

EASyCAP ENCODER/DECODER

Emergency Alert System for Cable TV, LPTV & Video Systems

- One-box Integrated Solution
- Flexible & Expandable Open Architecture
- IP-Based Alerting Protocols
- Ethernet Support for Remote Network Control
- CAP IPAWS



Trilithic introduces the next generation EAS platform, the EASyCAP™ Encoder/Decoder. This new integrated solution combines everything needed to deliver CAP based audio and video alerts, in a one-box solution including: EAS, CAP, local access messages, audio/video peripherals, control over serial and network based devices, interfaces to management systems, and network protocols and interfaces.

The new EASyCAP solution can receive all of the required alert messages including local access messages for franchise agreements and the EASyCAP can control all of the devices necessary to deliver the messages to system subscribers.

Flexible, Powerful, Open Architecture Platform

This next-gen solution not only handles all of today's EAS requirements, but provides a flexible and expandable platform designed to accommodate requirements and features that may be needed in the future. As CAP standards and FEMA requirements continue to evolve, Trilithic's innovative open architecture simplifies the process of making changes and adding new capabilities and features. All software and firmware can be upgraded across the Network connection. The EASyCAP platform utilizes common interfaces such as secure web servers and SNMP, so that common tools that users are

familiar with can be used rather than installing and operating proprietary software.

EAS Encoder/Decoder

There are several new features included in this platform including:

- Six input channels are provided to monitor for EAS messages, each input is configurable as external audio or an optional internal radio receiver (Economy version only supports 4 inputs)
- All EAS inputs are decoded simultaneously and overlapping alerts are stored until they can be processed to guarantee that all incoming alerts are received and processed
- Multiple user interfaces are provided to allow operators to encode EAS messages: front panel touch-screen LCD, telephone interface, general purpose inputs, and secure Web Server

CAP

This new platform is designed for next-generation EAS and is in compliance with all of the current CAP IPAWS standards. The EASyCAP platform allows multiple sources to be configured for receiving CAP alerts. Additional interfaces can be added as they are

defined and required by FEMA, the FCC, individual State plans, and individual operators

Automatic Weekly Test Generator

A span of days and times can be configured for generating random weekly tests, and Required Weekly Tests are automatically generated at random times each week.

Custom and Local Access Messaging

Satisfying local franchise agreements, the EASyCAP provides the ability for local authorities to quickly send local alert messages (audio and video) to subscribers and the ability for operators to send administrative or informative messages to subscribers. Custom text and audio can be setup with the message and then played back immediately or saved for playback at a later time.

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Multiple Ethernet ports

The EASyCAP features multiple Ethernet ports to allow connectivity to multiple networks. Two 10/100/1000 BaseT Ethernet ports are included on all units. Optional expansion communication boards can be installed to add up to two more 10/100 BaseT Ethernet ports. One Ethernet port can be configured to face the internet for receiving CAP messages, a second port can be connected to the internal management network, and a third port can be connected to the video network

Secure Web Server

A Secure Web Server (HTTPS) is provided as the primary user interface providing an intuitive, easy to use interface for management and monitoring, configuration, testing, calibration, and log maintenance. This intuitive design provides interfaces for monitoring the status and health of the hardware and software, for monitoring and controlling incoming/outgoing alert messages, and for originating messages.

Telephone MODEM interface (optional)

A telephone MODEM interface can be added as an option to support touch-tone telephone access and voice, providing remote access to the EASyCAP across a standard telephone line. The data MODEM interfaces to the onboard Secure Web Server using a standard browser. The touch-tone telephone with voice is used to originate EAS and local access messages.

Audio

Two Radio Receiver boards can be installed to provide up to six internal radios. Each radio board contains three radio receivers and each radio receiver can be setup as AM, FM, or NOAA. Note that the economy version only supports one radio.

Six balanced audio inputs are provided for monitoring EAS, and each input can be setup to use an external audio source or an internal radio receiver.

Two balanced mono analog audio outputs are provided for the alert audio. Connect these to external distribution/switching equipment to replace program audio with alert audio. A balanced stereo audio switch is also provided to internally replace program audio with the alert audio.

