

Intergrate Live Time Code Capture Into Your HD/SD Workflow

Capture live HD/SD-SDI along with LTC Time Code straight into Final Cut, Premier and other computer based video capture systems.

Synchronize your on-set/live video capture to the master or reference time code. Using the uBOX allows video capture hardware to "think" that it is recording/capturing the output of a VTR that it is controlling, emulating a normal tape ingest operation. The uBOX acts as a 'virtual VTR', providing the live time code information that is normally acquired from a VTR during tape ingest (via RS-422 machine control). This allows the Mac/PC computer running Final Cut / Premier to become a digital video recorder, replacing the need for stand-alone (and very expensive and time consuming) digital VTRs. Even a small budget allows the assembling of an UNCOMPRESSED HD recorder that correctly time code tags the captured signals to the connected time code. This is commonly done with Xserve and other readily available PC/MAC computer hardware.

The AEC-uBOX-2 is often used to synchronize single and multi-camera live capture files to each other or ISO (on camera) recordings. Several commercial production companies and church production facilities use this device

to save valuable time and money while improving quality, post production speed and obtaining greater flexibility. This unit can also be used to read time code into logging systems during (live) production. For more details and to get a special article on how an award winning expert has been using this device to improve his FCP production, visit our web site.

SPECIFICATIONS:

Model: AEC-uBOX-2 (with VTR emulator/Virtual VTR firmware)
Power: 5 Volt DC or RS-422 port powered, approx. 0.1 Watts.
LTC* input: Standard BNC jack
Serial: RS-422 I/O (also supports RS-232 I/O)
Dimensions: 4.5 x 2.75 x 1.25 inches (L x W x H)
Weight: ~7 oz (190g) (not including cables)
 RoHS compliant & CE mark approved
Cables included (2): Custom RS-232 to PC COM port (for PC users) and USB-to-+5VDC (for power).

*LTC input levels of 100mVpp to 5Vpp are readable. LTC Input impedance > 10kohms. Reads all LTC bits simultaneously, at speeds 1/10x to 2.2x, bi-directional, DF/NDF. SMPTE/NTSC, EBU/PAL and Film frame rates (30, 29.97, 25, 24, 23.98, ...)

Adrienne Electronics

World leading time code solutions

1-800-782-2321
 www.adrielec.com
 info@adrielec.com
 (702) 896-1858

PCIeSDV – Computer Plug-in Time Code Boards for PCI Express

Now supporting SD/HD/3G-SDI Serial Digital Video, LTC & IRIG time codes plus much much more!



Adrienne Electronics is pleased to introduce our sixth generation of time code boards for personal computers. The new "6G" product line carries the 'PCIeSDV' model prefix (indicating in general that the model supports Serial Digital Video). The card circuits are designed to work with all speeds of SDI signals from the relatively slow SD-SDI to the HD-SDI and even the latest 3G-SDI signals. From the general list of capabilities shown below, you can see that there are a lot of different models that can be made on the PCIeSDV platform. Note that not all of the capabilities can be present at the same time on the board as some "possible" pairs or sets of features require the same input or output connector. Some also use the same section of the circuit and can not be simultaneously assigned. In general, because of careful circuit design considerations and planning, it is possible to have many different combinations of SDI in/out, LTC in/out, audio out and IRIG in/out.

Possible Capabilities

- LTC reader for up to four different channels at once
- LTC generator for up to four different channels at once
- Read SDI embedded time code or other embedded signals from up to three different streams at once
- Embed time code from LTC reader or internal software controlled generator source into an SDI stream
- Translate SDI time code into LTC
- Monitor embedded audio (stereo/mono) of an SDI signal
- Read the closed caption data embedded in an SDI signal
- Create/embed closed captions into an SDI stream
- Read IRIG-B time code
- Generate IRIG-B time code
- Translate IRIG to LTC or LTC to IRIG.
- Create up to three channels of SDI test signals
- Embed visible time code numbers into SDI video
- Analog and SDI video sync detection
- Plus more

The PCIeSDV devices are physically about the same size as the PCIe-TC models but with an additional 1.25 inch length added. This allows them to work in both full height and low profile slots, depending upon the bracket that is installed. Contact Adrienne Electronics for more details on the various models, pricing and availability.

Interface LTC into this and other hardware via the RS-422 Machine Control Connector.



Any LIVE streaming video source

GO TAPELESS AND GET THE TIME!

Any video capture hardware with RS-422 machine control



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PCIeSDV Models Priced from \$TBD

Our 6th Generation (6G) time code boards are designed for the PCI Express (x1) bus and can be mounted in both standard and low profile slots. Both brackets are included, one installed. All PCIeSDV models include a high performance 32-bit on-board processor and an externally visible time code / signal status LED, system diagnostics, in-system upgradable firmware, plug and play installation, Windows software drivers, full RoHS compliance and FCC and CE-mark approval (pending laboratory testing certifications), and automatic frame rate (30/25/24 frames/second) operation. Models with video circuitry will handle SD/HD/3G-SDI signals. BNC connectors are standard for SDI (SDV) and IRIG signals. Audio/LTC may use a BNC, mini-XLR (3P) or mini-XLR (5P), depending upon the board model and required connector configurations and requests. Adrienne Electronics is pending release of the first models in the prod-

uct line near the middle of 2012. Large order customization may be available. See our web site for additional model and functional ability over the coming weeks.

PCIe-TC Models priced from \$335.

