SAGE Digital ENDEC[1]

The Digital ENDEC uses an internal AES/EBU interface, LAN support, and a Web Browser based interface to support a new generation of EAS users. While the Digital ENDEC continues to support Radio, TV, and Cable users, it also supports the first responder and state/county/local emergency centers with emerging standards such as IPAWS and CAP.

In addition to the many features of the original ENDEC[2], we add:

New Hardware Features

- 10/100 Base-T LAN support.
- 2 USB connectors for printers, additional serial ports, future expansion.
- Four new GPIO inputs and one additional contact closure for expanded control.
- AES/EBU Digital Audio Interrupt with active switching.
- 64 MByte onboard storage for log files.
- Optional USB memory stick(s) for up to 8 GB long term storage of alert audio.
- Totally solid state memory storage for reliable operation – no hard drive.

New Software Features

- Web-Based control – all settings and functions can be performed from anywhere on the internet, including initiating or forwarding alerts, and changing configuration.
- Several layers of security are provided, including IP access lists, HTTPS/SSL is used to encrypt all access.
- Software is stored in FLASH and is updatable via the LAN or the USB interface.
- Text and audio logs are available via the web interface page.
- Alert audio for originated alerts can be transferred via the web interface.
- Alert audio for a pending alert to relay can be previewed via the web interface using streamed audio.
- Any of the audio monitor inputs can be streamed to the web interface.
- The Digital ENDEC can trigger the relay of an alert, or the generation of Weekly Test or any other alert, via interface to common station automation programs on the serial port, via the LAN, or its GPIO interfaces.
- Optional Text to Speech support locally generates audio based on the expanded text message available with the CAP protocol.
- The ENDEC can optionally send email when important events occur, such as sending and receive alerts, loss of input on a monitor receiver, etc.

[1] Part 11 certified, FCC ID V2W3644.

[2] The original ENDEC's internal strip printer is replaced by several options, including Web Browser access to logs, or some makes of USB printers connected to the DIGITAL ENDEC's USB port.

Future-Proof

No one can accurately predict the future, however, the Digital ENDEC uses a faster processor and has much more program and data space than the previous ENDEC. It also has USB and LAN interfaces. We expect to be able to handle any of the new protocols being discussed for future revisions to the EAS system.

Original ENDEC compatibility

With the exception of the internal strip printer, the Digital ENDEC has all of the interfaces that the original ENDEC has, including:

- Rack mount 2U enclosure.
- 6 audio inputs.
- 6 serial ports.
- Encoder and Microphone input.
- 4x20 LCD display.
- Internal speaker and Line Out.
- Three contact closures (plus one new closure).
- One GPIO input (plus four new).
- Front panel status LEDs.
- Support for all ENDEC hardware options such as the remote control, Multi Station Relay Panel, LED signs, etc.
- Support for all ENDEC software utilities such as ENDEC PRO and ENDEC DJ.

The Digital ENDEC was developed by the same team and know-how that built the original ENDEC, as well as 12 years experience working with Radio, TV, Cable, and Emergency Center users.

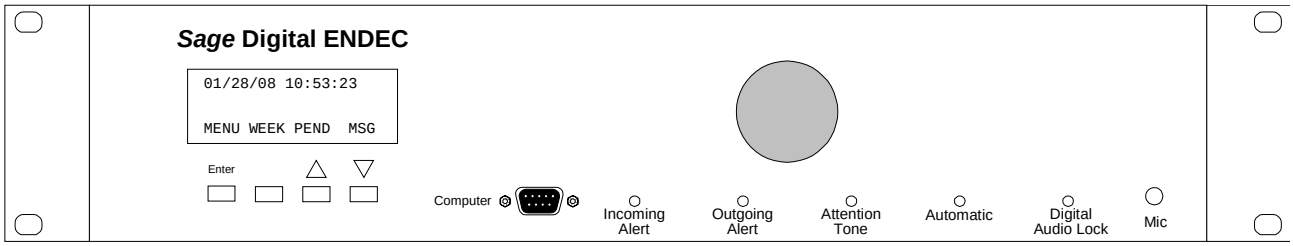

Figure 1. Digital ENDEC front panel.

