



United States Election Assistance Commission

Certificate of Conformance



ClearVote 1.5

The voting system identified on this certificate has been evaluated at an accredited voting system testing laboratory for conformance to the *2005 Voluntary Voting System Guidelines Version 1.0*. Components evaluated for this certification are detailed in the attached Scope of Certification document. This certificate applies only to the specific version and release of the product in its evaluated configuration. The evaluation has been verified by the EAC in accordance with the provisions of the *EAC Voting System Testing and Certification Program Manual* and the conclusions of the testing laboratory in the test report are consistent with the evidence adduced. This certificate is not an endorsement of the product by any agency of the U.S. Government and no warranty of the product is either expressed or implied.

Product Name: **ClearVote**

Model or Version: **1.5**

Name of VSTL: **Pro V&V**

EAC Certification Number: **CBG-CV-15**

Date Issued: **March 19, 2019**

Executive Director, U.S. Election Assistance Commission

Scope of Certification Attached

Manufacturer: *Clear Ballot Group*
System Name: *ClearVote 1.5*
Certificate: *CBG-CV-15*

Laboratory: *Pro V&V*
Standard: *VVSG 2005*
Date: *March 15, 2019*



Scope of Certification

This document describes the scope of the validation and certification of the system defined above. Any use, configuration changes, revision changes, additions or subtractions from the described system are not included in this evaluation.

Significance of EAC Certification

An EAC certification is an official recognition that a voting system (in a specific configuration or configurations) has been tested to and has met an identified set of Federal voting system standards. An EAC certification is **not**:

- An endorsement of a Manufacturer, voting system, or any of the system's components.
- A Federal warranty of the voting system or any of its components.
- A determination that a voting system, when fielded, will be operated in a manner that meets all HAVA requirements.
- A substitute for State or local certification and testing.
- A determination that the system is ready for use in an election.
- A determination that any particular component of a certified system is itself certified for use outside the certified configuration.

Representation of EAC Certification

Manufacturers may not represent or imply that a voting system is certified unless it has received a Certificate of Conformance for that system. Statements regarding EAC certification in brochures, on Web sites, on displays, and in advertising/sales literature must be made solely in reference to specific systems. Any action by a Manufacturer to suggest EAC endorsement of its product or organization is strictly prohibited and may result in a Manufacturer's suspension or other action pursuant to Federal civil and criminal law.

System Overview

The ClearVote 1.5 voting system is a paper-based optical-scan voting system consisting of the following major components: ClearDesign (ballot design and EMS), ClearCount (central count, tabulation, and election reporting), ClearCast (precinct count and tabulation), and ClearAccess (accessible voting and ballot marking device).

ClearDesign

ClearDesign is an election management system consisting of an interactive set of applications that are responsible for all pre-voting activities necessary for defining and managing elections. This includes ballot design, ballot proofing, ballot layout, and ballot production. The ClearDesign system consists of the physical components listed below. All the components and the

generation of voting machine election definition file packages are unmodified COTS that are connected via a wired, closed, and isolated network not connected to any other systems or to the Internet.

- DesignServer: A desktop computer that runs the ClearDesign software on an Ubuntu operating system and hosts the election database.
- DesignStations: One or more laptop or desktop computers that runs Microsoft Windows with a browser-based user interface. DesignStations connect to the DesignServer, and users with administrative privileges can define users and manage the elections.
- Router: Connects the DesignStations to the DesignServer using a wired, closed Ethernet-based network with FIPS 140-2 certified encryption.

ClearCount

ClearCount is a central, high-speed, optical-scan ballot tabulator coupled with ballot-processing applications. The ClearCount software runs on unmodified COTS laptop or desktop computers running the Linux and Windows operating systems, and supports specific models of Fujitsu scanners. The ClearCount central-count system consists of the following physical components, all of which are unmodified COTS hardware that are connected via a wired, closed, and isolated network not connected to any other systems or to the Internet.

