

Walk Around the BLOCK Diagram - A Glossary

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DASDEC Inputs

GPI-General Purpose Input (back panel center terminal strip) The DASDEC has 2 browser programmed GPI inputs. An external contact closure can trigger an action (see SETUP-GPIO) which includes "forward decoded EAS upon closure", "Hold Non-National EAS alerts until closure", "Issue RMT on closure" etc. This ability maintains the operational design of some legacy EAS system configurations.

Monitor Incoming Alerts (RF connector) The DASDEC includes three internal radio receivers. External antennas provide reception through the three RF inputs. The internal receivers can be programmed to select channels in any AM, FM, or NOAA band of frequencies. Audio levels are also software configurable. A fourth mono audio input can monitor an external receiver or output from another EAS decoder. Incoming audio or outgoing alerts can be heard on the front panel or auxiliary speakers.

External Receiver (back panel terminal strip) The DASDEC can monitor an additional audio input for EAS information as may be required in some locations. Audio from an external receiver monitoring a fourth EAS source is connected as an analog mono audio input.

Analog Program Audio Input (back panel terminal strip) Analog program audio can be connected as full balanced stereo. Program audio is muted with a mono alert output during an alert. There is also an auxiliary alert audio output.

RS-232 (DB-9) The 9-pin serial port on the back panel provides a communication interface, (input and output) for a wide variety of character generators. It provides emulation of the Sage and TFT serial protocols. The serial port also communicates with devices used for digital signage such as the Beta-Bright LED. Four extra RS232 ports can be added using a USB/Serial port expansion unit.

Mouse and Keyboard (PS/2) DASDEC local access is easily obtained with a PS/2 mouse, PS/2, keyboard, and a VGA monitor. Therefore, network connectivity is not absolutely necessary for the DASDEC to become a functional controller, especially when communicating with non-network devices such as: Character Generators or Digital Signage, providing GPIO switching to various other locally, yet externally, connected devices.

Microphone Inputs (3.5mm Jack) The two microphone inputs can be used to record audio messages for an alert. Audio .wav files up to two minutes in length can be recorded and stored with a unique filename. Recorded .wav files can be previewed, erased and re-recorded until the desired result is obtained.

Network (RJ-45) The DASDEC provides many network services. The most obvious is the DASDEC Web server. It is remotely LAN accessible from any computer with a web browser such as Mozilla-Firefox, Safari, Netscape, Opera, or Internet Explorer. The DASDEC utilizes Hyper Text Transfer Protocol, (HTTP) the underlying protocol used by the World Wide Web. HTTPS utilizes HTTP with SSL (Secure Socket Layer), a more secure way of transferring private data to preserve confidential user information. Secure Shell is also enabled as a network input.

EAS-NET EAS-NET is a DAS designed peer-to-peer metadata and data protocol for sending /receiving EAS event information and associated alert data (like text and audio files) over a network. EAS-NET allows EAS alerts to be forwarded across a network to file systems on remote devices, including other DASDECs. EAS-NET supports a variety of transmission protocols (e.g. SSH, FTP, TCP) customizable to a variety of target platforms.

CAP - Common Alerting Protocol. CAP is an XML file based alert description for use over a network. The FCC has made CAP transported EAS reception a requirement in future EAS packages, pending definition by FEMA. The DASDEC is fully CAP compatible in the existing EAS compliant chassis. The DASDEC will provide CAP reception and conversion to EAS alongside its current radio based EAS reception. The DASDEC leads the alerting industry by coupling together the new and pre-existing alerting requirements in one self-contained 2-RU chassis.

SSH Secure Shell program permits a user to remotely log into a similar SSH computer on a network. SSH provides strong authentication and secure communications over a potentially insecure network. When SSH is used, such as with a command line, the entire login session, including the password is encrypted to eliminate malicious intruders from accessing private data. When SSH encryption is enabled, the user is also protected from IP spoofing, IP source routing and DNS spoofing.

EAS CentralCasting The DASDEC can send alerts over a network from one location to another DASDEC via EAS NET. EAS CentralCasting relies on this ability to gather local alerts and send them back to a central broadcast facility. At the broadcast studio, a receiving DASDEC processes and plays the alert which is then inserted into the broadcast stream. The broadcast is sent back to the remote site.

2nd 10/100 T Network Interface in -> USB The DASDEC utilizes its RJ-45 network connection to perform many network services. Additional network expansion is supported through the USB port to allow access via a second network.

Optional EAS monitoring The DASDEC has one PCI slot available for expansion. Present models can house an MPEG card, an AES audio card, or a two-port audio input card to allow monitoring the audio from two extra external EAS sources. This exceeds most current monitoring requirements and may be applicable for future EAS/CAP requirements

DASDEC Outputs

GPO-General Purpose Output relays (back panel center terminal strip & network) The DASDEC is equipped with two browser programmable GPO relays to activate downstream peripheral devices. The GPO provides a switching mechanism for external devices during various stages of an alert condition. Relay operation can also be filtered according to alert code and FIPS locations. The Net/GPO Expander adds extra programmable, alert filtered relays for use with extra hardware. Extra relays, tied to specific alert types and alert locations or to specific station hardware, are required for handling the complexity of EAS CentralCasting and for MultiStation operation.

