(8) DVI-I IN – DVI-I input port. The LED blinks when DVI-D or DVI-A is selected for video input. The LED is lit when a stable signal input is detected.

(9) ANALOG VIDEO IN – Analog video input ports. The LED blinks when component, S-Video or composite is selected for video input. The LED is lit when a stable signal input is detected.

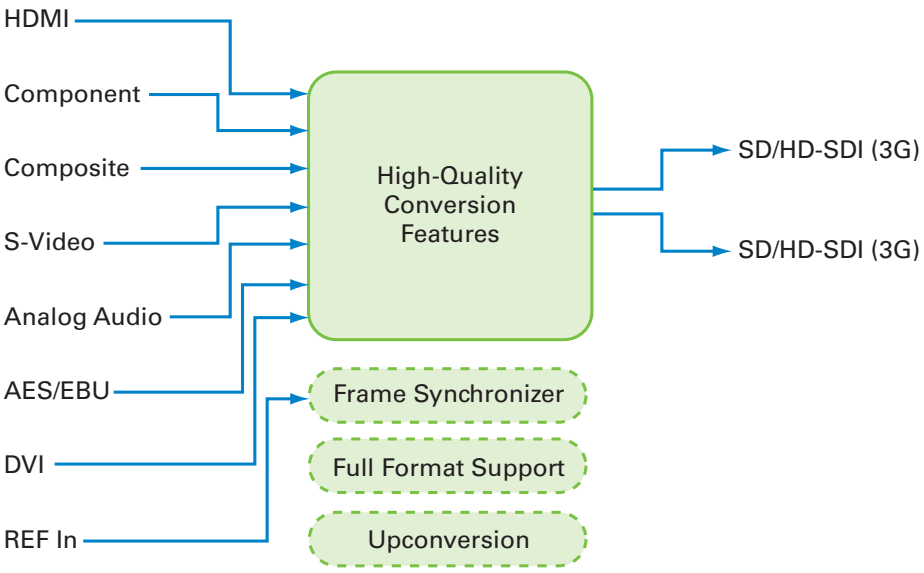
KEY FEATURES

- Any In to (3G) SDI:
  - Converts any type of connection to SDI
  - Incorporates latest 3G technology
- Feature-rich at an affordable price:
  - Latest technology upconverter
  - Integrated frame synchronizer
- Multipurpose converter:
  - DVI input with PC resolution support
  - Audio inputs for audio embedding

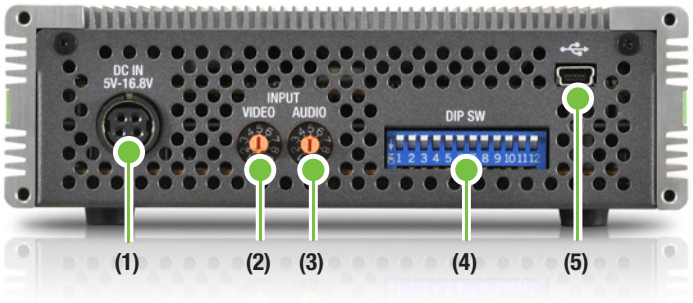
Applications

- Conversion from analog to SDI
- Conversion from DVI or HDMI to (3G) HD/SD-SDI
- High-quality upconversion from analog SD to HD or 3G
- Frame synchronization (house sync) of analog signals

Please note that the ADVC G1 does not support frame-rate conversion.



(1) Power connector – Connects to the DC plug of the accompanying AC adapter.
(2) VIDEO INPUT MODE switch – Use the switch to choose the video input.
(3) AUDIO INPUT MODE switch – Use the switch to choose the audio input.
(4) DIP switches – Use the switches to choose input/output settings.
(5) USB port – Used for firmware update.



SPECIFICATIONS

HDMI Input

Input connector: HDMI
Input resolution:
- 1080i 60/59.94/50
- 1080p 60/59.94/50/30/29.97/25/24/23.98
- 720p 60/59.94/50
- 480i/p 60/59.94
- 576i/p 50
- VGA (640x480), SVGA (800x600)
- XGA (1024x768), SXGA (1280x1024)
- FWXGA (1360x768)
- UXGA (1600x1200)

PC resolution framerate: 60 Hz
Input color format: YCbCr (4:2:2/4:4:4), RGB (4:4:4)
Deep color support: not supported
Color format conversion: YCbCr 4:2:2 12 bits

DVI-D Input

Input connector: DVI-I (DVI-D)
Input resolution:
- 1080i 60/59.94/50
- 1080p 60/59.94/50/30/29.97/25/24/23.98
- 720p 60/59.94/50
- 480p 60/59.94
- 576p 50
- VGA (640x480), SVGA (800x600)
- XGA (1024x768), SXGA (1280x1024)
- FWXGA (1360x768)
- UXGA (1600x1200)

PC resolution framerate: 60 Hz
Input color format: RGB (4:4:4)
Color format conversion: YCbCr 4:2:2 12 bits