- ScanServer: A computer running the ClearCount software and hosting its election database and the web server that serves its election reports. The ScanServer runs on the Ubuntu operating system.
- ScanStations: One or more computer/scanner pairs used to scan and tabulate ballots. The ScanStations run on the Microsoft Windows operating system.
- Router: Connects the ScanStations and election administration stations to the ScanServer using a wired, closed Ethernet-based network with FIPS 140-2 certified encryption.
- Election Administration Stations (Adjudication Stations): One or more laptop or desktop computers that runs Microsoft Windows with installed browser software. This station can serve multiple purposes: user administration, election administration, adjudication, and reporting. This station is also used to consolidate the vote totals and ballot images from the ClearCast precinct tabulator. The vote totals and ballot images are consolidated by the ClearCount software via the ClearCast USB drive.

All files that make up the ClearCount software reside on a single ScanServer that is shared by all client ScanStations. The only software programs installed on ScanStations, other than the Windows operating system, are the Fujitsu ScandAll Pro software and drivers required by the scanner hardware. The ClearCount software consists of the following components:

- Tabulator: The Tabulator application handles ballot tabulation. The Tabulator software is stored on the ScanServer and is executed by each ScanStation at run-time from files that reside on the ScanServer. The Tabulator program analyzes the incoming image and transfers them to the local output folder named CBGBallotImages. The ScanServer retrieves the images from the folder and uploads them into the election database.

- **Election Database:** A centralized election database that resides on the ScanServer and collects the output of each Tabulator.
- **Election Reports:** A browser-based suite of reports that provides election results and analysis, and allows election officials to review individual ballot images. A web server on the ScanServer serves the reports.
- **Card Resolutions Tool:** A web application that allows election officials to review and appropriately resolve unreadable voted ballots.
- **User and Election Database Management through Web Applications:** From the User Administration page, the administrator can add, rename, or delete users; assign permissions; and change user passwords. From the Election Administration pages, the administrator can create or delete an election, set an election as active or inactive, back up or restore an election, merge election results, withdraw contests/choices, and export the Cast Vote Record.

ClearCast

The ClearCast tabulator is a precinct-count ballot-scanning solution suitable for early and election in-person voting, including processing ballots printed by the ClearAccess accessible ballot-marking device. The ClearCast application runs on the precinct-count-based tabulator, and is used to scan, count and tally marked ballots.

ClearCast functionality is divided into three essential modes, Election Mode (early voting and Election Day), which is used to process voter cast ballots; Pre-Election Mode, which occurs prior to Election Mode, and is used to test all system functionality subsequent to the start of the election; and Post-Election Mode, which is used to perform administrative functions following the close of the election. Ballots tabulated on the ClearCast system are transmitted via one of the redundant USB drives to the central ClearCount system for consolidation and reporting.

ClearAccess

ClearAccess is an accessible touchscreen ballot-marking device used for the creation of paper ballots that can be scanned and tabulated by ClearCast or ClearCount. Like other components of the ClearVote voting system, ClearAccess uses modified and unmodified COTS hardware, such as laptop and desktop computers, combined with personal assistive devices, printers, and uninterruptible power supplies to form a ballot-marking device.

Mark Definitions

Twenty percent or more of the voter target (oval) marked anywhere within the oval (left/right, above, or below its center) provides mark recognition. The manufacturer recommends black ink, but many colors will tally in accordance with VVSG 1.0 accuracy requirements. There are no required dropout colors.

Tested Marking Devices

The manufacturer recommends black and blue ballpoint pens, Sharpie® markers, and number 2 pencils.

Language Capability

In addition to English, the voting system supports Chinese, Danish, Dutch, Flemish, French, German, Italian, Japanese, Korean, Norwegian, Portuguese, Spanish, Swedish and Vietnamese.

Components Included

This section provides information describing the components and revision level of the primary components included in this Certification.

