



# Key Benefits Summary: ES&S Voting System 5.2.2.0

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This Key Benefits Summary provides information about the enhancements and new products introduced with EVS5220. Read the sections that are most relevant to your needs.

- [Executive Summary](#) - a high-level overview
- [General Overview](#) - information relevant to election officials and poll workers
- [Cross-Product Enhancement Details](#) and [Product-Specific Enhancement Details](#) - detailed information relevant to your technical support staff

## Note



This system is an enhanced version of EVS 5.2.1.0. For information about all system features and benefits of that release, refer to *Key Benefits Summary: ES&S Voting System 5.2.1.0*.

## Executive Summary

At ES&S, we design, build, and sell voting systems that adhere to the most current standard of security for the industry. Keeping our products current with this standard requires diligent supervision and perpetual updates to stay one step ahead of risks. In EVS5220, we implemented a new set of NIST validated COTS cryptographic modules to remain on the cutting edge of security. These upgraded cryptographic modules maintain the FIPS 140-1 and FIPS 140-2 compliance for the EVS5220 suite of products.

EVS5220 introduces the new DS450, a mid-range, central scanner and tabulator.

Electionware and ERM now use the term “Central Count” to refer to both the DS450 and DS850 central count tabulators.

The ExpressVote now enables the display of candidates in either one or two columns. The ExpressVote also now supports activation barcodes from third-party pollbook systems. This enhancement enables a poll worker to select the voter’s correct precinct and ballot style automatically by scanning an activation barcode pre-printed on the voter’s check-in receipt. This enhancement reduces the time required to activate the voting session and can ease congestion at busy polling locations. The ExpressVote can now be configured to display Open Primary contests sorted by Party. Election Data generation has added ExpressVote card size validation.

## General Overview

The following section provides a general overview of enhancements made to each component of EVS5220.

### Note



Refer to [Cross-Product Enhancement Details](#) and [Product-Specific Enhancement Details](#) for additional information.

For complete details about these enhancements, refer to the *EVS5220 System Change Notes*, and to the User Guide, Operator Guide, and System Maintenance Manual for each component of EVS5220.

## Electionware

- Implemented new cryptographic modules for security
- Central Count label
- ExpressVote option for 2-column candidate display
- ExpressVote Open Primary contest order is now sorted by Party
- ExpressVote card size validation

## ERM

- Implemented new cryptographic modules for security
- Central Count label

## DS450 Central Scanner and Tabulator

- New, mid-range scanner and tabulator

## ExpressVote

- Implemented new cryptographic modules for security
- Candidate 2-column display capability
- Support for third-party activation barcodes
- ExpressVote Open Primary contest order is now sorted by Party

## Cross-Product Enhancement Details

This section contains detailed information about the EVS5220 enhancements affecting multiple products.

### Security Compliance

This enhancement affects the following products:

- Electionware
- ERM
- ExpressVote
- AutoMARK
- DS200
- DS850

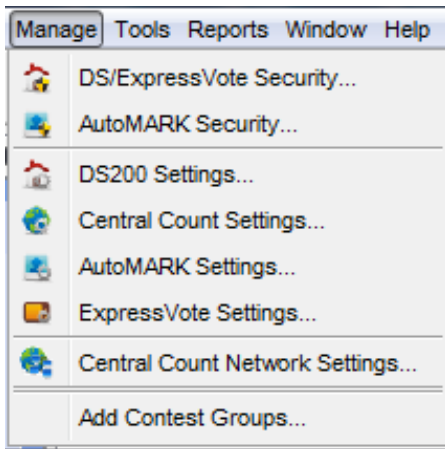
ES&S strives to maintain up-to-date voting system security. For EVS5220, the products were updated to a newer set of NIST validated COTS cryptographic modules (RSA BSafe and OpenSSL) to maintain FIPS 140-1 and FIPS 140-2 compliance.