DVI-A Input

Input connector: DVI-I (DVI-A)
Input resolution:
- VGA (640x480), SVGA (800x600)
- XGA (1024x768), SXGA (1280x1024)
- FWXGA (1360x768)
- UXGA (1600x1200)

Framerate: 60 Hz
Input color format: RGB
Color format conversion: YCbCr 4:2:2 12 bits
Input connector: YPbPr

Component Input

Input connectors: YPbPr
Input resolution:
- 1080i 60/59.94/50
- 1080p 30/29.97/25/24/23.98
- 1080PsF 24/23.98
- 720p 60/59.94/50
- 486i 59.94
- 483p 59.94
- 576i/p 50

Input color format: YPbPr
Color format conversion: YCbCr 4:2:2 10 bits
Component level: SMPTE/EBU N10, Betacam
SD pedestal: 0 IRE, 7.5 IRE

Composite Input

Input connector: CVBS (common with Component-Y)
Standard: NTSC, PAL
Input color format: YPbPr
Color format conversion: YCbCr 4:2:2 10 bits
SD pedestal: 0 IRE, 7.5 IRE
3DYC separation: not supported

S-Video Input

Input connectors: S-Y/S-C (common with Component-Pb,Pr)
Standard: NTSC, PAL
Input color format: YPbPr
Color format conversion: YCbCr 4:2:2 10 bits
SD pedestal: 0 IRE, 7.5 IRE

Audio Input

Input connectors:
- Balanced analog (2ch)
- AES/EBU digital (2ch)
- HDMI embedded (8ch)

(HDMI audio is not available when DVI is chosen for video input.)
HDMI/AES sample rate: 32/44.1/48 kHz
Analog ADC sample rate: 48 kHz
Sample size: 16/20/24 bits
Input level adjust: 0 dBu +4 dBu (available for analog audio)

Reference Input

Input connector: BNC
Sync signal: HD Tri-level/SD BB (auto-detect)

SDI Output

Output connectors: 3G/HD/SD-SDI (BNCx2) (outputs the same signals)
Output resolution:
- 1080i 60/59.94/50
- 1080p 60/59.94/50/30/29.97/25/24/23.98
- 1080PsF 30/29.97/25/24/23.98
- 720p 60/59.94/50/30/29.97/25/24/23.98
- 487i 59.94
- 576i 50

Output color format: YCbCr 4:2:2 (ITU-R BT.709/601) 10 bits (ITU-R BT.601 is in SD resolution)
3G-SDI mapping format:
- Level A: direct image mapping
- Level B: 2x SMPTE292 HD mapping

Frame freeze function: supported (keeps displaying the final frame when there is no video input signal)
Line 21 closed caption: not supported

Audio Output

Output connectors: SDI embedded (supports outputting with 8ch multiaudio in HDMI input mode. If AES/analog is selected, audio will be embedded to 1/2ch)
Sample rate: 48 kHz
Sample size: 24 bits (3G/HD), 20 bits (SD)
Output level adjust: not supported

Video Resizing

Upconversion: supported
Upconversion mode: (switchable with DIP SW5, SW6)
- Through
- 720p
- 1080i
- 1080p

Display mode:
- Standard
- Full screen
- Flex view

Framerate conversion: not supported
Internal processing: YCbCr 4:2:2 12 bits

Noise reduction:
- 3DNR
- Stream Clean Processor (quality of the highly compressed video source will be enhanced)
- OFF/Low/High/Auto

Image enhance: Image Enhance Processor can be switched on or off. Detail will be enhanced.
Total delay time:
- Interlace to interlace: 2.5 frame
- Interlace to progressive: 2.0 frame
- Progressive to interlace: 3.0 frame
- Progressive to progressive: 2.0 frame

Video Output Synchronize

REF Sync Video output:
- Reference signal (BB/HDSync)
- Internal

(REF Sync can be enabled/disabled with DIP SW3. When disabled, or when there is no signal input, the ADVC G1 automatically turns into Internal Sync mode.)