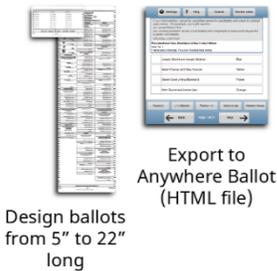
ClearVote

The first visual voting system to bring transparency to democratic elections



ClearDesign

Interactive ballot design, proofing, layout, and programming



Export to Anywhere Ballot (HTML file)

Design ballots from 5" to 22" long

USB drives program ClearAccess, ClearCast, and ClearCount



ClearAccess

Accessible ballot-marking device (BMD)



BMD and low-cost printer



Accessible input device Sip-and-puff input device



Machine-marked ballot

ClearCast

In-person tabulation for vote centers and polling places



ClearCast voting station and collapsible ballot bag

ClearCount

Central-count tabulation, consolidation, and election reporting



ScanServer

ScanStation with scanner

System Component	Software or Firmware Version	Hardware Version	Operating System or COTS	Comment
ClearAccess software	1.5.1			ClearAccess
ClearCast software	1.5.1			ClearCast
ClearCount software	1.7.1			ClearCount
ClearDesign software	1.5.1			ClearDesign
Brother printer driver	1.0.1.0		Windows 10 Pro	ClearAccess
ColReorder	1.1.2		COTS software	ClearAccess
ColVis	1.1.1		COTS software	ClearAccess

System Component	Software or Firmware Version	Hardware Version	Operating System or COTS	Comment
DataTables	1.10.5		COTS software	ClearAccess
Google Chrome	61.0.3163.100		COTS software	ClearAccess
jquery	1.10.5		COTS software	ClearAccess
jsmin	2003.12.04		COTS software	ClearAccess
nsis	3.01		COTS software	ClearAccess
Okidata printer driver	1.0.0.0		Windows 10 Pro	ClearAccess
pefile	2016.3.28		COTS software	ClearAccess
PyInstaller	3.2		COTS software	ClearAccess
Python	2.7.10		COTS software	ClearAccess
Python-future	0.15.2		COTS software	ClearAccess
pywin	223		COTS software	ClearAccess
webpy	0.38		COTS software	ClearAccess
Zebra CoreScanner Driver	3.03.0001		COTS software	ClearAccess
Windows 10 Pro	Build 1607		Windows 10 Pro	ClearAccess
Adafruit tools	1.4.9		COTS software	ClearCast
Arduino tools	1.8.0		COTS software	ClearCast
DataTables	1.10.5		COTS software	ClearCast
google_chrome	70.0.3538.110		COTS software	ClearCast
jquery	1.12.4		COTS software	ClearCast
jQuery.NumPad	1.4		COTS software	ClearCast
jquery.ui	1.11.3		COTS software	ClearCast
JTSage DateBox	4.0.0		COTS software	ClearCast
libPDIScan.so	7.1.0		COTS software	ClearCast
OpenSSL (standard)	1.1.0g		COTS software	ClearCast
OpenSSL FIPS Object Module	2.0.10		COTS software	ClearCast
pdi_ps3_drv_scanner.ko	2.0.5		COTS software	ClearCast
Pyinstaller	3.2.1		COTS software	ClearCast
scanner_control	0.0.33		COTS software	ClearCast
Ubuntu LTS	18.04.1		COTS software	ClearCast
zeromq	4.2.3		COTS software	ClearCast
Apache	2.4.18		COTS software	ClearCount
ColVis	1.0.8		COTS software	ClearCount

System Component	Software or Firmware Version	Hardware Version	Operating System or COTS	Comment
Fujitsu fi-6400 PaperStream	1.30.0		Windows 10 Pro	ClearCount
Fujitsu fi-6800	10.10.710		Windows 10 Pro	ClearCount
Fujitsu fi-7180 PaperStream	1.4.0		Windows 10 Pro	ClearCount
Google Chrome	55.0.2883.87		COTS software	ClearCount
J JavaScript jQuery-migrate library	1.2.1		COTS software	ClearCount
JavaScript Bootstrap library	2.3.2		COTS software	ClearCount
JavaScript Chosen library	1.0.0		COTS software	ClearCount
JavaScript DataTables library	1.9.4		COTS software	ClearCount
JavaScript FixedHeader library	2.0.6		COTS software	ClearCount
JavaScript hotkeys library	0.8		COTS software	ClearCount
JavaScript jQuery library	1.10.2		COTS software	ClearCount
JavaScript LESS library	1.3.3		COTS software	ClearCount
JavaScript pep library	1.0		COTS software	ClearCount
JavaScript TableTools library	2.1.5		COTS software	ClearCount
JavaScript tooltip library	1.3		COTS software	ClearCount
libapache2-mod-fcgid	2.3.9		COTS software	ClearCount
MySQLdb (part of Ubuntu)	1.3.7		COTS software	ClearCount
OpenSSL (standard)	1.0.2g		COTS software	ClearCount
OpenSSL FIPS Object Module	2.0.10		COTS software	ClearCount
Pillow (part of Ubuntu)	3.1.2		COTS software	ClearCount
PollyReports	1.7.6		COTS software	ClearCount
PyInstaller	3.2.1		COTS software	ClearCount
Python (part of Ubuntu)	2.7.12		COTS software	ClearCount
Ubuntu LTS	16.04.1		COTS software	ClearCount
Windows 10 Pro	Build 1607		Windows 10 Pro	ClearCount
ZeroClipboard TableTools2	1.0.4		COTS software	ClearCount