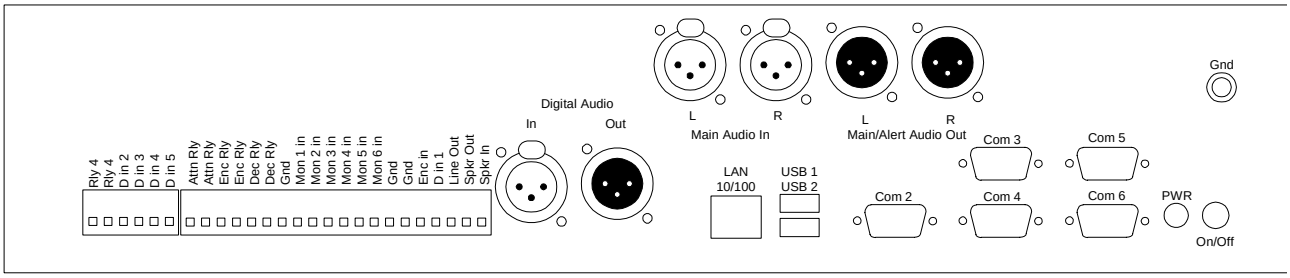

Figure 2. Digital ENDEC rear panel.

Support for CAP

The Digital ENDEC users its LAN connection to receive CAP alerts (either pulled from a server by the ENDEC or pushed to the ENDEC). It will then use ENDEC "filters" to determine the required action. If needed, it will then:

- Generate an EAS alert based on the data in the CAP message.
- Fetch audio using information in the CAP message, or generate audio using internal Text to Speech software based on data in the CAP message.
- Send the EAS message using all of the standard ENDEC filtering/formatting capabilities.

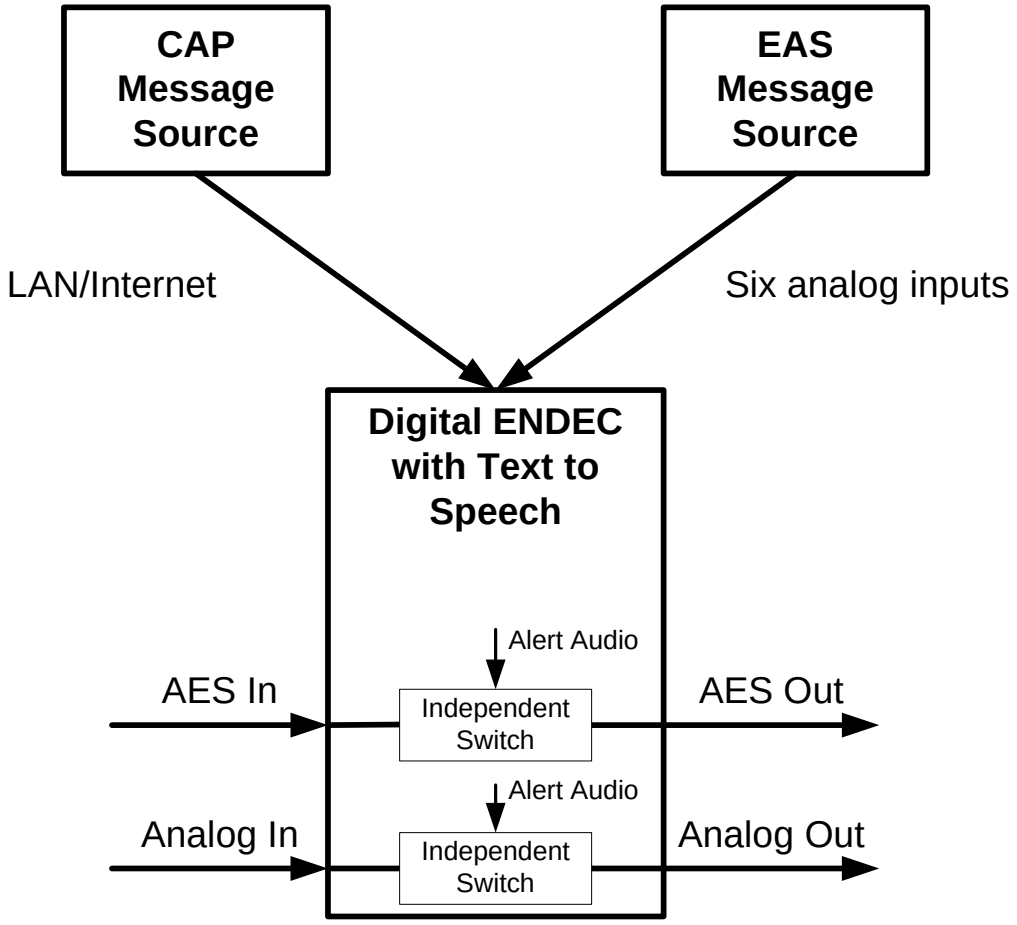

Figure 3. Block Diagram showing Digital ENDEC in EAS and CAP environment.