USB

Format: USB2.0 compliant
Connector: Mini B

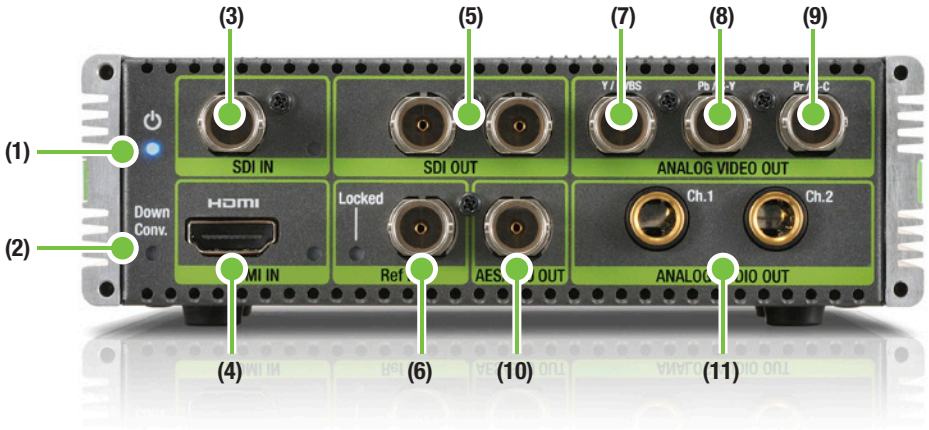
Specifications

Voltage:
- AC adapter:
- – Input: 100V – 240V (50 Hz/60 Hz)
- – Output: DC 12V 3A (max.)
- ADVC G1 unit:
- – Input: DC5 – 16.8V
- Maximum power consumption: 11.4W

Dimensions: 142.5 (W) x 42.5 (H) x 98.5 (D) mm (5.61 (W) x 1.67 (H) x 3.88 (D) in.) (projecting parts not included)
Weight: 700g (approx.)
Environmental Characteristics:
- Operating temperature: 0-40°C (32-104°F)
- Maximum humidity: 8%-80% (no condensation)

ADVC G2

HDMI & SDI to Analog & SDI Multifunctional Converter/Downconverter with Frame Synchronizer



Like other members of the ADVC G-Series family, the ADVC G2 combines the latest conversion technologies in a compact 1/3 RU form factor.

Featuring HDMI and HD/SD-SDI (3G/1.5G support) inputs and HD/SD-SDI (3G/1.5G support), component, composite, S-Video, AES/EBU and analog audio outputs, the new ADVC G2 plays the role of many converters for the price of one. The ADVC G2 also features 3G support, down-converting and a frame synchronizer, which becomes very useful when, for example, connecting the SDI out to a switcher.

The ADVC G2 can be used as a monitoring device for HDMI and HD/SD-SDI sources, but it can also act as an HDMI to HD/SD-SDI (3G/1.5G support) converter.

The AES/EBU and analog audio outputs, used for audio de-embedding, are a welcome feature in most monitoring applications.

(1) Power LED – Lights when the ADVC G2 is operating.

(2) Down Conv. LED – Lights in Downscaling mode.

(3) SDI IN – 3G-SDI input port. The LED blinks when SDI IN is selected for the input video channel. The LED is lit when a stable signal input is detected.

(4) HDMI IN – HDMI input port. The LED blinks when HDMI IN is selected for the input video channel. The LED is lit when a stable signal input is detected.

(5) SDI OUT – 3G-SDI output ports.

(6) Ref IN – Reference signal input port. The LED is lit when REF is selected for reference signal, and if the REF signal input can be synchronized.

(7) Y/CVBS – Outputs composite (BNC) or component (Y) signal based on the setting.

(8) Pb/S-Y – Outputs S-Video (Y) or component (Pb) signal based on the setting.

(9) Pr/S-C – Outputs S-Video (C) or component (Pr) signal based on the setting.

(10) AES/EBU OUT – Digital audio output port.

(11) ANALOG AUDIO OUT (Ch.1/2) – Balanced audio output ports. (1/4" TRS)

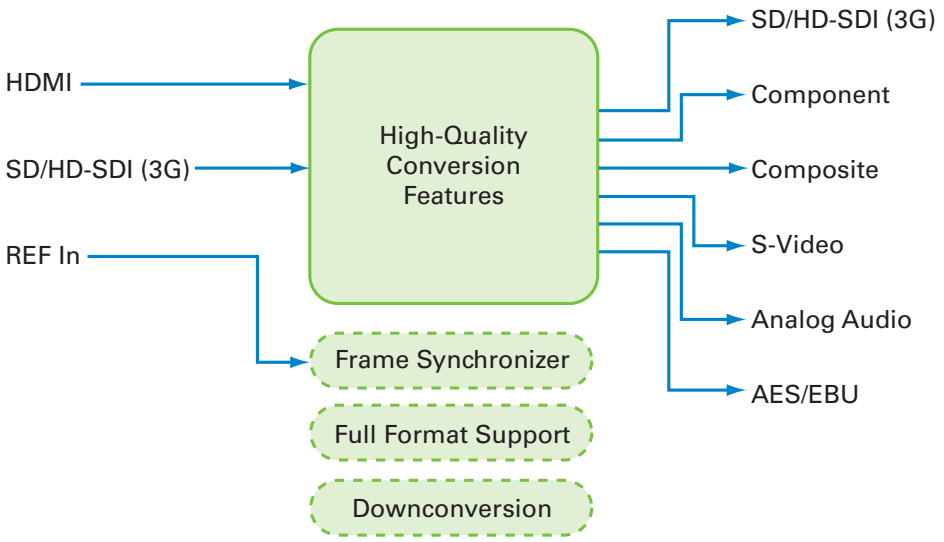
KEY FEATURES

- Latest technologies all in one box:
  - Full 3G support (up to 60p)
  - Integrated HDMI input
- Feature-rich at an affordable price:
  - Downconverter with manual on/off
  - Integrated frame synchronizer
- Multipurpose converter:
  - HDMI input for latest camcorder connections
  - Audio outputs for audio de-embedding