### Central Count Terminology

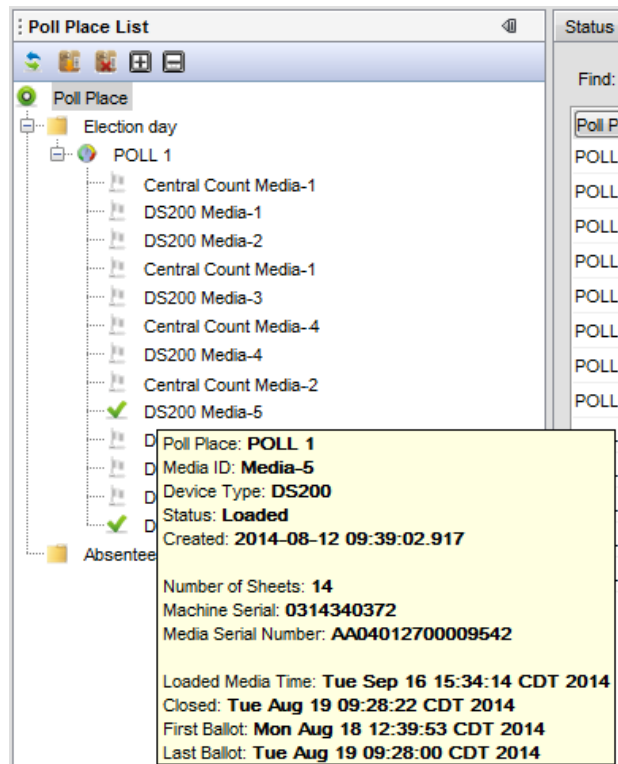
This enhancement affects the following products:

- Electionware
- ERM
- DS850

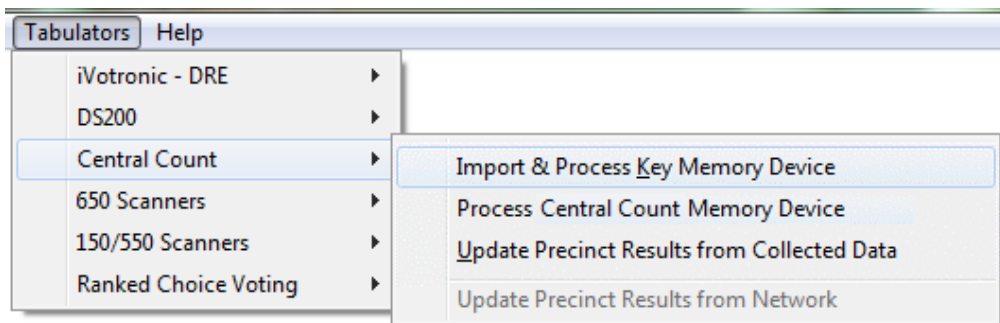
With the introduction of the DS450, the label Central Count now appears in all applicable screens and reports, instead of specific model numbers, as shown in the samples below.



Samples of Electionware screen updates



Samples of ERM screen updates



## Two-Column Candidate Display

This enhancement affects the following products:

- Electionware
- ExpressVote

Use the new **Show two columns when candidates exceed one page** ExpressVote setting in the Configure module of the Deliver group to enable the ExpressVote to display a contest's candidates in two columns if the candidates do not fit on a single screen. For each contest that fits on a single screen, the candidates will continue to appear in the standard ExpressVote one-column format.

When the **Show two columns when candidates exceed one page** checkbox is not selected, the ExpressVote will display all contests in a single-column format. When this setting is enabled, the ExpressVote will automatically show candidates in two columns for any contest that exceeds one page.

If a contest uses the two-column display format, the two columns may not display an equal number of candidates each. For example, if a contest contains a total of 12 candidates, the ExpressVote may display 8 candidates in the left column and 4 candidates in the right column.

You can monitor your use of this setting via the **Show two columns when the candidates exceed one page** field in the Vote Session Properties section of the ExpressVote Settings report.