VGA CRT Monitor (VGA) Direct server access is supported via a VGA CRT monitor, keyboard, and mouse. Simultaneous local and network login is supported and multiple user sessions are supported. The VGA monitor can also be configured to simulate a full page CG and display the text of a processing alert.

CG/NTSC Video Out (RCA) The DASDEC video line-level output (RCA) provides an NTSC signal displaying a full screen text message of the data from a current alert. This simulated CG functionality eliminates the expense of adding an external Character Generator to view an actively relayed alert. This provides a low cost solution for Cable, LPTV and a data display for EOCs.

RS-232 (DB-9) See description under Inputs.

USB (USB) The Universal Serial Bus will support data rates of 12 MBPS and up to 127 peripheral devices such as; the RS-232 expansion unit, an additional Ethernet port, printers, modems, wireless Ethernet, flash drives, and nearly any other external device which utilizes a USB port.

Analog Program Audio Out (back panel terminal strip) The analog balanced stereo output connector provides program audio pass-through. Program audio pass-through also operates without power. This audio output is internally switched between incoming program audio and the EAS alert audio. During an alert, the program audio is muted and a mono alert output is played on one channel of the dual channel output. The alert audio output becomes simultaneously present with the NTSC alert CG video output to create a complete aural/visual alert.

Parallel Port - Printer (25-pin D) The parallel port provides the ability to support a variety of printers.

Alert & Monitoring Audio (3.5mm or terminal block) Audio levels are software configurable. These four (plus two) sources are configurable for audibly monitored. Audio from the radio receivers or decoders can be configured to play-out an audio announcement on the front panel speaker prior to the time the alert is forwarded and before it has been acknowledged. This audio can also be routed to external main and auxiliary audio outputs.

Network (RJ-45) A large number of outgoing network services are supported on the DASDEC. Network alert communications is the main strength of the DASDEC platform.

Email (RJ-45) One outgoing email server can be configured per DASDEC, and it can send mail to a designated SMTP email relay service. The relay is a separate email server that can send alert notification messages and reports out through an Intranet or Internet for individual or group delivery to designated email clients.

MPEG (BNC) This PCI hardware option supports MPEG encoding of NTSC video and analog audio during an alert play out. The resulting MPEG file can be simultaneously streamed via IP during alert play out. This feature is most often used in Cable and IPTV applications.

AES audio output (XLR) An optional PCI AES/EBU digital audio card can be installed in the DASDEC to provide on channel of AES digital EAS output. Presently, AES audio input is unsupported.

External Options

Low Cost CG Crawl (RS-232 XBOB) The DASDEC interfaces with most popular CG and Logo Inserters. It provides EAS data and in some cases additional data to these devices. The XBOB is offered as a low cost solution for crawling an EAS text message over analog program video. The DASDEC directly connects to the XBOB CG through an RS-232 port. The standard XBOB, compatible with NTSC composite baseband video, can generate its own on-board video or automatically genlock to an external video source.

Net/GPO Expander (RJ-45 to terminal block) In addition to the DASDECs two onboard programmable GPO's, this expander is offered in as a RACK MOUNT (NET/GPO (1)) or as a lower cost COMPONENT package (NET/GPO (2)). Each expander, driven over IP/Ethernet, provides four (4) additional programmable GPO connections. The DASDEC can manage up to eight expanders. It is used in conjunction with DASDEC's powerful SAS-MultiStation (2) or SAS-MultiStation (5) software during EAS to signal EAS audio play out via GPO switch to routers for individual co-located Radio or TV stations.

Serial Expander (USB to RS-232) The USB/4 port Serial Expander is an external USB adapter, which provides the DASDEC with four (4) additional RS232 DB9 serial ports. The expander is used in conjunction with the optional SAS-Radio, SAS-TV, and SAS-EOC software and can provide up to five (5) total independent serial drivers for character generators and digital signage. The expander is also used in conjunction with the optional MultiStation operation.

Master Control The power and flexibility of the DASDEC will be realized in the future as Network connections to various Master Control packages are developed. The DASDEC currently interfaces via serial and GPIO with a limited number of Master Control systems.

AADA For MultiStation operation, an analog audio distribution amplifier can be used to split the analog EAS alert audio signal into multiple streams. Each stream is fed as an input to an analog to digital converter + program audio switchers (see below).

DADA For MultiStation operation, a digital AES audio distribution amplifier can be used to split the digital EAS alert audio output signal into multiple streams. Each stream is fed as an input to a digital program audio switcher (see below).

AES Program audio / EAS audio switchers (XLR) The BDI (AES-302), an external 1RU rack mount unit, provides the AES connections to support digital program audio pass-through and EAS audio insertion. Alert audio insertion is switched with one of DASDEC's browser programmed GPO relays. The AES SW2 switcher, an external 1RU rack mount unit, provides the connections to support digital AES program audio pass-through and analog EAS audio conversion to AES digital as well as switched audio insertion. Alert audio insertion is switched with one of DASDEC's browser programmed GPO relays.

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