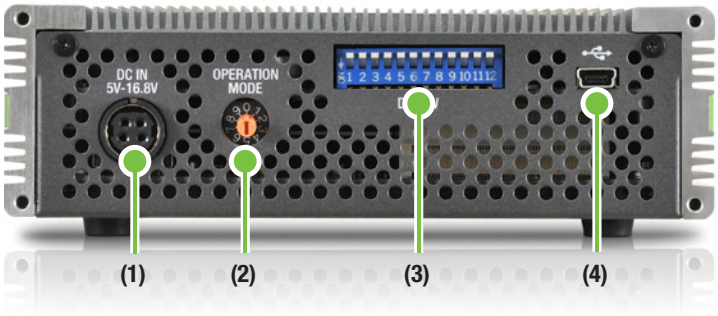
Applications

- Conversion from SDI to analog
- Conversion from HDMI to HD/SD-SDI or analog
- Downconversion from (3G) HD-SDI to SD-SDI or analog
- Downconversion from HDMI to analog or SD-SDI with audio
- Frame synchronization (house sync) for SDI signals

Please note that the ADVC G2 does not support frame-rate conversion.



(1) Power connector – Connects to the DC plug of the accompanying AC adapter.
(2) OPERATION MODE switch – Use the switch to choose the operation mode.
(3) DIP switches – Use the switches to choose input/output settings.
(4) USB port – Used for firmware update.



SPECIFICATIONS

SDI Input

Connector: SDI (SD/HD/3G) – BNC

Input rasters:

- 1920 x 1080
- 1920 x 1035
- 1280 x 720
- 720 x 486
- 720 x 576

Framerate: 60, 59.94, 50, 30, 29.97, 25, 24, 23.98 Hz

Color format: YCbCr

Sampling structure: 4:2:2

Sampling depth: 10 bits

Input frame buffer: None

Line 21 closed caption: supported only in SD input (THROUGH)

3G-SDI mapping: both Level A and B supported

HDMI Input

Connector: HDMI

Input rasters:

- 1920 x 1080
- 1280 x 720
- 720 x 480
- 720 x 576
- 640 x 480

Framerate: 60, 59.94, 50, 30, 29.97, 25, 24, 23.98 Hz

Color format: YCbCr/RGB

Sampling structure: 4:2:2 / 4:4:4

Sampling depth: 8 bits (up to 10 bits is available for YCbCr 4:2:2)

RGB → YCbCr conversion: supported

Input frame buffer: none

Audio Input

Connectors: SDI embedded/HDMI embedded

- Supports only LPCM
- Ch3/4 is switched in HDMI (complies with DCI standard)

Sample rate:

- 48 kHz (SDI)
- 48/44.1/32 kHz (HDMI) (converted to 48 kHz before output)

Sampling depth: up to 20/24 bits (up to 20 bits for SD-SDI)

Embedded audio: 8ch, 24 bits

Reference Input

Input connector: BNC

Sync signal: HD Tri-level/SD BB (auto-detect)

Video Output

Available to output in the same resolution as the input signal. Note that 3G can not be output as an analog signal

Connectors:

3G-SDI – BNC x2

- Component – BNC x3
- Composite – BNC (common with component Y)
- S-Video – BNC x2 (common with component Pb Pr)

Output rasters:

- 1920 x 1080
- 1920 x 1035
- 1280 x 720
- 720 x 486
- 720 x 576

Framerate: 60, 59.94, 50, 30, 29.97 25, 24, 23.98

Color format: YCbCr

Sampling structure: 4:2:2

Sampling depth: 10 bits

Frame buffer: 1 frame

SDI ANC data: not supported (outputs VITC through in SDI input mode)

3G-SDI mapping format:

- Level A: direct image mapping
- Level B: 2x SMPTE292 HD mapping

Downconverter

Input rasters:

- 1920 x 1080
- 1280 x 720 (black bars will be added to 1920 x 1035 video when input)

Output format:

- 720 x 486i59.94
- 720 x 576i50

Color format: YCbCr

Sampling structure: 4:2:2

Sampling depth: 10 bits

Framerate conversion: not supported

Frame buffer: none

Audio Output

Audio output connectors:

- Digital – AES/EBU – BNC
- Analog – balanced – 1/4" TRS
- SDI embedded

AES/EBU audio coding: LPCM

Analog audio level: 0/+4 dBu

Sample rate: 48 kHz (32, 44.1 kHz are not supported)

Sample size: 24 bits

Level adjust: not supported

Analog / AES/EBU channel select: can be selected with DIP switches

Embedded audio: 8ch, 20/24 bits (20 bits for SD-SDI)

USB

Format: USB2.0 compliant

Connector: Mini B

Specifications

Voltage:

