



CEM Systems AC2000 v10.1 New Product Announcement

[Johnson Controls](#) is pleased to announce the latest release of **CEM Systems AC2000** suite of access control and security management software.

CEM Systems AC2000, AC2000 Airport and **AC2000 Lite** are now available with a number of new features that improve functionality along with a range of new integration interfaces and OEM products that increase the performance, simplicity and scope of the system.

Features at a Glance

- **AC2000 v10.1** includes:
 - **The Health and Safety Induction Check application** for emerald allows cardholders to self-certify that they have completed H&S induction training before allowing access to a site. The application automatically records the induction completed date on the AC2000 system, helping mitigate the risk of health and safety incidents and report on who has and has not completed training.
 - **The Emergency Responder Remote application** helps improve emergency response times during incidents by quickly finding Emergency Responders (Fire Marshalls, First Aiders and/or First Responders) via emerald terminals.
 - **The Local Access Remote application** on the emerald intelligent access terminal removes the need for a workstation client when adding, removing or amending Local Access for a cardholder. This provides enhanced functionality at the edge with optional workstation cost savings.
 - **Rolling Transaction Display (RTD)** improvements for the web and workstation client increase the usability of the system by providing enhanced visual icons for operators to quickly identify user privileges at a glance.
 - **AC2000 WEB Personnel** has been added to provide an improved user experience with the ability to implement changes to Personnel data records without the need to install workstation software.
 - **User Access Level Controls** allow System Administrators to specify which access levels each system user is able to assign as extra access via User Options web and client apps.
 - AC2000 v10.1 additional feature enhancements include:
 - **Swipe to remove extra access**
 - **Time and Attendance Check**
 - **Enterprise enhancement**
 - **Rescaling support for low and high resolutions monitors**
 - **New validation option on Personnel-Type in card no. in decimal or hex.**
 - **Enhanced API and Restful API**



- Updated **CEM Systems AC2000 integration** interfaces and new **OEM products** include:
 - Enhanced **AC2000 SnapShell® ID and passport scanner integration** to AC2000 Personnel application, allowing users to select the fields from a passport or driving license, and map them to user selected fields.
 - Support for **SimonsVoss SmartIntego** wireless locking technology which provides AC2000 customers with a convenient way to add the flexibility of wireless locks to any door in an AC2000 secured facility.
 - Support for **IDEMIA MorphoWave™ Compact** frictionless biometric access control reader which enhances security for sensitive, high-traffic environments where convenience, speed and security are a priority.
 - Support for **STid Architect® range of RFID readers**, providing CEM Systems AC2000 users with even more reader choices.