The image shows two screenshots. The left screenshot is a window titled 'ExpressVote Settings...' with a 'Vote Session Properties' section. A red box highlights the checkbox 'Show two columns when candidates exceed one page', which is checked. A red arrow points from this checkbox to the right screenshot. The right screenshot is a ballot screen for 'BEST VOCAL ARTIST' with the instruction 'Vote for no more than Two'. It displays a 2-column grid of candidate names: FRANK SINATRA, "MAMA" CASS ELLIOT, ELVIS, Write-in:, PATSY CLINE, Write-in:, JANIS JOPLIN, Write-in:, BUDDY HOLLY, Write-in:, BARRY WHITE, Write-in:, BILLIE HOLIDAY, Write-in:, and STEVIE RAY VAUGHAN, Write-in:. The screen has a blue header with 'BMW-Import Electionware County 3/29/2016' and 'EARLY VOTING 9:40 AM'. A bottom navigation bar includes 'Previous', 'Zoom', 'Exit', 'Contrast', and 'Next' buttons.

**ExpressVote settings in Electionware Configure**

**2-Column formatting on the ExpressVote screen**

## Open Primary Contest Order

This enhancement affects the following products:

- Electionware
- ExpressVote

Open Primary contest order is sorted by Party at this location. Internal note from Paige: Rather than show by the paper order it shows by party order. For example, Front side of ballot may show Dem/Rep/ Nonpartisan column and repeat this on the back. The ExpressVote was showing races as [Party selected] then Nonpartisan, then [Party selected] then Nonpartisan.

## Product-Specific Enhancement Details

The following sections provide detailed information about EVS5220 enhancements affecting individual products or multiple products.

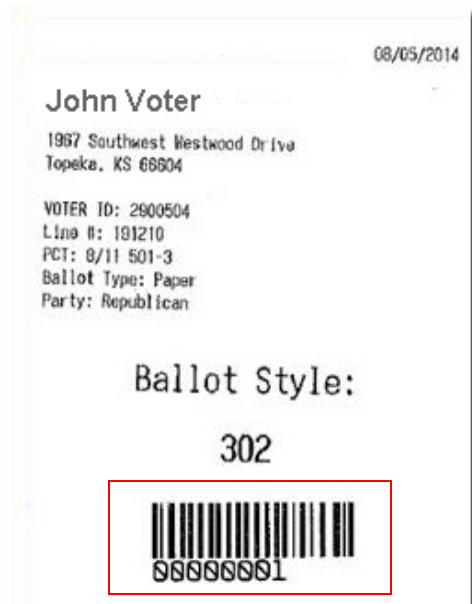
### Electionware: ExpressVote Card Size Validation

During the Generate Election Data process in Configure, validation now excludes any contest-level text that is set to "Paper Ballot Only" from ExpressVote cards. This ensures that the number of lines calculated for the ExpressVote card is correct.

### ExpressVote: Third-Party Activation Barcodes

The ExpressVote Universal Voting System now supports third-party activation barcodes. If you use an electronic pollbook that prints a 128c activation barcode on the voter's check-in receipt, a poll worker now can scan the barcode when prompted using the ExpressVote optional external barcode scanner. The ExpressVote automatically displays the proper ballot for the voter's precinct and ballot style.

The poll worker positions the printed barcode in front of the external barcode scanner window.



Scanner window



The ExpressVote scans the printed activation barcode and automatically selects the proper ballot for the voter's precinct-ballot style. The ballot selection process is complete.

## Introduction of DS450 Central Scanner and Tabulator



The new DS450 mid-range scanner and tabulator provides high-speed scanning of ballots and vote summary cards, sorting tabulated ballots and/or cards into discrete output bins without interrupting scanning. Like the DS850, the DS450 can be optionally configured to transmit tabulation results via closed network.

Easily manage folded ballots with the DS450 tabulator's TruGrip™ technology. The mid-range tabulator uses our patented IMR™ and PTRAC™ technology, increasing the accuracy of tabulation and eliminating manual adjudication time. The DS450 competes with the industry's standard high-speed scanners while maintaining an appropriate throughput along with affordability for jurisdictions.

The DS450 ballot tracking feature can save you time and effort by enabling you to manage your ballot jams without rescanning the entire run. Through the messages displayed on interactive screens and the LED lights on the front of the output bins, the DS450 walks the operator through the process of setting aside all properly scanned ballots and rescanning the rest.