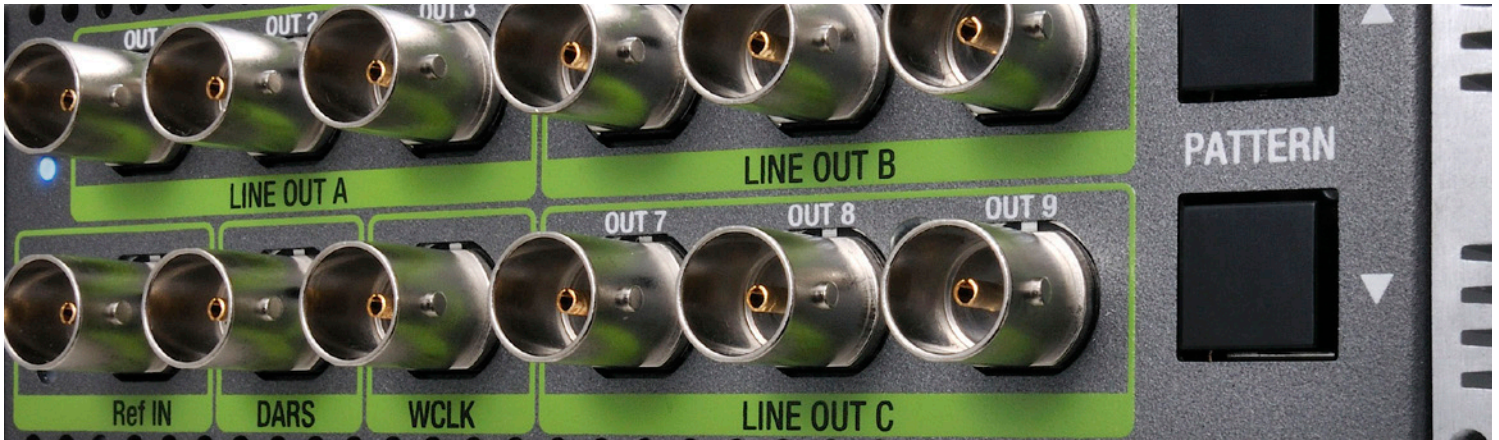# ADVC G2

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

The ADVC G2 features HDMI and 3G/HD/SD-SDI inputs and 3G/HD/SD-SDI, component, composite, S-Video, AES/EBU and analog audio outputs.

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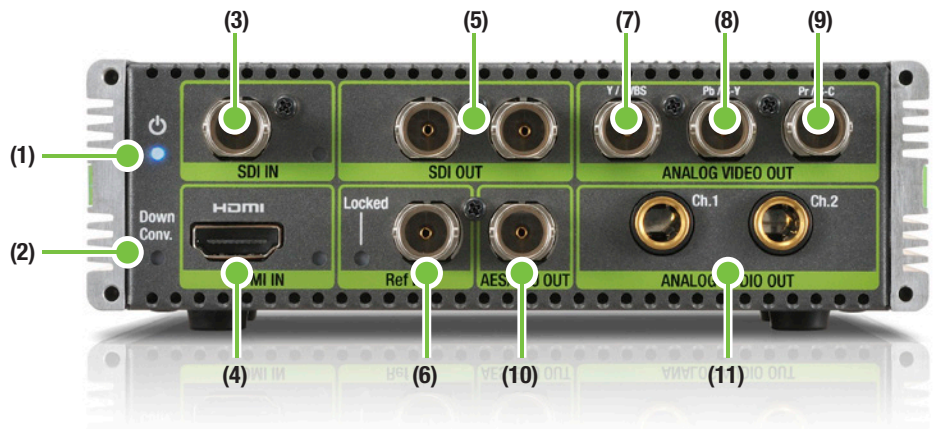
(1) Power LED – Lights when the ADVC G2 is operating.

(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.
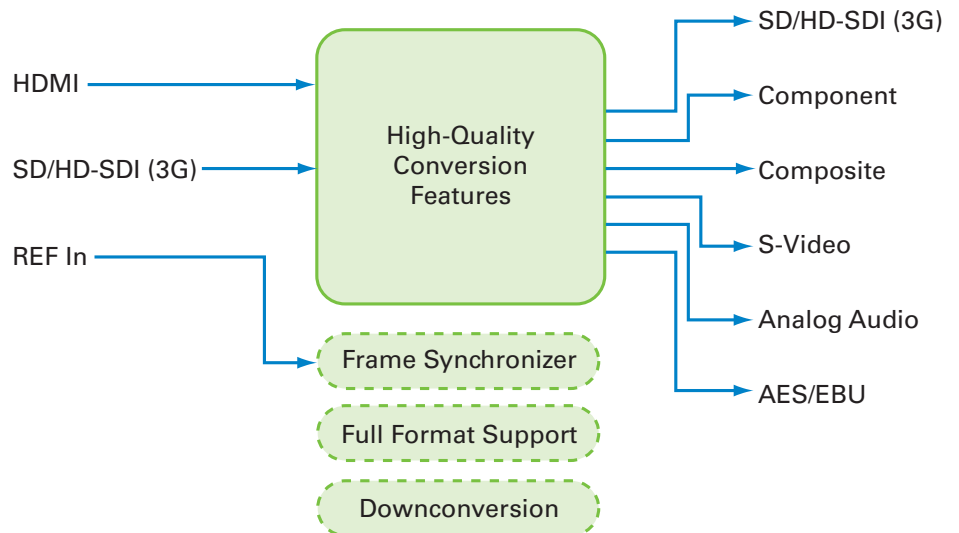
(1) Power connector – Connects to the DC plug of the accompanying AC adapter.

(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.
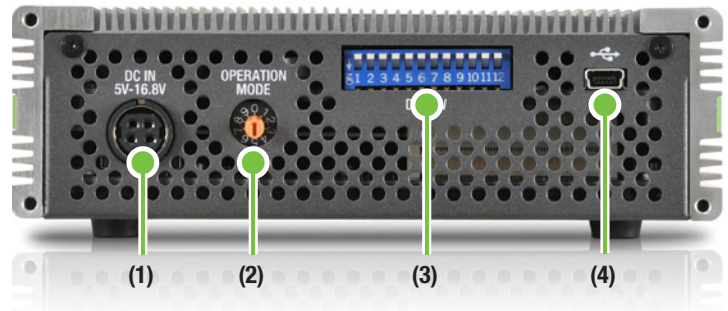
SPECIFICATIONS

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)