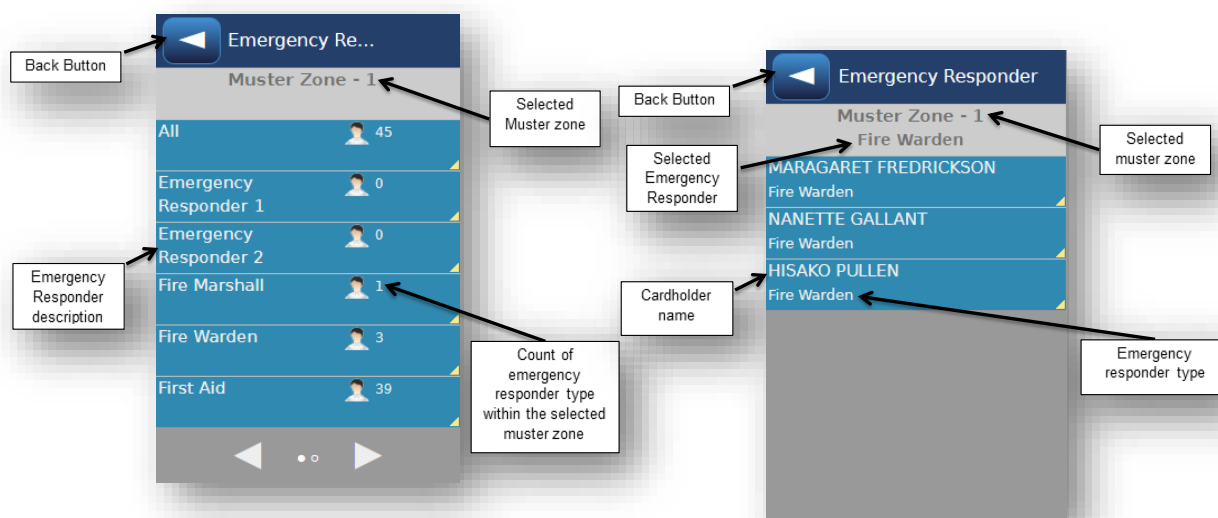


CEM Systems AC2000 v10.1 Features

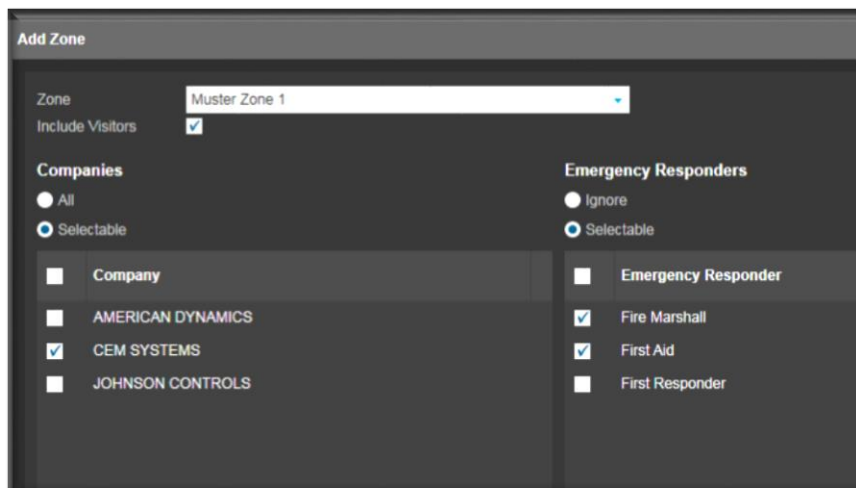
Emergency Responder

Users of the Personnel app are now able to specify which employees are Emergency Responders. A new Emergency Responder remote app has been added so that it is possible in the field to do a quick check on the emerald to see which emergency responders are currently on site and how to contact them. This helps improve emergency response times during incidents by quickly finding Emergency Responders (Fire Marshalls, First Aiders and/or First Responders) via emerald terminals.

The Emergency Responders remote application for emerald will then allow authorised card holders to select a zone and responder type(s) e.g. Fire Marshal or First Aider. The app will then list which responders are currently on site.



It is now also possible to configure Zone Monitor to monitor which Emergency Responders are currently on site. When configuring a Zone Monitor tab, the operator can now select which types of Emergency Responder are to be monitored.

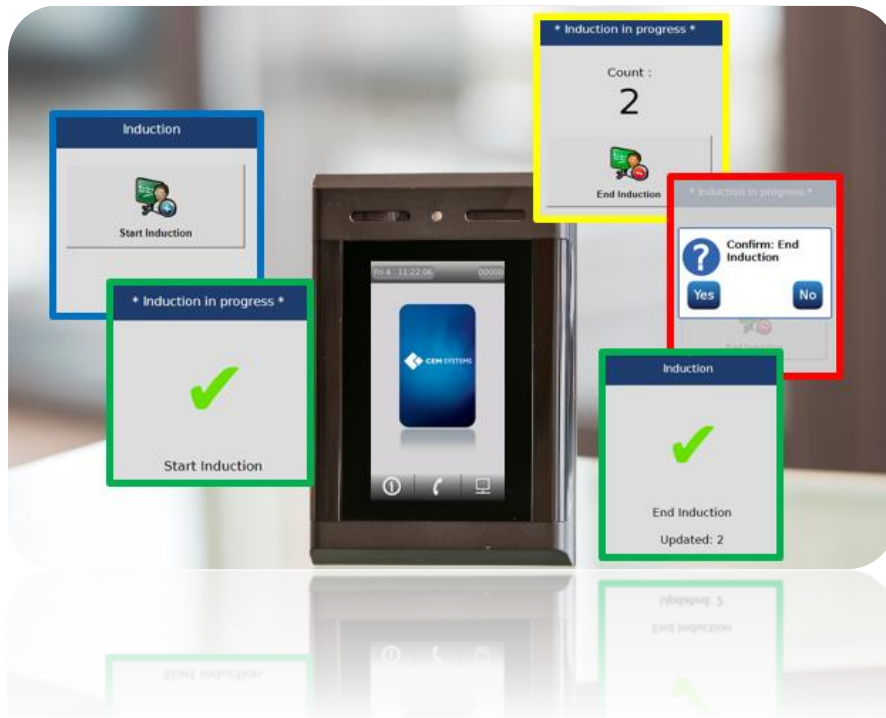




Health and Safety Induction Check

The new Induction Remote app for emerald helps mitigate risk of H&S incidents by maintaining automatic electronic 'training complete' information ensuring all personnel have completed Safety training before access to site is granted.

Card holders swipe on emerald to self-certify they have attended the Induction training. Emerald automatically updates their Induction Training Date on the Personnel app.



Local Access Remote app

Extra Access can be added/amended/removed via the Local Access Remote app on the emerald Intelligent Access Terminal. This is beneficial to deployments with multiple sites where installing workstation clients at each site may not be feasible.

This feature provides enhanced functionality at the edge with optional workstation cost savings and improved usability providing more at the door.