- AC adapter:
- – Input: 100V – 240V (50 Hz/60 Hz)
- – Output: DC 12V 3A (max.)
- ADVC G2 unit:
- – Input: DC5 – 16.8V
- Maximum power consumption: 12.5W

Dimensions: 142.5 (W) x 42.5 (H) x 98.5 (D) mm (5.61 (W) x 1.67 (H) x 3.88 (D) in.) (projecting parts not included)

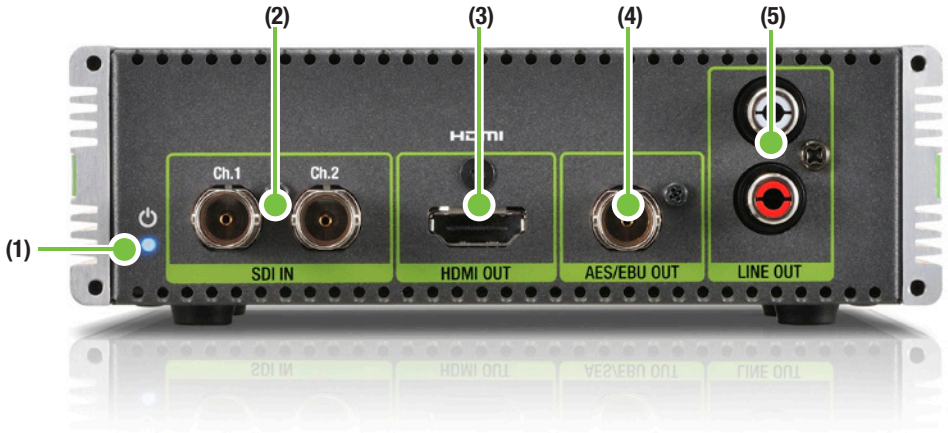
Weight: 700g (approx.)

Environmental characteristics:

- Operating temperature: 0-40°C (32-104°F)
- Maximum humidity: 8%-80% (no condensation)

ADVC G3

2X SDI to HDMI Converter/Multiplexer with 3D Support



(1) Power LED – Lights when the ADVC G3 is operating.
(2) SDI IN (Ch.1/2) – 3G-SDI input ports.
(3) HDMI OUT – HDMI output port.
(4) AES/EBU OUT – Digital audio output port.
(5) LINE OUT – Analog audio (L/R, 2ch) output ports.

The ADVC G3 is a full-featured HD/SD-SDI to HDMI converter with 3G technology and the latest HDMI connection support, designed to fulfill the demands of 3D monitoring and multiplexing.

The ADVC G3 can be used as a standard HD/SD-SDI to HDMI converter, but also features a second SDI input which can be used for left-eye/right-eye inputs. The ADVC G3 will, in real time, multiplex the two left-eye/right-eye signals for a 3D output through HDMI.

The analog audio and AES/EBU outputs, used for audio de-embedding, are a welcome feature in monitoring situations, for both 2D and 3D content.

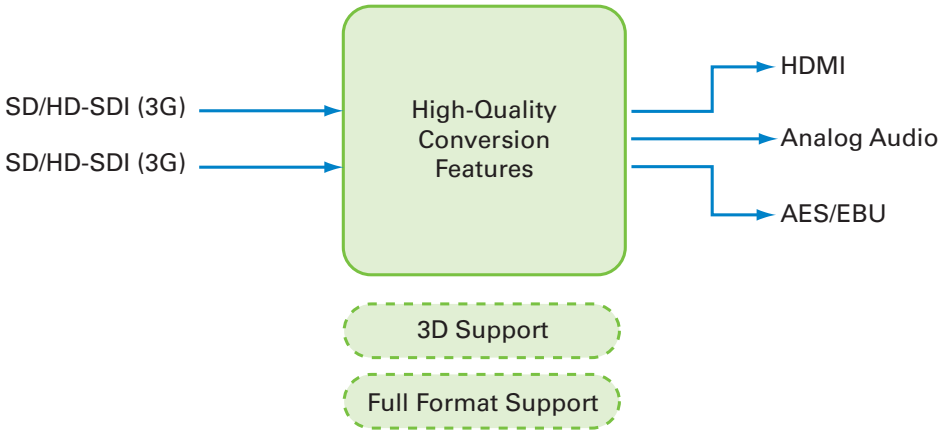
The ADVC G3 features 3D multiplexing technology supported by HDMI (Side-by-Side, Top-and-Bottom and Frame Packing — sequential), which can be turned on and off manually.