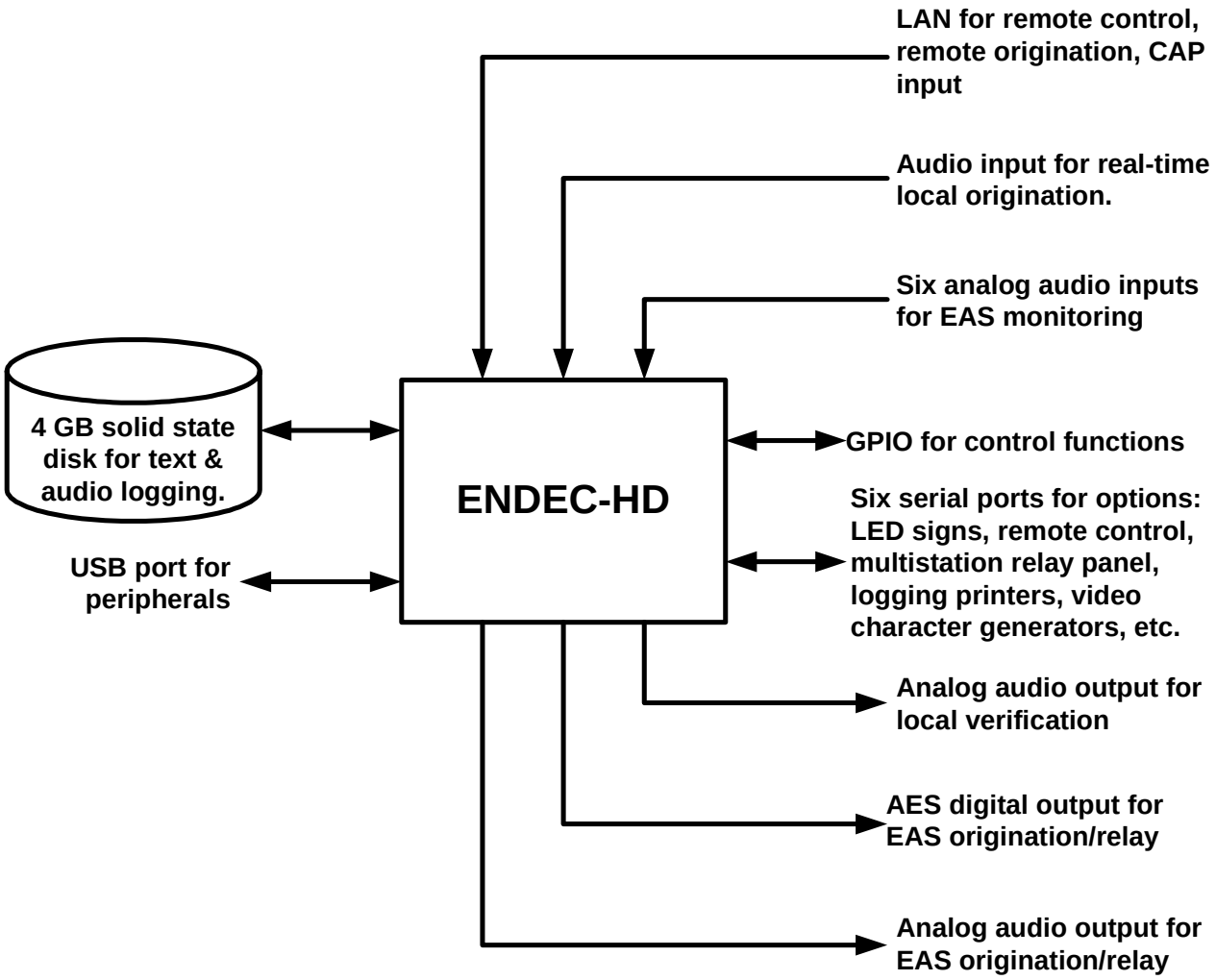

Figure 4. Details of inputs and outputs in a EAS and CAP environment.

Specifications are subject to change without notice. CAP and text to speech capabilities are included with the base unit. Software is field upgradable from the LAN connection.