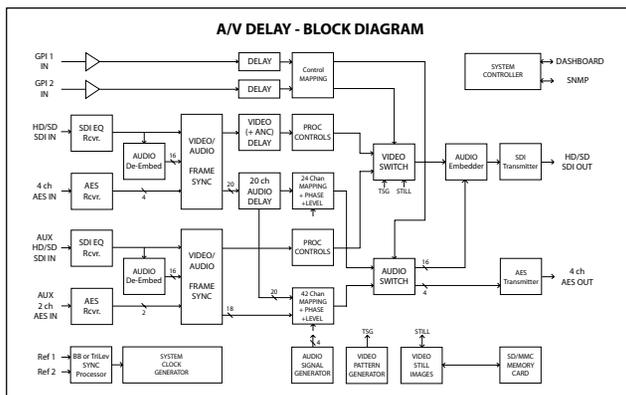


Specifications



Max Delay

1080i-60/59.94	6 seconds 10 frames
1080i-50	7 seconds 15 frames
1080i-24/23.98	7 seconds 22 frames
720p-60/59.94	7 seconds 8 frames
720p-50	8 seconds 28 frames
SD 483i (NTSC)	30 seconds 28 frames
SD 576i (PAL)	31 seconds 5 frames

Delay Adjust

Video:	1 frame increments
Audio offset:	0.25ms increments

Video Processing

Signal:	HD - 1.485Gb/s (SMPT 292M) SD - 270Mb/s (SMPT 259M)
Inputs:	2 BNCs, 75ohm, 800 mVpp HD - Auto EQ to 100 meters (Belden 8281) SD - Auto EQ to 280 meters (Belden 8281)
Output:	BNC, 75ohm, 800 mVpp HD Timing Jitter < 0.3UI SD Timing Jitter < 0.2UI

Formats:	1080i-60/59.94/50 1080PsF-24/23.98 720p-60/59.94/50 483i-59.94 576i-50
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Resolution:	10 bit, 4:2:2
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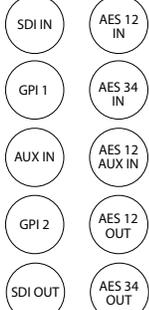
Audio Processing

Signal:	Embedded, AES/EBU SD (SMPT 272C) HD (SMPT 299M)
Inputs:	2 BNCs, 75ohm Transformer coupled
Outputs:	2 BNCs, 75ohm Transformer coupled
Sample Rate:	48KHz-synchronous
Resolution:	24 bit

Genlock Reference

Signals:	Bi-Lev (Black Burst) , Tri-Level
Inputs:	2 BNC loops, Hi-Z, on Frame

AV-DLY:



Control

GPI Inputs:	2 BNCs, internal pullup Activates on closure to ground
Remote Input:	RJ-45 Ethernet connector on Frame Dashboard

Memory Card

Type:	MMC, SD, SDHC
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Power

	10 Watts
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Warranty

	5 years parts and labor
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Specifications subject to change without notice.
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Cal Media's cards are 100% designed and manufactured in the USA.



California Media Engineering (Cal Media) is an active participant in the openGear consortium, manufacturing openGear platform cards that may be mixed and matched with a multitude of other vendors' cards providing powerful and customizable solutions. The founders of Cal Media Engineering have many years of experience designing and manufacturing professional audio/video analog and digital equipment used in film, television/radio broadcast, video production and post production. Cal Media Engineering brings a proven track record of excellent service and matching its customers' needs with the right product features.

For more information, please visit our website at www.calmedia.com.

Additional openGear Cards

5010 HD/SD AV SYNC+

The 5010 is a professional broadcast audio/video full frame synchronizer for high definition and standard definition signals. Audio embedding and de-embedding are standard features along with proc amp controls, color correction, test signals, still capture and storage. This card also supports an alternative split rear module configuration for SDI only with no AES, using only 1 slot position in the 20 slot frame.

5200 High Performance Analog-to-Digital Converter

Cal Media's 5200 openGear card is a professional broadcast quality HD/SD analog-to-digital converter with an audio embedder and full frame synchronizer. Engineered for high performance, the analog front end utilizes advanced video filtering and professional audio processing. The 5200 uses 12-bit 4:4:4 video conversion and 24-bit audio conversion.