KEY FEATURES

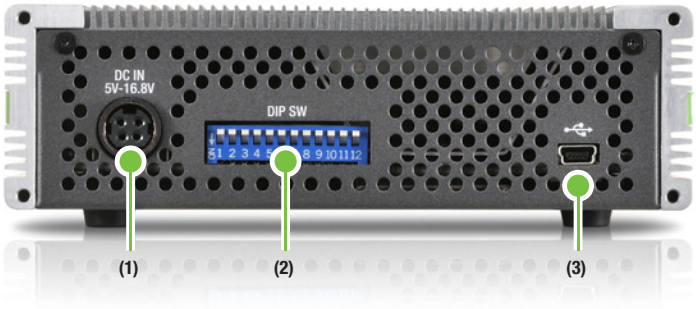
- The best tool for 3D!
  - Selectable muxing patterns: top-and-bottom, side-by-side, and frame-packing
- Incorporates the latest technology:
  - Full 3G support (up to 60p)
  - HDMI support
- Multipurpose converter:
  - 3D multiplexer
  - (3G) SDI to HDMI converter

Applications

- Conversion from HD/SD-SDI (3G/1.5G support) to HDMI (with audio)
- Multiplexing right-eye/left-eye
- SDI signals to HDMI 3D
- De-embedding audio



(1) Power connector – Connects to the DC plug of the accompanying AC adapter.
(2) DIP switches – Use the switches to choose input/output settings.
(3) USB port – Used for firmware update.



SPECIFICATIONS

Video Input

Input connectors: SDI (SD/HD/3G) – BNC x2 (supports both level A/B of 3G-SDI)
Input rasters:
- 1920 x 1080
- 1920 x 1035
- 1280 x 720
- 720 x 486
- 720 x 576

Input video resizing: not supported
Framerate: 60, 59.94, 50, 30, 29.97, 25, 24, 23.98 Hz
Color format: YCbCr
Sampling structure: 4:2:2
Sampling depth: 10 bits
Input frame buffer: none
Input video flywheel: not supported
Line 21 closed caption: not supported
SDI VANC: not supported
Widescreen: not supported
3G-SDI mapping format:
- Level A: direct image mapping
- Level B: 2x SMPTE292 HD mapping

Audio Input

Input connectors: SDI embedded
Sample rate: 48 kHz (32/44.1 kHz are not supported)
Sample size: 20/24 bits (20 bits for SD-SDI)
Embedded audio: 8ch, 24 bits

Video Output

Output connector: HDMI
Output rasters: resolution of the output signal is determined based on that of the input signal. 1920 x 1035, 1920 x 1080, 720 x 486, 720 x 480
- 1920 x 1080
- 1280 x 720
- 720 x 480
- 720 x 576

Color format: YCbCr/RGB
Sampling structure: 4:4:4
Sampling depth: 8 bits
3D structures:
- Frame Packing (does not support 1080p60/59/50)
- Side-by-Side (half)
- Top-and-Bottom

I P conversion: supported (available only for SD)
Widescreen display setting: supported (setting can be configured with DIP switches)
Output frame buffer: none
Output skew: 0-2 frame
Y Cb Cr RGB colorspace conversion: supported
Line 21 closed caption: not supported
Plug-and-play monitor with DVI: not supported

Audio Output

Output connectors:
- Digital – AES/EBU
- Analog – RCA 2ch
- HDMI embedded

S/PDIF audio coding: LPCM
Analog audio level: 2V RMS (+6 dBV)
Sample rate: 48 kHz (32/44.1 kHz are not supported)
Sample size: 20/24 bits (20 bits for SD-SDI input signal)
Level adjust: not supported
Embedded audio: 2/8ch, 24 bits
Channel swap: swaps Ch.3 and Ch.4 when outputting with 8 channels

3D Composer

Input connectors: SD/HD/3G-SDI x2
Input rasters:
- 1920 x 1080
- 1920 x 1035
- 1280 x 720
- 720 x 486
- 720 x 576

Output rasters: resolution of the output signal is determined based on that of the input signal. 1920 x 1035, 1920 x 1080, 720 x 486, 720 x 480
- 1920 x 1080
- 1280 x 720
- 720 x 480
- 720 x 576

Color format: YCbCr
Sampling structure: 4:2:2
Sampling depth: 10 bits
3D structures:
- Frame Packing
- Side-by-Side (half)
- Top-and-Bottom

Flywheel: not supported
Frame buffer: 1 frame
Output timing: uses recovered clock from the input channel

Redundant

Input connectors: SD/HD/3G-SDI x2
Input rasters: resolution of the output signal is determined based on that of the input signal. 1920 x 1035, 1920 x 1080, 720 x 486, 720 x 480
- 1920 x 1080
- 1920 x 1035
- 1280 x 720
- 720 x 486
- 720 x 576

Output rasters: resolution of the output signal is determined based on that of the input signal
- 1920 x 1080
- 1280 x 720
- 720 x 480
- 720 x 576

Color format: YCbCr
Sampling structure: 4:2:2
Sampling depth: 10 bits
Error checker: supported (detects errors when the format is converted even between the available formats)
Selector: selects primary channel except error frame
Flywheel: supported (pauses at the last frame. Audio is muted)
Frame buffer: 0-2 frame
Output timing: uses recovered clock from the input channel

