

ES&S EVS 5.2.2.0

The Election Systems and Software release of the EVS 5.2.2.0 election system was examined in Austin on 4/19/17. The release was certified by the Federal Elections Assistance Commission (EAC) in February 2017. This release is a modification to the EVS 5.2.1.0 system that was certified by the EAC in December, 2015 and by Texas in the summer of 2016.

The main component added to the EVS system is the DS450 central-count paper ballot scanner. It is a smaller, less expensive scanner than the previously certified DS850. It is designed for counties needing a high-speed scanner, but not the throughput of the DS850. Another hardware upgrade is the Power Supply for the ExpressVote.

The significant software changes to this release include 1) an upgrade to the random number generator used for security functions; 2) a change to the creation of passwords for the SFTP server; and 3) the addition of multi-column display on the ExpressVote.

Additional software changes were de minimus; they are mostly cosmetic or do not apply to Texas elections.

The following table lists the 5.2.2.0 applications components used during the examination.

Table 1 - Proprietary Hardware/Software Components

Application	Version/Firmware #
AutoMARK	1.8.6.1
Event Log Service	1.5.5.0
DS200	2.12.2.0
DS450	3.0.0.0
DS850	2.10.2.0
ElectionWare (EMS)	4.7.1.1
Election Reporting Manager (ERM)	8.12.1.1
ExpressLink	1.3.0.0
ExpressVote - ballot marking device (BMD)	1.4.1.2
ExpressVote Previewer	1.4.1.2
PaperBallot	4.6.1.0
Removable Media Service	1.4.5.0
Toolbox	3.1.0.0
VAT Previewer	1.8.6.1
ExpressVote Activation Card Printer	N/A

ES&S EVS 5.2.2.0

For a detailed explanation of the hardware components and applications of the 5.2.20 system please refer to the EAC certification test report [_____](#)

ES&S EVS 5.2.2.0

need different keys to meet Texas law. The ballot box also has 2 places for seals.

- The DS200 scanner can be locked up, but left with the polls open for an early voting deployment.
- The DS200 can be configured in the EMS to have a red circle stamped on the voted paper ballot to flag over-voted, under-voted, and write-ins ballots. This allows the ballots to be manually sorted for subsequent adjudication.
- The DS450 has a menu option for an administrator to create a “tar” file which can then be used for hash comparison to verify the software installed.
- The DS450 has more features than the DS850. It is equipped with LED indicators on the edge of the diverters which are a visual clue to the operator that a ballot was jammed, unread, or out-stacked. If the LED is red it indicates that the ballot was uncounted or unread due to error.

If a ballot cannot be read, the whole batch (minus the bad ballot) should be re-run.

- The election should be coded to out-stack write-in ballots so that they can be manually adjudicated. A report in ElectionWare also allows you to view the write-ins on screen, but not adjudicate them. Therefore, out-stacking on the central scanners is best to make it easier to process the write-in votes. The DS200 has the aforementioned capability to stamp a red circle on the write-ins ballots for easy sorting.
- The USB media used by the system should be either purchased from ES&S or meet the minimum specification as certified by the EAC and declared in the EAC Scope of Certification document.
- The AutoMark BMD is slow for voting and printing of the voted ballot. This makes it unsuitable for heavy use. It should be limited for use by voters who are visually or physically impaired and/or need to use ADA devices.
- The ExpressVote has good throughput and as such, may be used by all voters including those who need ADA devices.
- The audit logs are in plain english and do require a manual to cross-reference a code to find the meaning. The logs are brought along with the results from the scanners into the ERM. The logs can also be viewed in ElectionWare which makes it easy to look for errors. But in order to be viewed in ElectionWare, a jurisdiction must purchase a separate program. Since the EVS is purported to be a complete, integrated system, the log program should be part of the package.
- The EVS 5220 system has a feature, Ballot Online - ExpressPass, which may be beyond the scope of a Texas certification. It is the same as when reviewed for the EVS 5210 examination. It allows a voter to make their selections online at home onto a sample ballot. Ballot marking is

ES&S EVS 5.2.2.0

done using a web browser and an application which is hosted on a web server by an ES&S partner.

After voting the sample ballot, the voter will print their ballot on their printer to be used on election day in a polling place on the ExpressVote. A QR code on their printed ballot is scanned by the ExpressVote to recall their selections.

The online voted ballot is only a sample ballot and is not tabulated in the EVS. The voter has a chance to verify their selections when it is read by the ExpressVote before they cast their vote. When they cast, the voter gets a chance to review the printed ballot (CVR) from the ExpressVote just as a voter who did not use the web application.

There are a few potential issues with this feature:

- 1) It's possible an error on the ballot displayed may go undetected. This error might be due to a last minute change to the ballot that was not pushed to the online version. It is less likely a deliberate manipulation of the ballot is made in order to have ballots mis-marked.
 - 2) Another possibility is that the voter will get the wrong ballot style due to an address change. In this case, their sample ballot will be rejected on the ExpressVote in the polling place if the sample ballot style is different from the style given to them when they check-in to the precinct.
 - 3) If the sample ballots are stored on the online server, they could be "tabulated" to see voting trends. Ideally, the voter's selections are only in memory until the voter closes the online session. However, the process has not been specified in detail at the time this report was written.
 - 4) If the voter's IP address is being monitored by the online system or an operator of the system, there may be voter privacy concerns.
- Jurisdictions should review the system and component limitations sections of the _____