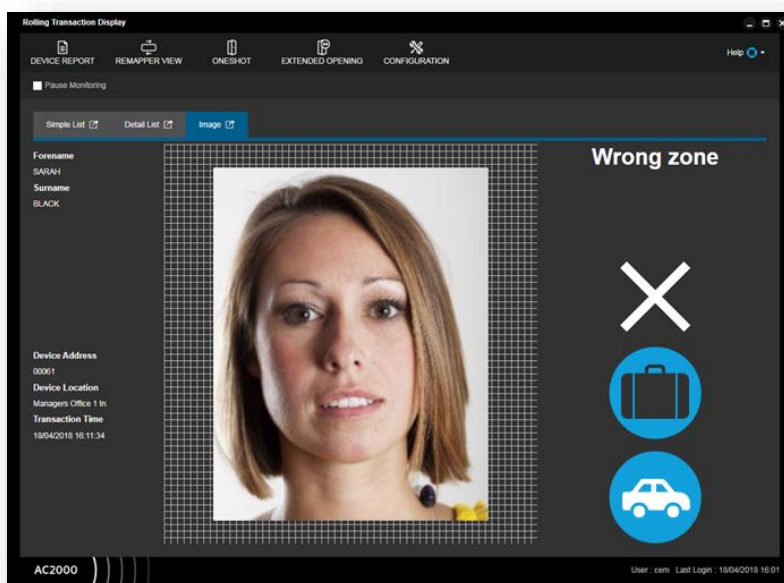




Rolling Transaction Display (RTD)

RTD improvements for the web and workstation client increase the usability of the system by providing enhanced visual icons for operators to quickly identify user privileges at a glance.

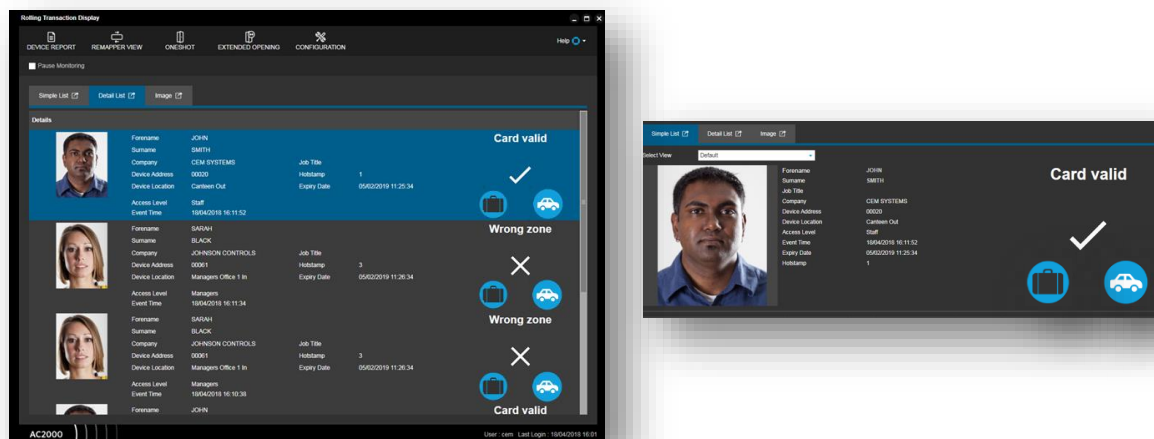
Outcome descriptions have been made larger with ✓ or ✗ icons displayed to distinguish between valid and invalid outcomes.



RTD Image view

The improvements also allow for two custom icons to be displayed, e.g. a vehicle icon for those card holders who are drivers or a suitcase for those who have baggage access in an aviation scenario.

RTD improvements also make it possible to pop the three RTD tabs (Simple List / Detail List / Image) out onto different displays for ease of viewing in a multi-monitor environment.



