



## SECURITY BULLETIN

# DS450<sup>®</sup> High-Throughput Scanner and Tabulator

# DS850<sup>®</sup> High-Speed Central Scanner and Tabulator



## PHYSICAL AND SYSTEM ACCESS CONTROLS

- Both the DS450 & DS850 use key-locks and security seals to protect the units against tampering or intervention in system operations.
- All data ports and the power switch are secured behind clear plastic lockable and sealable access doors to protect access and allow election officials to detect unauthorized access easily.
- All critical hardware components can be locked and sealed, as well. It also provides additional alerts and logs access to the back service door.



## SYSTEM APPLICATION CONTROLS

- Both tabulators have no capability to write or otherwise change the election program once installed. The contents of the DS450/DS850 election media are digitally signed and verifiable using the application.
- No options exist on the DS450/DS850 to change any ballot information.
- All administrative functions are limited to the controls allowed through the touch screen interface for machine operation only.



## ENCRYPTION, HASH VALIDATION AND DIGITAL SIGNATURES

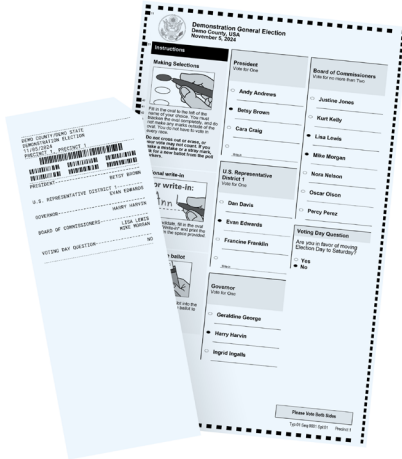
- The units use digital encryption and signing of key configuration and data files for complete integrity of the election and results. All DS450/DS850 data is signed with FIPS-compliant digital signature algorithms. All data generated is also signed, so the program receiving the data can validate it.



## AUDIT LOGS

- The tabulators provide options for both real-time printed and electronic logging of all activity performed, with the ability to reprint logs on demand or export electronic logs for complete review.
- The DS450/DS850 logs all passcode attempts, whether successful or failed, to the digitally signed audit log. In addition, all user actions (such as administrative selections and open and close poll events), whether successful or failed, are written to the audit log.
- Only the system can create, read, modify and delete the audit log content as the user interface is locked out of this functionality.

# Post-election Auditing and Paper Ballot Cards



ES&S fully supports the use of paper ballots and post-election audits to ensure accuracy and increase confidence in our country's election process. ES&S views paper records as critical for auditing. A physical paper record of the selected candidate names provides the means to a statistically valid post-election audit.

## IS A PAPER BALLOT CARD AUDITABLE?

Yes. Just as hand-marked paper ballots can be inspected or audited by hand or by machine, so can ballot cards. A ballot card contains the same data as a hand-marked ballot, displayed in different ways. During a post-election hand-count audit, selected candidate names are used to count the vote.

## ES&S Security Philosophy

Nothing is more important to ES&S than protecting America's democracy through secure and accurate elections. That's why every ES&S product reflects the company's three-part security philosophy:



- **Design:** All products are designed, without compromise, to meet the latest and ever-evolving standards in security, accuracy and reliability.



- **Testing:** In addition to ES&S testing protocols, all tabulation systems are rigorously tested and certified by the federal Election Assistance Commission (EAC), which reflects security and performance standards developed by scientists, academia and election officials. The ES&S testing protocol also involves testing by independent, accredited laboratories. ES&S submitted our end-to-end voting configuration for Cybersecurity and Infrastructure Security Agency (CISA) critical product evaluation (CPE) at Idaho National Labs.



- **Implementation:** The entire ES&S team is devoted to ensuring that each piece of technology performs as expected on election day, helping election officials uphold the laws of their state which mandate strict physical security and tight chain of custody of all voting machines.

Perhaps most importantly, ES&S' essence — its very being — is predicated on providing America with secure, accurate and accessible elections. Every person at ES&S holds themselves, and each other, accountable for this mandate, and is proud to serve a role in this noble purpose.