An optional AES-EBU digital audio board can be installed to provide 4 channels (2 pair) of alert audio in AES-EBU format. Internal switches are provided to replace the AES-EBU program audio with alert audio.

Text-to-speech is included to generate alert audio for CAP messages that are text-only or if problems occur while retrieving the audio resource. Custom and local access messages can have a voice message automatically generated.

Streaming audio is available for protocols requiring an audio stream (not available in Economy version).

Video

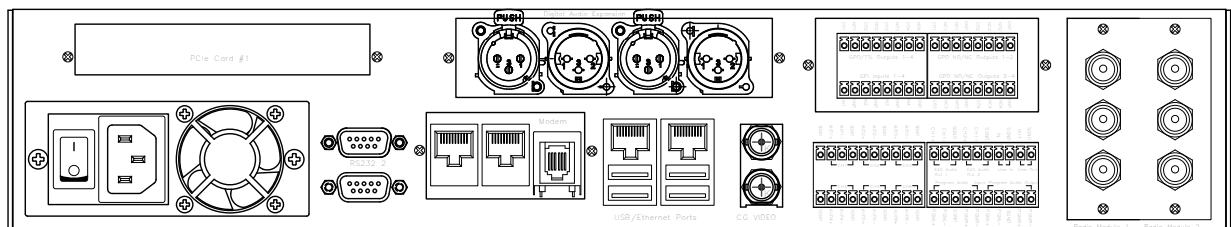
An internal color NTSC character generator is provided to display the alert information. This provides a video source that can be used as a dedicated EAS channel or to replace the normal program video during alert messages. An internal analog video switch is included to replace program video with the internal CG video.

Expansion options will be provided to output the alert audio and video as MPEG-2 and MPEG-4 streams.

General Purpose Inputs and Outputs

General purpose inputs are provided to originate weekly tests, abort messages in progress, and trigger or hold-off alerts. General purpose outputs are provided to activate external distribution and routing equipment. TTL outputs are provided to activate Trilithic distribution and routing equipment. An optional Zone Routing Output card can be installed for trunk switching and connects to an SM-16 trunk switch. Each output is configured for a list of locations and is activated only when processing an alert that affects at least one of those locations. This option is not supported in the Economy version.

IP based general purpose output devices are supported to remotely activate outputs. The locations serviced by each output device can be configured so they're only activated when necessary.



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Serial Protocols

Two RS-232 serial ports are included with all units. An RS-485 port and additional RS-232 ports can be added on an optional expansion communications board. A variety of serial protocols are supported to control older character generators, sign boards, logging systems, and other equipment.

Network Based Alert Protocols

The EASyCAP system provides support for virtually any network based peripheral that accepts alert messages. Ask your sales professional for a complete list of the supported protocols and equipment.

Location routing is used for all of the configured devices, regardless of the protocol. Each configured device includes a list of locations so that alert messages are only sent to devices that service the effected locations.

- DNCS/Evertz
 - Up to 8 DNCS/Evertz devices can be configured to receive messages
 - Alert information, text, and audio is delivered using a TCP socket and FTP file transfers
 - Supported by Cisco (SA) DNCS, Evertz Logo Inserters, Myrio middleware, and more
- SCTE-18
 - Up to 64 SCTE-18 devices can be configured to receive

messages

- Fully supports the 2007 revision of the specification, including standard and private descriptors
- The transport of each recipient can be configured as: UDP MPEG packet streams, or DOCSIS Set-Top Gateway
- Supported by MPEG Splicer's, multiplexers, edge decoders, set-top boxes, and more
- Visionary SD/HD SDI Overlay Systems
 - Up to 8 Visionary devices can be configured to receive alert messages
- Microsoft® Mediaroom™
 - Only available for the EASyCAP IPTV model and not supported in the Economy version
- Cisco DCM Splicer
 - Up to 8 Cisco DCM Splicer's can be configured to receive messages
- Alert Text
 - Up to 8 Alert Text devices can be configured to receive messages
 - Supported by Minerva ITvManager middleware and Nagravision middleware

SNMP

SNMP will be supported for management monitoring systems to monitor the status and health of the hardware and software, monitor incoming and outgoing alert messages, and provide a limited amount of control to abort and originate messages.