System Component	Software or Firmware Version	Hardware Version	Operating System or COTS	Comment
Apache	2.4.18		COTS software	ClearDesign
Bootstrap	3.0.0		COTS software	ClearDesign
DataTable	1.10.16		COTS software	ClearDesign
DataTable Buttons	1.4.2		COTS software	ClearDesign
DataTable Buttons JSZip	2.5.0		COTS software	ClearDesign
DataTablePlugins	1.10.16		COTS software	ClearDesign
DataTable Buttons Pdfmake	0.1.32		COTS software	ClearDesign
Google Chrome	55.0.2883.87		COTS software	ClearDesign
jquery	1.10.2		COTS software	ClearDesign
jquery-impromptu	5.2.3		COTS software	ClearDesign
jquery-qrcode	1.0		COTS software	ClearDesign
jquery-splitter	0.14.0		COTS software	ClearDesign
jquery-ui	1.10.4		COTS software	ClearDesign
jscolor	1.4.2		COTS software	ClearDesign
jsmin	2003.12.04		COTS software	ClearDesign
jszip	3.1.2		COTS software	ClearDesign
libapache2-mod-fcgid	2.3.9		COTS software	ClearDesign
libmp3lame	0.5.0		COTS software	ClearDesign
MySQL	5.7.21		COTS software	ClearDesign
OpenSSL (standard)	1.0.2g		COTS software	ClearDesign
OpenSSL FIPS Object Module	2.0.10		COTS software	ClearDesign
papaparse	4.1.2		COTS software	ClearDesign
PhantomJS	1.9.8		COTS software	ClearDesign
Pyinstaller	3.2.11		COTS software	ClearDesign
Python	2.7.12		COTS software	ClearDesign
Python DBUtils	1.1		COTS software	ClearDesign
Python Flup	1.0.2		COTS software	ClearDesign
Python FontTools library	3.0		COTS software	ClearDesign
Python JSMIN	2.2.1		COTS software	ClearDesign
Python MySQL DB	1.3.7		COTS software	ClearDesign
Python Pillow	3.1.2		COTS software	ClearDesign
Python PIP	8.1.1		COTS software	ClearDesign

System Component	Software or Firmware Version	Hardware Version	Operating System or COTS	Comment
Python RTF	0.2.1		COTS software	ClearDesign
Python webpy	0.38		COTS software	ClearDesign
Python XLRD	0.9.4		COTS software	ClearDesign
Samba	4.3.11		COTS software	ClearDesign
SQLAlchemy	1.0.15		COTS software	ClearDesign
tinymce	4.1.9		COTS software	ClearDesign
Ubuntu LTS	16.04.4		COTS software	ClearDesign
Unzip	6.0.20		COTS software	ClearDesign
Usbmount	0.0.22		COTS software	ClearDesign
Windows 10 Pro	Build 1607		Windows 10 Pro	ClearDesign
Zip	3.0.11		COTS software	ClearDesign
ELO 15 inch AIO		E-Series (15E2)	COTS hardware	ClearAccess
ELO 20 inch AIO		X-Series (20X2)	COTS hardware	ClearAccess
Brother Laser Printer		HL-L2350DW	COTS Hardware	ClearAccess
Oki Data Laser Printer		B432dn	COTS hardware	ClearAccess
Storm EZ Access Keypad		EZ08-222013	COTS hardware	ClearAccess
Origin Instruments Sip/Puff Breeze with Headset		AC-0313-H2	COTS hardware	ClearAccess
Monoprice Over the Ear Pro Headphones		8323	COTS hardware	ClearAccess
ElectionSource Table Top Voting Booth (Privacy Screen)		VB-60B	COTS hardware	ClearAccess
3M EMI Copper Foil Shielding Tape, , ¼ inch		1181	COTS Hardware	ClearAccess
Lexan or acrylic plastic cover (8 mm)		2"x4"	COTS hardware	ClearAccess
3/4" 2 mil Kapton tape		S-17213	COTS hardware	ClearAccess
APC Smart-UPS		SMT2200C	COTS hardware	ClearAccess
ClearCast		Model D, Revision 4	COTS hardware	ClearCast
Ballot Bag		CBG-BAG-002	COTS hardware	ClearCast
CORSAIR Flash Padlock 3		CMFPLA3B-32GB	COTS hardware	ClearCast
Würth ferrites		74271142,74275812,74275813,74271132,74271722	COTS hardware	ClearCast

