



Voting System Security

Election Systems & Software (ES&S) is a proud provider of voting system technology across the United States. We have been in the business of providing tabulation systems to local and state jurisdictions for nearly 40 years.

The voters of our nation cast their ballots using a number of different methods. The types and kinds of technology in use across the nation vary from state to state and county to county, depending on the election laws and preferred voting methods for a particular jurisdiction. Depending on the jurisdiction, voters can cast their ballots by mail in advance of Election Day or in a polling location on Election Day, and in some cases in a polling location during an Early Voting period. A number of voters cast their ballots on a voting device designed to ensure that those with disabilities can vote securely and independently. The most common way to vote, however, remains in-person at a polling location on the day of the election. Polling place ballots are then tabulated at the precinct, or in some cases, they are centrally counted at the Elections Office.

At ES&S we design, build and sell voting systems that support all the aforementioned voting methods. The overriding design philosophy with all of our products is to ensure accuracy, security and reliability — a philosophy that has prevailed throughout our company's history. As such, ES&S is committed to ensuring the long-term sustainability of our products. A large part of our company is devoted to sourcing and maintaining replacement parts for our fielded systems – regardless of age. All replacement parts are tested and certified for use prior to installation. Additionally, we field hundreds of trained support personnel who perform preventative maintenance on voting systems to ensure that each piece of technology is in good working order prior to Election Day.

ES&S submits our tabulation systems to rigorous and lengthy test campaigns as part of the Election Assistance Commission's (EAC) Voting System Certification Program. This important program sets forth security and performance standards that were developed by Scientists, Academicians and Election Officials. All of our systems are tested by independent laboratories that have received federal accreditation.

In addition to adhering to the security and performance requirements of the EAC Certification Program, our systems allow Election Officials to easily adhere to the laws of their state which mandates strict physical security and tight chain of custody of the voting machines.

In the event that a voting machine has a mechanical issue, or a human makes an error in preparing or using a voting machine, every state in the nation has protocols for the use of back-up equipment, audits of voting results and publicly documented physical tests to ensure that issues can be corrected prior to Election Day or before the final certification of voting results.

Our mission at ES&S is simple and unwavering. We believe in "maintaining voter confidence and enhancing the voting experience". We deliver on this commitment through our dedication to the research, design and manufacture of secure, accurate and reliable voting systems. In addition, we remain committed to submitting all of our systems to the EAC federal testing process that is the gold standard for our industry. Finally, our promise of accuracy, security and reliability is supported and strengthened by the dedication and attention to excellence that is a hallmark of the thousands of Election Officials across the nation whom we serve. We support each of these officials in our mutual quest to perpetually uphold the integrity of this nation's elections process.



DS200[®]

Security Features Of The Precinct Scanner & Tabulator

Accuracy, security and reliability are the cornerstones of the ES&S development process for each voting system we manufacture and sell. From concept to construction, ES&S adheres to industry-leading standards and complies with rigorous testing schedules set forth by federal and state election agencies. Upholding and perpetuating the integrity of our nation's election process is our continuing mission as a company.

Like all ES&S ballot tabulation equipment, the DS200 in-precinct paper-based scanner and tabulator includes physical security features such as locking panels and security seals to secure sensitive components and election files, and a key locked case for transport and shipping. This paper-based system maintains paper vote records and takes digital images of each processed ballot.

The DS200 allows election officials to easily validate that all resident firmware matches the firmware version certified for use in that jurisdiction. It also generates detailed audit and event logs to reveal all actions taking place on the unit while also digitally signing and encrypting all data to prevent malicious tampering. Each administrative function requires a password be entered for completion and units can be configured to require a passcode before the tabulator boots up.

Strong physical safety features including controlled keys with unique locks, security seals and security screws eliminate the possibility of undetected system tampering during storage, transport and use. The unit only accepts approved and certified USB drives to prevent unauthorized data transfers or uploads.

The DS200 tabulator is a single purpose voting device. As such, once an election official installs election programming, it is not possible for a separate device to interface with the DS200 in order to overwrite or change the election definition or system firmware. Additionally, when election results are transmitted, a double encryption procedure is employed that ensures results are secure from the time they are bundled by the DS200 tabulator until they are processed by the Election Reporting Manager (ERM).





MODEMING

As It Relates To Unofficial Results Transmission

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Where approved, certain ES&S systems support secure wireless network results transmission utilizing a Data Transmission Security bundle configured in the Electionware Configure module. The security bundle is loaded to the DS200 using USB media. The encrypted security bundle contains network access passwords to facilitate secure connection and authentication with the central reporting location. Only unofficial results are ever transmitted via modem. Official results are physically uploaded at the election office.

Additional security is achieved by signing the encrypted results bundle with a private key created by the DS200. The encrypted results bundle, in addition to the results, includes the signature file and DS200 created Public key used to verify the results bundle signature.

ES&S application software digitally signs every cast vote record and digitally signs the package of cast vote records captured by the tabulators.

Additionally, ES&S application software for the DS200 places a digital signature on all data sent to the tabulators on removable media — from the Election Management System (EMS) — and all data returned from the tabulators on removable media (to the EMS). The jurisdiction's election administrator assigns a unique account and password to all users of the EMS PCs

Modem capability is only activated when the polls are closed and communication is initiated to a designated host site for purposes of results transmission. Even when the modem is active the unit is not capable of establishing a connection that it did not initiate. Results are transmitted over a secure and encrypted connection.