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5000 HD/SD Audio-Video Delay System



Profanity Switching

- Switch to "Safe" inputs
- Switch audio and video independently
- 2 GPI control inputs
- Programmable reaction times
- Clean switching (NO clicks or pops)

Stadium Delay

- Adjust large video displays to audio system delay

Variable Audio/Video Delay

- 6.25 seconds at 1080i, 30.5 seconds in SD
- Lip sync correction
- Passes all VANC data including CEA-608/708
- 20 total channels of audio delay (4 AES + 16emb)

Additional Features

- Audio/Video full frame synchronizer
- Audio embedder / de-embedder with channel mapping
- Video test pattern / audio tone generator (20+ patterns)
- Still image store and display
- AES I/O, video and GPIs use only one slot

Multiple products in one card
for one price!



About the 5000

Concerned about wardrobe malfunctions, obscenities, or extreme violence being broadcast? Do you need a powerful solution for large video displays used in stadium or concert settings that need to be synchronized with delayed audio? The 5000 has proven to be a successful, low cost answer for all of these problems and more. From live events being broadcast on major networks, to live concerts featuring major superstars, Cal Media Engineering has been the chosen solution.

Audio/Video Delay

The 5000 provides variable delay of high definition and standard definition signals at the main SDI input. The delay is adjustable in video frame increments up to 6.25 seconds at 1080i resolution, and 30.5 seconds in standard definition.

All vertical ancillary data (VANC), including Closed Captions (CEA-608/708) and time-code, are delayed equal to the video signal.

All 16 embedded audio channels are de-embedded and processed independent of the video. Four AES audio inputs are also processed separately for a total of 20 channels. The audio delay automatically follows the video delay and may be offset by up to +/-500ms to allow for lip-sync correction.

Switching Capabilities

Controls are provided to eliminate objectionable material by individually switching the video and each audio channel to alternate "safe" signals.

The video may be switched to an auxiliary input (Aux SDI), one of four user defined still images, a freeze frame, a test pattern, or black.

Each audio channel may be individually configured to switch to an auxiliary input (Aux SDI or Aux AES), another delayed audio channel, one of four tone generators, or mute.



Switching is performed via 2 GPI control inputs, and through the openGear Dashboard™ control software. Each switch may be configured to control video, or audio, or both. These same switches may also be set to switch

instantly when the GPI is engaged, or wait and follow the video delay with a programmable reaction time. The delayed configuration allows the user to view the original source input, and engage the GPI when something objectionable occurs. When the audio and video signals arrive at the delayed output, the switch will occur timed with the objectionable event. If the reaction time was set for one second then the switch will begin one second before the objectionable event.

Video and Audio Processing

The main SDI input, and the Aux SDI input each have a full frame audio/video synchronizer. Full proc amps are provided for each of the SDI inputs, allowing the video's brightness, contrast, saturation and hue to be adjusted.

20 channels of delayed audio, 18 channels of AUX audio inputs (16emb + 2 AES), and 4 tone generators are all available for mapping into any of the output AES or SDI embedded channels. Any source may be selected for any output channel, including one source feeding multiple output channels. The mapping function also provides individual level adjustment and phase control for all output channels.

Additional Features

- Test pattern generator with over 20 useful test patterns
- Still image storage and retrieval through SD/MMC memory card interface
- Fast and easy firmware updates through SD/MMC memory card interface
- Five year warranty



About openGear

openGear is supported by an ever growing consortium of vendors supporting a single platform. The openGear 2RU frame is configurable with redundant power supplies and a capacity for up to 20 hot swappable openGear cards. Powerful ethernet-based remote control and monitoring capability is provided through the free JAVA-based Dashboard™ software that runs on Mac™, Linux®, or Windows™ platforms.

Cal Media Engineering cards may be mixed and matched with a multitude of other vendors' cards providing your own powerful and customizable solutions.

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Linux® is a registered trademark of Linus Torvalds in the US and other countries

Windows™ is a registered trademark of Microsoft Corp.