System Component	Software or Firmware Version	Hardware Version	Operating System or COTS	Comment
Dell Latitude (client)		5590	Windows 10 Pro	ClearCount
Dell Precision (client)		T3620	Windows 10 Pro	ClearCount
Dell PowerEdge (server)		T440	Ubuntu 16.04.1 LTS	ClearCount
Dell PowerEdge (server)		T130	Ubuntu 16.04.1 LTS	ClearCount
Fujitsu Scanner		fi-7180	COTS hardware	ClearCount
Fujitsu Scanner		fi-6800	COTS hardware	ClearCount
Fujitsu Scanner		fi-6400	COTS hardware	ClearCount
Lenovo USB DVD Burner		LN-8A6NH11B	COTS hardware	ClearCount
Western Digital 4 TB External HD		WDBFJK0040HBK-NESN	COTS hardware	ClearCount
Western Digital 8 TB External HD		WDBFJK0080HBK-NESN	COTS hardware	ClearCount
Netac Keypad Encryption Portable Hard Disk		K390	COTS hardware	ClearCount
CORSAIR Flash Padlock 3		CMFPLA3B-32GB	COTS hardware	ClearCount
Dell 24 inch Monitor		P2415Q	COTS hardware	ClearCount
Dell 22 inch Monitor		P2217	COTS hardware	ClearCount
Dell 22 inch Monitor		S2240M	COTS hardware	ClearCount
Cisco 8-Port Switch		SG250-08	COTS hardware	ClearCount
Cisco 26-Port Switch		SG250-26	COTS hardware	ClearCount
NETGEAR 8-Port Gigabit VPN Firewall		FVS318G	COTS hardware	ClearCount
TP-LINK 5-Port Gigabit Switch		TL-SG105E	COTS hardware	ClearCount
Sabrent 13 port USB 2.0 Hub		HB-U14P	COTS hardware	ClearCount
APC Smart-UPS		SMT1500	COTS hardware	ClearCount
Lenovo USB DVD Burner		LN-8A6NH11B	COTS hardware	ClearCount
EZ Scanning Shelves		Model: WorKEZ	COTS hardware	ClearCount
Dell Latitude (client)		5590	Windows 10 Pro	ClearDesign
Dell Precision (client)		T3620	Windows 10 Pro	ClearDesign
Dell PowerEdge (server)		T440	Ubuntu 16.04.4 LTS	ClearDesign

System Component	Software or Firmware Version	Hardware Version	Operating System or COTS	Comment
Dell PowerEdge (server)		T130	Ubuntu 16.04.4 LTS	ClearDesign
Dell 24 inch Monitor		SE2416H	COTS hardware	ClearDesign
Dell 22 inch Monitors		E2216HV	COTS hardware	ClearDesign
Cisco 8-Port Switch		SG250-08	COTS hardware	ClearDesign
Lenovo USB DVD Burner		LN-8A6NH11B	COTS hardware	ClearDesign
Sabrent 13 port USB 2.0 Hub		HB-U14P	COTS hardware	ClearDesign
Zebra Technologies Bar Code Scanner		DS457	COTS hardware	ClearDesign
SySTOR Multiple USB Duplicator		SYS-USBD-11	COTS Hardware	ClearDesign

System Limitations

This table depicts the limits the system has been tested and certified to meet.

