EMERGENCY COMMUNICATIONS SYSTEMS - SECTION 27 51 29

**Reference CSI Specification 27 51 29 Emergency Communications Systems (April, 2016)**

Related CSI specifications are listed in section I. B. Users of this document are encouraged to consider referencing alternative, related, or multiple CSI specifications, due to the multi-function nature of the EverAlert communication system, if alternative specifications are more relevant to individual or combined funding sources earmarked for the project. This product specification is written according to the Construction Specifications Institute (CSI) MasterFormat™, SectionFormat, and PageFormat, contained in the CSI Manual of Practice.

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# GENERAL

## Requirements and Scope

### Furnish and install a complete Emergency Communication System as described herein

### All bids must conform to every requirement listed in this product specification

#### Alternative equipment bidders must supply documentation that proves technical and functional equivalency to all requirements

#### Failure to propose equipment that meets all requirements shall disqualify alternative equipment bids from consideration

## Related CSI Specifications

### Reference April 2016 CSI Divisions and Sections

#### 27 51 29 Emergency Communication Systems

#### 27 53 13 Clock Systems

#### 28 47 13 Mass Notification Software

#### 28 47 21 Mass Notification System Interfaces

## Definitions

### Emergency Communication System: A user-configurable messaging display and software platform that integrates with and supports existing emergency systems to deploy visual and audio alerts, synchronized content, messaging, audible tones, and clock images for

#### Emergency notification/communication

#### Routine digital signage and messaging

#### Clock display

### Ethernet: A system to form a local area network with protocols to control the passing of information and provide time synchronization via SNTP (Simple Network Time Protocol)

### Local Area Network (LAN): connects computers and devices in a limited geographical area

### Wi-Fi: A wireless networking technology that allows computers and other devices to communicate over a wireless signal. It describes network components that are based on one of the 802.11 standards developed by the IEEE and adopted by the Wi-Fi alliance

### Software Service Agreement (SSA): a software licensing and distribution model

#### Software is licensed on a subscription basis for terms of one, two and three years

#### It is centrally hosted and accessed by users over the Internet

## Submittals

### Product Data: Submit complete catalog data for each component, describing physical characteristics and method of installation

### Samples: Submit one display for approval. Approved sample shall be tagged and shall be installed as part of the final operating system

### Submit complete manufacturers installation, set-up and maintenance instructions

## Quality Assurance

### Manufacturer must provide documentation of at least 10 continuous years of experience supplying networked systems in the education market

### Installer must be experienced in the installation of networked systems

## Regulatory Requirements

### Equipment and components furnished shall be of manufacturer's latest model

### Refurbished equipment, upgraded to as-new condition, may be offered for product evaluation purposes and sold as such at discounted pricing

### System shall be installed in compliance with local and state authorities having jurisdiction

## Delivery, Storage and Handling

### Deliver all components to the site in the manufacturer's original packaging

### Packaging shall contain manufacturer's name and address, product identification number, and other related information

### Store equipment in finished building, unopened containers until ready for installation

## Field Conditions

### Displays shall not be installed until painting and other finish work in each room is complete

### Coordinate installation of 110 VAC outlets to all locations where a display shall be installed unless a suitable 110 VAC legacy power source already exists

### The display shall be installed within 4 feet of a 110 VAC outlet or within 12 inches of a legacy 110 VAC power source having a Molex connector

# PRODUCTS

## System Feature Description

### Displays shall include the following features

#### Smart 22” class HD screen with built-in speakers

#### Retrofit installation where legacy classroom or hallway clocks are currently located

#### New construction installation where clocks are located in classrooms and hallways

#### Screen display orientation can be either Landscape or Portrait mode

#### Preloaded with operating system software

#### Communicates to the online Management Portal through wired or Wi-Fi network

#### Resumes normal operation after a temporary power interruption without intervention

#### Operator adjustable or scheduled screen brightness to reduce distraction

#### Scheduled sleep mode for energy conservation

### Wall Mounting Hardware shall include the following features

#### Display wall mounting bracket kits for retrofit installations and new installations

#### Kits include tamper-resistant mounting brackets that allow tilting of the display in both portrait or landscape orientation, and integrated clip for the display power supply

#### A clear guard for common area applications protects displays, provides ventilation, and accommodates full mounting bracket tilt

### Integrators shall include the following features

#### Integrators are wired to monitoring systems such as fire alarm panels, lockdown systems, hold-in-place systems, or any other security/monitoring system with normally-open switch access.

#### When activated, integrators will send a signal to the EverAlert system to display a user-defined alarm notification/instructions.

### Software Service Agreement (SSA) shall include the following features

#### Provides access to the Management Portal and technical support for general operation of the system, including configuration/setup, messaging, scheduling, etc.

#### Available for multi-year terms, renewable prior to expiration

#### Expiration of SSA will cause display to revert to synchronized clock function only: Emergency alert detection and notification, digital signage functions, including current weather, and technical support will no longer be available.

