ExpressVote® XL
Full-Face Universal Voting System

The purpose-built, paper-based ExpressVote XL full-face Universal Voting System maintains the highest levels of physical and digital security controls. It provides voter confidence with on-screen, printed and audio playback options for vote selection verification. The unit's security features control access to critical system components.

PHYSICAL AND SYSTEM ACCESS CONTROLS

- Lockable doors with an optional unique key for each unit
- Tamper-evident seals imprinted with identification numbers
- Access codes required to gain administrative access

MEDIA MANAGEMENT

- All USB flash drives are validated to ensure that they are the approved type and programmed for the expected function.
- The election programming and vote data are encrypted and digitally-signed, so the system can verify that they are from a trusted source and have not been altered.

SYSTEM APPLICATION CONTROLS

- The firmware is designed to operate only as intended and protects against user error or nefarious manipulation.
- A self-diagnostic test is performed at startup and alerts of errors or inconsistent system changes before the election data is introduced.
- A detailed audit log is generated of all actions and events that occurred on the unit.

ENCRYPTION, HASH VALIDATION AND DIGITAL SIGNATURES

- Files that contain voters' selections have the time stamp obscured to protect their privacy.
- All vote data is digitally signed as it is committed to memory to protect against modification.
- Files with vote data and results are encrypted and digitally signed at poll close to protect them during transfer.

CAST PROCESS

- During the cast process, vote data that is read from the voter-verified paper record is recorded. The print head lifts out of contact with the paper path, allowing the ballot to pass through to the secure card container.

ExpressVote XL Tabulation and Auditing
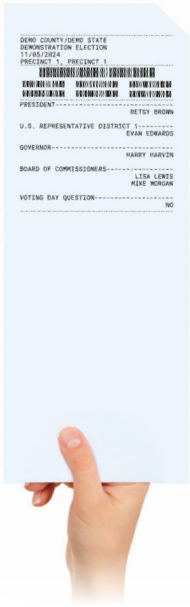
PAPER BALLOT CARD

- Provides a verifiable paper vote record for every voter, containing both human-readable selections and corresponding machine-readable barcodes
- Can be read by any ExpressVote XL unit before tabulation to verify the voter's intent was captured accurately

IS THE PAPER FROM THE EXPRESSVOTE XL 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, candidate names are used to count the vote.

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. A physical paper record of the selected candidate names provides the means to a statistically valid post-election audit.

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.