System Characteristic	Boundary or Limitation	Limiting Component
Precincts in an election	3200	ClearDesign database
Contests in an election	3200	ClearDesign database
Candidates/Counters in an election	3200	ClearDesign database
Ballot Styles in an election	3200	ClearDesign database
Contests in a ballot style	60	ClearDesign database
Candidates in a contest	300	ClearDesign database
Ballot styles in a precinct	50	ClearDesign database
Number of political parties	50	ClearDesign database
“vote for” in a contest	50	ClearDesign database
Supported languages in an election	15	ClearDesign database
Number of write-ins	50	ClearDesign database
Maximum oval positions per side: 5-inch ballot	60	Ballot length
Maximum oval positions per side: 11-inch ballot	180	Ballot length
Maximum oval positions per side: 14-inch ballot	240	Ballot length
Maximum oval positions per side: 17-inch ballot	300	Ballot length
Maximum oval positions per side: 19-inch ballot	360	Ballot length
Maximum oval positions per side: 22-inch ballot	420	Ballot length

System Limits for ClearCount

Scanner model	Sustained ballots per hour by ballot size in inches						Typical jurisdiction size (central count)
	8.5 x 5	8.5 x 11	8.5 x 14	8.5 x 17	8.5 x 19	8.5 x 22	
fi-6400	5592 (est.)	3624*	2928	2448	2350	2236 est.	Large (>100K voters)
fi-6800	7822 (est.)	5508*	4155	3352	3000	2800 est.	Large (>100K voters)
fi-7180	3396 (est.)	2040	1692	1400	1300	1200 est.	Small (<25K voters)
ClearCount can have a maximum of 10 ScanStation/scanner pairs							

*Scanning cards in a landscape format

Functionality

2005 VVSG Supported Functionality Declaration

Feature/Characteristic	Yes/No	Comment
Precinct and BMD accessible via Parallel (Side) and Forward Approach	Yes	
Closed Primary		
Primary: Closed	Yes	
Open Primary		
Primary: Open Standard (provide definition of how supported)	Yes	Open Primary
Primary: Open Blanket (provide definition of how supported)	Yes	General "top two"
Partisan & Non-Partisan:		
Partisan & Non-Partisan: Vote for 1 of N race	Yes	
Partisan & Non-Partisan: Multi-member ("vote for N of M") board races	Yes	
Partisan & Non-Partisan: "vote for 1" race with a single candidate and write-in voting	Yes	
Partisan & Non-Partisan "vote for 1" race with no declared candidates and write-in voting	Yes	
Write-In Voting:		
Write-in Voting: System default is a voting position identified for write-ins.	Yes	
Write-in Voting: Without selecting a write in position.	Yes	
Write-in: With No Declared Candidates	Yes	
Write-in: Identification of write-ins for resolution at central count	Yes	
Primary Presidential Delegation Nominations & Slates:		
Primary Presidential Delegation Nominations: Displayed delegate slates for each presidential party	Yes	
Slate & Group Voting: one selection votes the slate.	Yes	
Ballot Rotation:		
Rotation of Names within an Office; define all supported rotation methods for location on the ballot and vote tabulation/reporting	Yes	Rotation by precinct and district