USB

Format: USB2.0 compliant
Connector: Mini B

Specifications

Voltage:
- AC adapter:
- – Input: 100V – 240V (50 Hz/60 Hz)
- – Output: DC 12V 3A (max.)
- ADVC G3 unit:
- – Input: DC5 – 16.8V
- Maximum power consumption: 6W

Dimensions: 142.5 (W) x 42.5 (H) x 98.5 (D) mm (5.61 (W) x 1.67 (H) x 3.88 (D) in.) (projecting parts not included)
Weight: 650g (approx.)
Environmental characteristics:
- Operating temperature: 0-40°C (32-104°F)
- Maximum humidity: 8%-80% (no condensation)

ADVC G4

Sync Generator with Reference In

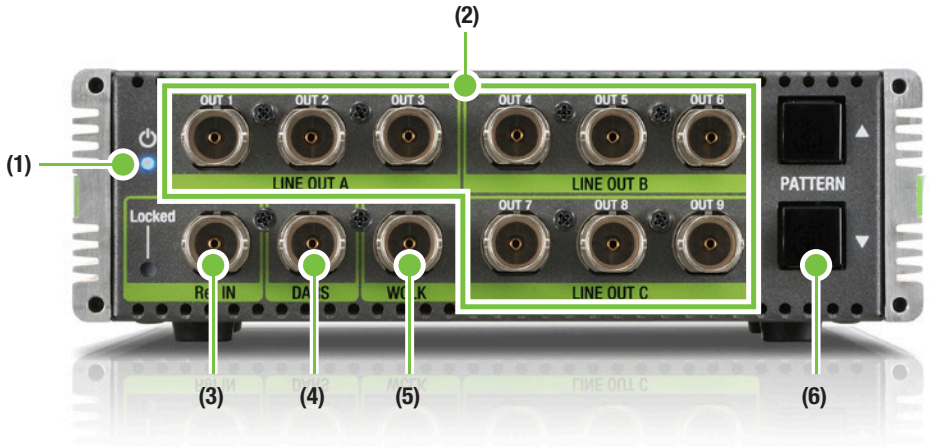
The ADVC G4 is more than just a compact and robust sync generator.

While most competitive products have only six outputs and restrictions on SD and HD signals, the ADVC G4 has nine outputs that can be individually controlled in groups of three.

For example, three outputs can be SD, the other six can be HD, or vice versa.

The ADVC G4 also includes a 48 kHz wordclock as well as a reference input, which allows it to be used as an extender when more than nine outputs are needed, or when an extension from the main system is necessary.

The ADVC G4 features the highest signal quality, best functionality, and the most comprehensive format support in the compact sync generator market.



(1) Power LED – Lights when the ADVC G4 is operating.

(2) OUT 1-9 – SYNC output ports. SD/HD setting can be individually specified in three groups: LINE OUT A, LINE OUT B and LINE OUT C. (The setting can be configured with DIP SW6, SW7, SW8.)

(3) Ref IN – Reference signal input port. The LED is lit when REF is selected for reference signal, and if the REF signal input can be synchronized.

(4) DARS – DARS (Digital Audio Reference Signal) output port.

(5) WCLK – Wordclock output port.

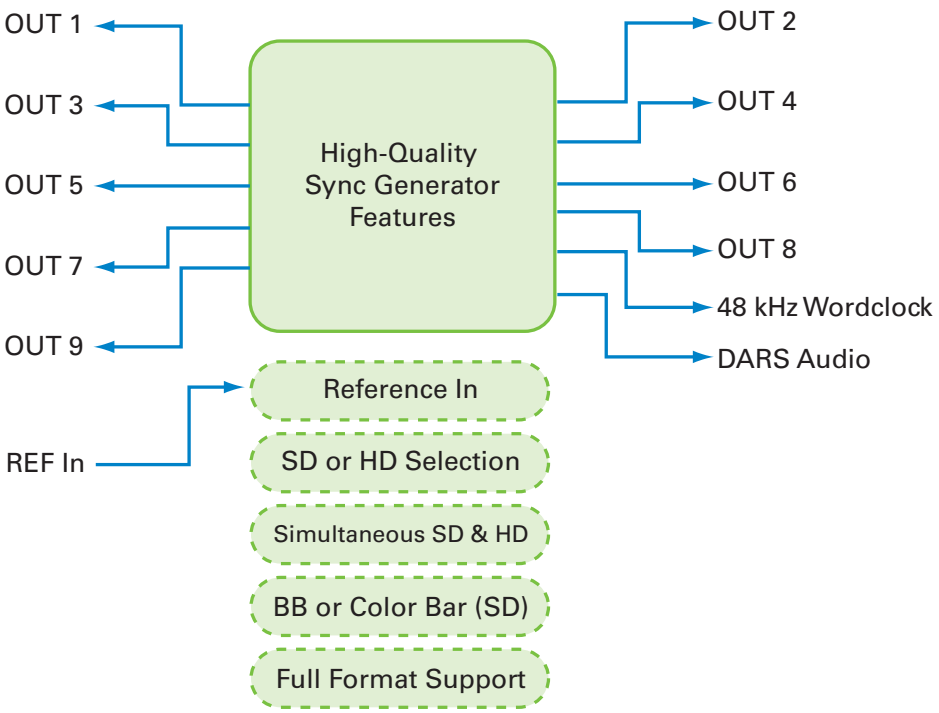
(6) PATTERN switches – Selects test pattern.