Our 5th generation of time code boards are designed for the PCI Express (x1) bus and can be mounted in standard or low profile (LOWB option) slots. All PCIe-TC models include a high performance on-board processor, an externally visible time code status LED, system diagnostics, insystem electronic software updates, plug and play installation (no jumpers), software drivers, full RoHS compliance, full FCC and CE-Mark approval, and automatic SMPTE/NTSC(30fps), EBU/PAL(25fps), and FILM(24fps) operations. Models that contain analog video circuitry can synchronize to 13 different video standards, including 720p and 1080i signals having tri-level

sync pulses. RCA jacks are standard for LTC , and a BNC connector is used for video/VITC. A 4-channel GPIO option is available for external logic interfacing. Large order customization may be available. See our web site for detailed pricing, additional model/function and connector option information.

PCI-TC Models priced from \$325.

Time code boards for the PCI bus. Our universal design is compatible with both 5.0V and 3.3V PCI/PCI-X buses. All boards include a high performance on-board processor, advanced diagnostics, in-system electronic software updates, plug and play installation (no jumpers), software drivers, full FCC and CE-Mark approval, and automatic SMPTE/NTSC(30fps), EBU/PAL(25fps), and FILM(24fps) operations. On-Screen-Display (OSD) and SERIAL (RS232/RS422) options available. Large order customization available.

USB-TC Models priced from \$325.

All USB-TC models include plug and play installation, Windows software drivers, and full FCC and CE-Mark approval. Each USB-TC product comes with a USB cable and a test/demo/support CD. Approximate size: 4.5 x 2.7 x 1.2 (inches).

CLOCK JAMMING FEATURE

All of our PCIeSDV, PCIe, PCI and USB products include a service application that can be used to constantly set a Windows PC's clock to match the time code that is being read. This is used, for example, to synchronize automation computers or PSIP encoders to the master clock.

STANDARD CAPABILITIES

Common SDK

			1/10th to 80x, simultaneous time and user bits, DF/NDF, 24/25/30 FPS rates	~24/25/30 FPS output, freerun or sync to video	SD/HD/3G-SDI Video signal processing	Video Sync detection - NTSC/PAL (composite video)	Video Sync detection - tri-level sync pulses including 720p/1080i	Simultaneous time and user bits, DF/NDF, automatic or programmable VITC line section	Keys VITC over desired video lines	LTC reader time code regenerated by LTC generator	LTC time code reader data generated by VITC generator	VITC time code reader data generated by LTC generator	SDI Video Closed Caption capable	Analog Line 21 video closed captioning decoder/reader - reads CC data / XDS / V-Chip	Reads all IRIG data including time-of-day, day-of-year, straight binary secs and all control bits	Generate all IRIG-B data including time-of-day, day-of-year, straight binary secs and all control bits	Time code status indicator (Green LED viewable on bracket)
	Model / Model#	PRICE	LTC Reader	LTC Generator	SDI Video In/Out	NTSC/PAL Sync	Tri-Level Sync	VITC Reader	VITC Generator	LTC to LTC	LTC to VITC	VITC to LTC	SDI Caption	Line 21 Reader	IRIG-B Reader	IRIG-B Generator	Status LED
PCI Express (x1)	PCIeSDV-19	\$TBD	• ³	• ³													•
<i>Full and Low Profile</i>	PCIeSDV-24	\$635	x4 • ³														•
<i>OSD optional</i>	PCIeSDV-65	\$TBD	• ³	• ³	•			Digital SDI	Digital SDI	•	LTC to SDI	SDI to LTC					•
	PCIeSDV-87	\$TBD	• ³	• ³	•			Digital SDI	Digital SDI	•	LTC to SDI	SDI to LTC	•				•
PCI Express (x1)	PCIe-LTC/RDR	\$335	• ¹														•
<i>Full and Low Profile</i>	PCIe-LTC/RGA	\$495	• ¹	• ¹		•	•			•							•
<i>GPIO optional</i>	PCIe-VLTC/RDA	\$475	• ¹			•	•	•						•			•
	PCIe-VLTC/RG2	\$605	• ¹	• ¹		•	•	•		•		•		•			•
PCI (PCI-X compatible)²	PCI-LTC/RDR	\$325	• ¹														•
<i>OSD and SERIAL optional</i>	PCI-LTC/RG1	\$485	• ¹							•							•
	PCI-VLTC/RDR	\$465	• ¹	• ¹		•	•	•	•								•
	PCI-VLTC/RG1	\$695	• ¹	• ¹		•	•	•	•	•	•	•					•
	PCI-21VL/RG1	\$725	• ¹	• ¹		•	•	•	•	•	•	•		•			•
USB	USB-LTC/RDR	\$325	•														•
	USB-21VL/RDR	\$485	•			•		•						•			•
	USB-IRIG/RDR	\$405													•		•

1 - RCA connector standard, BNC and mini-XLR connectors optional. 2 - Not all PCI models listed. 3 - A mini-XLR (5P pin per in/out or in/in pair) is standard (no RCA available). Please call or visit our website for details. Adrienne, AEC, PCIeSDV, PCIe-TC, PCIe-LTC, PCIe-VLTC, PCI-TC, PCI-LTC, PCI-VITC, PCI-VLTC, PCI-21, USB-TC, USB-LTC, USB-21VL, USB-IRIG, AEC-BOX and AEC-uBOX are trademarks of Adrienne Electronics Corporation © 2012 AEC. Prices and specifications subject to change without notice. Proudly made in the USA.