Feature/Characteristic	Yes/No	Comment
Straight Party Voting:		
Straight Party: A single selection for partisan races in a general election	Yes	
Straight Party: Vote for each candidate individually	Yes	
Straight Party: Modify straight party selections with crossover votes	Yes	
Straight Party: A race without a candidate for one party	Yes	
Straight Party: "N of M race (where "N">1)	Yes	
Straight Party: Excludes a partisan contest from the straight party selection	Yes	
Cross-Party Endorsement:		
Cross party endorsements, multiple parties endorse one candidate.	Yes	
Split Precincts:		
Split Precincts: Multiple ballot styles	Yes	
Split Precincts: P & M system support splits with correct contests and ballot identification of each split	Yes	
Split Precincts: DRE matches voter to all applicable races.	N/A	Not a DRE system
Split Precincts: Reporting of voter counts (# of voters) to the precinct split level; Reporting of vote totals is to the precinct level	Yes	
Vote N of M:		
Vote for N of M: Counts each selected candidate, if the maximum is not exceeded.	Yes	
Vote for N of M: Invalidates all candidates in an overvote (paper)	Yes	
Recall Issues, with options:		
Recall Issues with Options: Simple Yes/No with separate race/election. (Vote	Yes	
Recall Issues with Options: Retain is the first option, Replacement candidate	Yes	
Recall Issues with Options: Two contests with access to a second contest	No	
Recall Issues with Options: Two contests with access to a second contest	No	
Cumulative Voting		
Cumulative Voting: Voters are permitted to cast, as many votes as there are	No	
Ranked Order Voting		
Ranked Order Voting: Voters can write in a ranked vote.	No	
Ranked Order Voting: A ballot stops being counting when all ranked choices		
Ranked Order Voting: A ballot with a skipped rank counts the vote for the		
Ranked Order Voting: Voters rank candidates in a contest in order of choice.		
Ranked Order Voting: A ballot with two choices ranked the same, stops being		
Ranked Order Voting: The total number of votes for two or more candidates		
Provisional or Challenged Ballots		
Provisional/Challenged Ballots: A voted provisional ballots is identified but	Yes	via jurisdiction processes
Provisional/Challenged Ballots: A voted provisional ballots is included in the	No	
Provisional/Challenged Ballots: Provisional ballots maintain the secrecy of	Yes	
Overvotes (must support for specific type of voting system)		
Overvotes: P & M: Overvote invalidates the vote. Define how overvotes are	Yes	If the system detects more
Overvotes: DRE: Prevented from or requires correction of overvoting.	Yes	Yes for ClearAccess
Overvotes: If a system does not prevent overvotes, it must count them.	Yes	If the system detects more
Overvotes: DRE systems that provide a method to data enter absentee votes	N/A	No method to data enter
Undervotes		

Feature/Characteristic	Yes/No	Comment
Undervotes: System counts undervotes cast for accounting purposes	Yes	
Blank Ballots		
Totally Blank Ballots: Any blank ballot alert is tested.	Yes	
Totally Blank Ballots: If blank ballots are not immediately processed, there must be a provision to recognize and accept them	Yes	via adjudication in ClearCount
Totally Blank Ballots: If operators can access a blank ballot, there must be a provision for resolution.	Yes	via adjudication in ClearCount
Networking		
Wide Area Network – Use of Modems	No	
Wide Area Network – Use of Wireless	No	
Local Area Network – Use of TCP/IP	Yes	
Local Area Network – Use of Infrared	No	
Local Area Network – Use of Wireless	No	
FIPS 140-2 validated cryptographic module	Yes	
Used as (if applicable):		
Precinct and Central counting devices	Yes	
Ballot Marking Device	Yes	
Overvotes (must support for specific type of voting system)		
Overvotes: P & M: Overvote invalidates the vote. Define how overvotes are counted.	Yes	If the system detects more votes than allowed by the
Overvotes: DRE: Prevented from or requires correction of overvoting.	Yes	Yes for ClearAccess
Overvotes: If a system does not prevent overvotes, it must count them. Define how overvotes are counted.	Yes	If the system detects more votes than allowed by the
Overvotes: DRE systems that provide a method to data enter absentee votes must account for overvotes.	N/A	No method to data enter absentee via ClearAccess
Undervotes		
Undervotes: System counts undervotes cast for accounting purposes	Yes	
Blank Ballots		
Totally Blank Ballots: Any blank ballot alert is tested.	Yes	
Totally Blank Ballots: If blank ballots are not immediately processed, there must be a provision to recognize and accept them	Yes	via adjudication in ClearCount
Totally Blank Ballots: If operators can access a blank ballot, there must be a provision for resolution.	Yes	via adjudication in ClearCount
Networking		
Wide Area Network – Use of Modems	No	
Wide Area Network – Use of Wireless	No	
Local Area Network – Use of TCP/IP	Yes	
Local Area Network – Use of Infrared	No	
Local Area Network – Use of Wireless	No	
FIPS 140-2 validated cryptographic module	Yes	
Used as (if applicable):		
Precinct and Central counting devices	Yes	
Ballot Marking Device	Yes	