KEY FEATURES

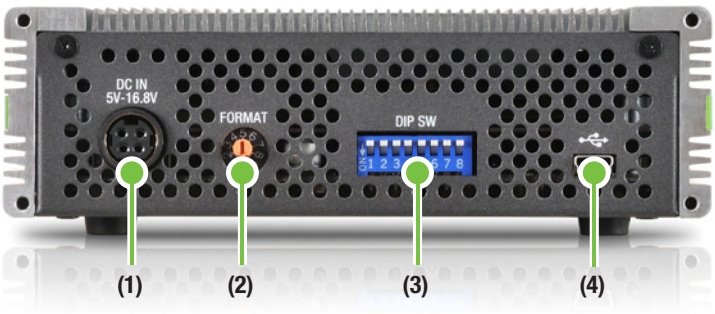
- Compact sync generator:
  - High-quality signals
  - Full format support
- Customizable output:
  - Select SD or HD in groups of 3
  - Simultaneous SD and HD outputs
- Feature-rich at an affordable price:
  - Reference in for extension
  - 48 kHz wordclock, DARS audio

Applications

- Provide reference signal for fly-cases or control rooms
- Add reference signal when the current reference distribution does not have enough outputs
- Synchronize a secondary local technical room to a primary room, with advanced timing
- Generating SD and HD reference with different timings to mix in a switcher
- Generating reference signals for ADVC G1 and G2 models when used in frame synchronizer mode



(1) Power connector – Connects to the DC plug of the accompanying AC adapter.
(2) Format switch – Use the switch to choose the output format.
(3) DIP switches – Use the switches to choose input/output settings.
(4) USB port – Used for firmware update.



SPECIFICATIONS

Video Reference Signal Output

Output connectors: BNC x 9 (SD/HD setting can be specified per LINE group)
- OUT1-3 (LineA)
- OUT4-6 (LineB)
- OUT7-9 (LineC)

Format:
- 1920 x 1080 p/PsF 23.98/24/25/29.97/30
- 1920 x 1080 i 50/59.94/60
- 1280 x 720 p 23.98/24/25/29.97/30/50/59.94/60
- 720 x 480 i 59.94
- 720 x 576 i 50

HD-Sync: Tri-level

SD-Sync: Black burst
- Can be switched to test pattern
- Compliant to SMPTE318M-B in NTSC format

Video/audio clock accuracy: +-4.0 ppm (for all operation temperatures)

VSYNC output delay between HD and SD output: none (for both REF sync and internal sync)

Reference Input

Reference input connector: BNC x 1 (for both SD/HD)

VSYNC output delay from locked reference input: none

Delay adjustment: not supported

Burst clock lock: not supported

SMPTE318M lock: not supported

Audio Reference Signal Output

Output connectors: BNC x 2
- DARS
- Wordclock

Sample rate: 48 kHz

DARS: AES-11, 48 kHz, grade-2 (can be switched between silent and 1 kHz tone)

Wordclock: 75Ω, 5 Vp-p

Test Pattern

NTSC:
- 75-75 full color-bar
- 100-75 full color-bar
- 100-100 full color-bar
- EIA color-bar
- ARIB color-bar
- RED field
- BLUE field
- GREEN field
- 100% white field
- 50% gray field
- Multiburst
- 100% ramp
- Staircase
- Modulated ramp
- Modulated staircase
- Shallow ramp
- NTC7
- Composite
- Dot
- Crosshatch
- Window

PAL:
- 75-75 full color-bar
- RED field
- BLUE field
- GREEN field
- 100% white field
- 50% gray field
- Multiburst (line 18)
- 100% ramp
- Staircase
- Modulated ramp
- Modulated staircase
- Shallow ramp
- Line 17
- Dot
- Crosshatch
- Window

USB

Format: USB2.0 compliant

Connector: Mini B

Specifications

Voltage:
- AC adapter
- – Input: 100V – 240V (50 Hz/60 Hz)
- – Output: DC 12V 3A (max.)
- ADVC G4 unit:
- – Input: DC5 – 16.8V
- Maximum power consumption: 4.9W

Dimensions: 142.5 (W) x 42.5 (H) x 98.5 (D) mm (5.61 (W) x 1.67 (H) x 3.88 (D) in.) (projecting parts not included)

Weight: 650g (approx.)

Environmental characteristics:
- Operating temperature: 0-40°C (32-104°F)
- Maximum humidity: 8%-80% (no condensation)

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