### The Management Portal shall include the following features

#### General

##### Three levels of user access-level rights, including Client Manager, Site Manager, and User.

##### Capable of uploading audio files for playback through the displays, including bells, tones, sirens, music, and prerecorded voice messages

##### Supports automated email and/or text outbound notifications to a list of subscribers authorized by the site administrator upon alarm activation or loss of network connections between any display and the management portal

#### Emergency Alerts

##### Emergency alerts with audible tones and customized messages can be configured by the site administrator access level only: Fire drills and alerts, lockdown drills and alerts, severe weather drills and alerts, and custom alerts

##### Alerts override all other routine displays

#### Routine digital signage

##### Routine messages be configured and deployed by all access levels: Time-synchronized event reminders, and audio alerts, including scheduled tone activation for class change notification, school start and dismissal

##### Screen background customization

##### Quiet message type to prevent distraction: Alert messages and alarms override quiet messages

##### Instant messaging with audible notification and on-screen flashing notification

##### Daily announcements, calendar events and scheduled activities

##### Tagging support for content delivery to individual classrooms or tagged groups

##### User-definable weather alarms/notifications, issued from National Weather Service by county

##### Current weather (temperature and conditions) issued by ZIP code.

#### Clock display

##### Analog or digital synchronized clock time

##### 4-digit or 6-digit digital clock display

##### Current date in multiple formats

##### Classroom and hallway countdown timer support

#### Audio paging

##### Devices support realtime audio paging with EverAlert Live subscription (add-on subscription)

##### Utilizes on-board speakers or auxiliary speakers via 3.5mm output jack on display

##### Individual device paging via SIP interface with VoIP phone system

##### Group/all-call paging via SIP interface with user-provided multicast server on VoIP phone system

#### Management Portal user interface for mobile devices

##### Password protected access, 4-character PIN

##### Accessible from any online smart mobile device

##### Streamlined, responsive-design version of the management portal full user interface

##### Trigger fire, lockdown and weather, and custom alerts directly from a smart phone

##### Send all clear message

##### Send instant messages that override scheduled messages

##### Automatically documents the mobile device user who has activated an alert

## Manufacturer

### Emergency Communication System and its components shall be manufactured by the following acceptable manufacturer

#### Location: American Time, 140 3rd Street South, Dassel, MN 55325

#### Contact information: american-time.com, 800 328-8996

## Equipment Specifications

### Dynamic Display (PN: EADV3) including

#### Dimensions, master shipping carton, two displays: 38” L, 8-3/8” W, 18-1/2” H

#### Weight, master shipping carton, two displays w/ accessories: 34lbs

#### Weight, single display: 12lbs

#### Dimensions, single display: 21” L, 1-3/8” W, 12-29/32” H

#### Dimensions, display screen diagonal: 21.5”

#### Lighting, screen: LCD with LED backlight

#### Resolution, display screen: 1920 x 1080

#### Mounting formats: Portrait or Landscape modes

#### Internal speakers: 2 each at 2W

#### Operating system: Android

#### USB ports: 2

#### External speaker output jack: 3.5mm

#### Wired Ethernet connectivity: 10/100M, RJ45 connector

#### Wireless connectivity: Wi-Fi - 802.11b/g/n (2.4/5.0GHz)

#### USB provisioning: USB drive with AES encryption

#### Wired provisioning: LAN/DHCP Web portal on network connection

#### Time synchronization support: 2 static IP address SNTP servers or pool

#### Clock battery backup for power outages: CR1620 Lithium

#### Relative humidity: 85%

#### Operating temperature: 0deg C – 40deg C

#### Power supply output voltage: 12Vdc

#### Energy efficiency: Level VI

#### Power Consumption: 30W (average), 40W (maximum), 23W (sleep)

#### Certifications: ROHS, CE/FCC, PSU with UL

### Dynamic View (PN: EABOX3) including

#### Dimensions, (device only): 7 1/2”L x 3 3/4”H x 3/4”W

#### Weight (device only): 1.1 lbs

#### Dimensions, shipping carton: 11 1/4”L x 3”H x 9 1/4”W

#### Weight, shipping carton: 2.64 lbs

#### Display format: Landscape (horizontal)

#### USB ports: 2

#### External speaker output jack: 3.5mm

#### Wired LAN connectivity: 10/100M, RJ45 connector

#### Wireless LAN connectivity: 802.11b/g/n (2.4/5.0GHz)

#### USB provisioning: USB drive with AES encryption

#### Wired provisioning: LAN/DHCP Web portal on network connection

#### Time synchronization support: 2 static IP address SNTP servers or pool

#### Clock battery backup for power outages: CR1220 lithium

#### Relative humidity: 85% maximum, non-condensing

#### Operating temperature: 32˚F – 104˚F

#### Input voltage to power supply: 100-240VAC, 50/60Hz

#### Output voltage from power supply: 12VDC

#### Energy efficiency: Level VI

#### Power consumption: 9.5W (average), 14.5W (maximum)

#### Certifications: ROHS, CE/FCC, PSU with UL

### EADV3 Display Power Options

#### Standard 120/240V Power Supply

##### Three-prong grounded plug

##### 100-240VAC, 50-60Hz input voltage

##### 12VDC output voltage

##### Level VI energy efficiency

##### 30W average power consumption (40W max, 23W in sleep)

##### UL certified

#### Power Backup Unit (PN: EABATKIT)

##### Provides minimum of 30 minutes backup power to display in the event of power outage

##### Maintains charge during normal operation of display

##### Recharges automatically upon restoration of power

##### Automatically switches to battery power if line power is interrupted

##### Includes battery mounting bracket and adapters

##### Two-prong non-grounded plug

##### 100-240VAC, 50-60Hz input voltage

##### 13.9VDC output voltage, 3.0A

##### RoHS certified battery

##### CE, UL, CSA certified power supply

#### PoE+ Splitter (PN: EAPOEKIT)

##### Adapts incoming 30W PoE+ power to 12.8VDC power for display

##### Allows Ethernet data connection passthrough

##### Functional with displays mounted within 100 meters of user-supplied PoE+ compatible switch

#####  Includes 24” Cat5e patch cable and 18” DC power cable for connection to display

##### Certifications:

###### EEE 802.3, 802.3u, 802.3ab,

###### 802.3at, 802.3af

###### FCC

###### CE

### Wall Mounting Hardware kits for easy display installation

#### Surface mount bracket kit, ref American Time (PN: EASMB)

##### Tilt bracket with standard VESA interface allows +/- 10 degrees of tilt.

##### Integrated clip to hold display power supply

##### Surface mount plate for new construction

#### Flush mount bracket kit, ref American Time (PN: EAFMB)

##### Tilt bracket with standard VESA interface allows for +/- 10 degrees of tilt.

##### Integrated clip to hold display power supply

##### Back box cover-plate

##### Power cord with molex connector for retrofit installations

#### Optional display guard, ref American Time (PN: G24167)

##### Clear high-strength polycarbonate

##### Allows full +/- 10 degrees display mounting bracket tilt

### Integrator, (PN: EAIV3)

#### Wired Ethernet connectivity: 10/100M, RJ45 connector

#### Monitored switch style: Normally open dry contact

#### Number of monitored switches: 2 input switches, 1 output switch per Integrator

#### Output switch: Normally-open, 60VDC/125VAC, 1A

#### Input voltage to power supply: 100-240VAC, 50/60Hz

#### Power supply output voltage: 12VDC

### Software Service Agreement, ref American Time (PN: EASSA1V1, EASSA2V1, EASSA3V1)

#### Allows customer access to the Management Portal and technical support

#### Available with one, two or three-year renewable Software Service Agreements (SSA)

#### Expiration of SSA will cause display to revert to synchronized clock function only: Emergency alert detection and notification, digital signage functions, including current weather, and technical support will no longer be available

### inCloud Management Portal

#### Server location: Microsoft Azure

#### Application updates: Daily between 12:00am and 2:00am

#### Update re-boot time: Less than 5 minutes

#### Compatible browsers as of December, 2016: Edge, Chrome and Safari

#### Connection security: HTTPS to all system devices.

#### Maximum number of simultaneous active users per site: Up to 100

#### Maximum number of email and text message subscribers: Up to 100

#### Clock synchronization and daylight saving time support: Configurable SNTP server addresses/pool domain names

#### Network credentials: AES encrypted key creation

#### Max size MP3 audio files: 10MB per file

#### Total storage for all media per site: 500MB

## System Operation and Startup Sequence

### Provide all connections to data network

### Displays is configured/provisioned by one of two optional methods

#### Display configuration using wired LAN on a DHCP Network (option 1)

##### Power-on device

##### Connect Ethernet cable to display

##### Display will automatically connect and provision to the correct site

#### Display configuration using USB key (option 2)

##### Login to portal and create a USB key by selecting create key and saving to a USB.

##### Power-on Device

##### Insert USB stick

##### Display will automatically connect and provision to the correct site

### Integrator installation

#### Connect normally open contact closure switches of desired alarms to trigger on the Emergency Notification System integrator input 1 and/or input 2

#### Login to portal and select new Emergency Notification System Integrator

##### In the Management Portal, document the title, serial number, and desired inputs

##### Document instructions for display configuration when alarm is triggered for each Integrator input

# EXECUTION

## Examination

### Construction must be complete and rooms clean and dry where equipment is located

### 120VAC power at the installation point is required for each display

#### Adapter for legacy clock system Molex connections available

#### PoE+ adapter available for PoE installations

### Wi-Fi or wired internet connectivity is required at each display location

## System Installation

### Install displays and integrators in accordance with manufacturer's installation manual furnished with the system, for proper installation of each system component

### Mounting brackets shall be securely attached to walls

## Cleaning

### Prior to final acceptance, clean exposed surfaces of all system components, using cleaning methods recommended by the manufacturer

###  Remove shipping packaging and other protective materials from the products

## Field Inspection

### Prior to final acceptance, inspect each system component to function properly and replace parts that are found defective

## Manufacturers Services

### Services are provided for the term of purchased Software Service Agreement

### Management portal software updates

### Remote technical assistance, on product start up, system setup, and system operation is provided via phone, fax, or e-mail