EMAIL

Alert messages and logs can be Emailed to a list of configured recipients

AVAILABLE CONFIGURATIONS

Model	Part Number	1 3-Radio Card	2 3-Radio Cards	COM Expansion	Zone Routing	AES/EBU Audio	PCIe
EASyCAP EC5020	2011617000	O		O		O	
EASyCAP C5020	2011618000	O	O	O	O	O	O
EASyCAP EB4020	2011616000	O		O		O	
EASyCAP B4020	2011619000	O	O	O		O	O
EASyCAP I6020	2011421500	S	S	S		S	O

S = standard feature O = optional feature



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SPECIFICATIONS

Processor and Memory	Standard Version: Dual Core Processor, 2GB RAM, 40GB SSD drive (minimum) Economy Version: Single Core Processor, 2GB RAM, 4GB FLASH drive
Chassis	2U RU chassis with 3.5" 320x240 color touch-screen LCD and Speaker on the Front Panel
Communications	(2) RS-232 serial ports available on male DB-9 connectors (4) USB ports (2) 10/100/1000 BaseT Ethernet ports available on USB/RJ45 combo jacks
Audio	(6) balanced 600 ohm audio inputs for EAS monitoring (Economy version supports 4 inputs) Each input can be configured for external audio or an optional internal radio receiver (1) line input and (1) line output (2) balanced analog audio outputs, 600 ohm (1) balanced stereo analog audio switch, 600 ohm
Video	NTSC video character generator RS-170A color analog video (source only, does not overlay onto video) 24-bit color, True Type fonts, static text, crawl text (up to 400 characters), and images Analog video switch with video bypass for fail-safe operation
General Purpose Inputs and Outputs	(6) general purpose outputs: isolated relay, maximum rating of 0.3A @ 120VAC or 1A @ 30VDC (2) TTL outputs: each TTL output can drive 2 TTL loads (4) general purpose inputs: optically isolated dry contact closure inputs
Radio Receiver Boards (Optional)	(2) radio receiver boards can be installed into the EASyCAP (3) radio receivers are included per board, each can be configured as AM, FM, or NOAA Note: Economy model only supports 1 radio board
AES-EBU Digital Audio Expansion Board (optional)	(2) AES-EBU digital audio switches: each switch provides a pair of channels, 110ohm XLR Alert audio automatically locks to the incoming bit rate and sample rate (up to 192Khz) Configurable as a switch or an audio source
Communications Expansion Boards (Optional)	One expansion port is provided for adding communications boards LAN-MODEM-RS485 Communications Expansion board (Optional) (1) 10/100 BaseT Ethernet port, (1) RS-485 serial port, (1) Telephone MODEM (33.6K & voice) DUAL-LAN-MODEM Communications Expansion (Optional), not available for Economy version (2) 10/100 BaseT Ethernet ports, (1) Telephone MODEM (33.6K Data with voice)



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PCI-Express Expansion (optional), not supported by the Economy Version

(1) PCI-Express card can be installed to provide additional capabilities such as SDI video, MPEG-2, MPEG-4, audio, video, or other capabilities
Supported PCI-Express cards must be purchased from Trilithic
Supports 1-lane and 4-lane PCI-Express cards and 16-lane PEG cards

INCLUDES THE FOLLOWING:

FCC-certified EASyCAP Encoder/Decoder system with customer-specified options

Touch-screen LCD

General purpose inputs/outputs

Speaker

4 USB ports

2 10/100/1000 Ethernet ports

RELATED PRODUCTS:

EASyIP EAS Network Receiver - 2 Radios

P/N 2011087001

EASyIP EAS Network Receiver - 4 Radios

P/N 2011087004

Compliance Assistant software (request quotation for 3, 10, 128 license)

AM/FM/NOAA antenna kit

P/N 2010830001

SW-IP contact closure switch

P/N 2010360001

Switching and distribution options
(Contact Trilithic for details)

Technical support agreement

P/N 9970900005

Consulting services (Installation and training)

P/N 9970900000

2-year extended warranty

P/N 9970900016