RTD Detail List and Simple List views

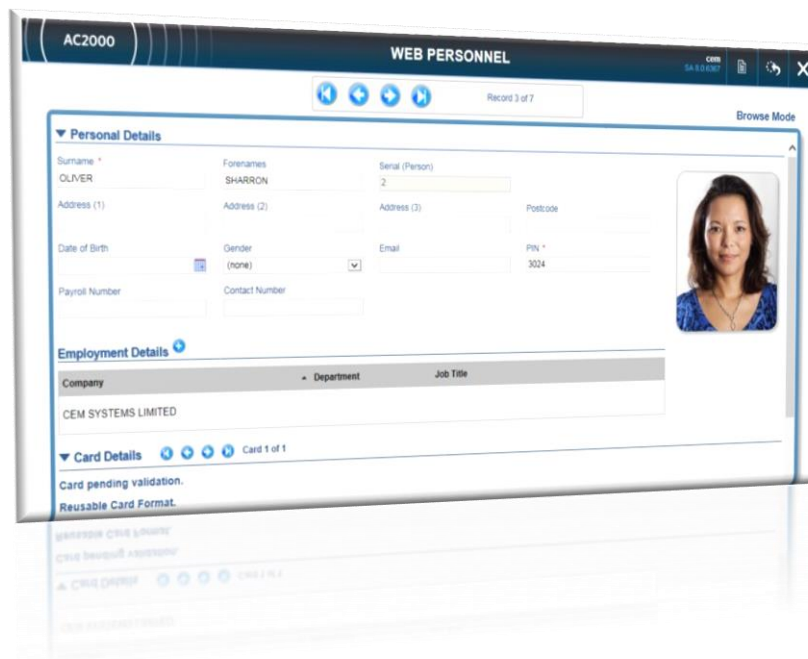


AC2000 WEB Personnel

AC2000 WEB Personnel application functionality has been added at AC2000 v10.1 and is accessible via a web browser. System users can find and edit Personnel records, as well as add, edit and delete extra access without the need to install the workstation software.

Support for on-line validation has been added at v10.1, meaning a dedicated validation reader isn't required. A card reader that is online and connected to an RTC can be used to read the card number and validate the card.

User defined fields are also supported at v10.1.



User Access Level Controls

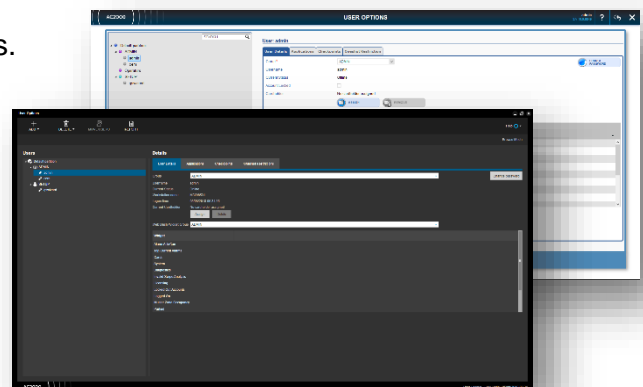
The User Options web and client apps have been updated in v10.1 so that the System Administrator can specify which access levels each system user is able to assign as extra access (e.g. an administrator may be able to assign all access levels but there may be certain managers or staff that are only allowed to give access to certain areas or assign only certain access levels).

Both Client and Web Personnel contain these rules ensuring that each operator is able to assign only their specified access levels as extra access.

This feature provides enhanced security controls.

This new functionality is also supported in:

- Client Visitors application
- Local Access web page/remote app





Additional AC2000 v10.1 features

Additional features in CEM Systems AC2000 v10.1 include:

- **Swipe to remove extra access** - Revokes extra access once a contractor/card holder swipes out so they cannot re-enter. This provides improved security as contractor's access is removed once they have swiped on a designated out reader.
- **Time and Attendance Check** – Option added to configure emerald to display date and time of last swipe so cardholders have a visual confirmation that time and attendance records have been updated correctly.
- **AC2000 Enterprise enhancement** – Allows batch export/un-export of multiple cardholders from one site to another in one simple operation (by query e.g. by Company or Department). This improves usability and reduces time taken to export/un-export.
- **Rescaling support for low and high resolutions monitors** – Provides improved user experience with option to change resolution to provide optimal viewing experience e.g. on higher resolution monitors and lower resolution laptop screens.
- **New validation option on Personnel-Type in card number in decimal or hexadecimal** – Allows user to type card number in decimal and the system will do the hexadecimal calculation. This saves time and reduces steps when entering card numbers into the system.
- **Enhanced API and Restful API** – Provides a more secure interface into AC2000. Requires integrators to use a secure web connection over https to access the API procedures and views. Results are returned as XML or JSON.



CEM Systems AC2000 v10.1 Features

IDEMIA MorphoWave Compact

CEM Systems AC2000 now supports the MorphoWave™ Compact frictionless biometric access control reader by IDEMIA. The advanced biometric algorithms and sensor technologies of IDEMIA MorphoWave Compact readers with AC2000 enhances security for sensitive, high-traffic environments where convenience, speed and security are a priority. The readers integrate with AC2000 using Morpho BioBridge, and quickly and accurately identify users with a wave of a hand.



The MorphoWave Compact delivers contactless 3D fingerprint technology in a compact wall-mountable device that provides multifactor authentication with native support for Prox, iCLASS, MIFARE and DESFire cards, and PIN code, in addition to biometrics.

The high speed, touchless acquisition capability allows users to remain in motion while being identified. Faster access control transactions reduce overall costs and improve the flow of users.

Designed for real world conditions the IP65 rated MorphoWave Compact captures and matches four fingers on either right or left hand, in any direction, and is immune to environmental factors (external light, dust). The touchless sensor copes with wet and dry fingers, and mitigates hygiene concerns with no prints left on scanner.

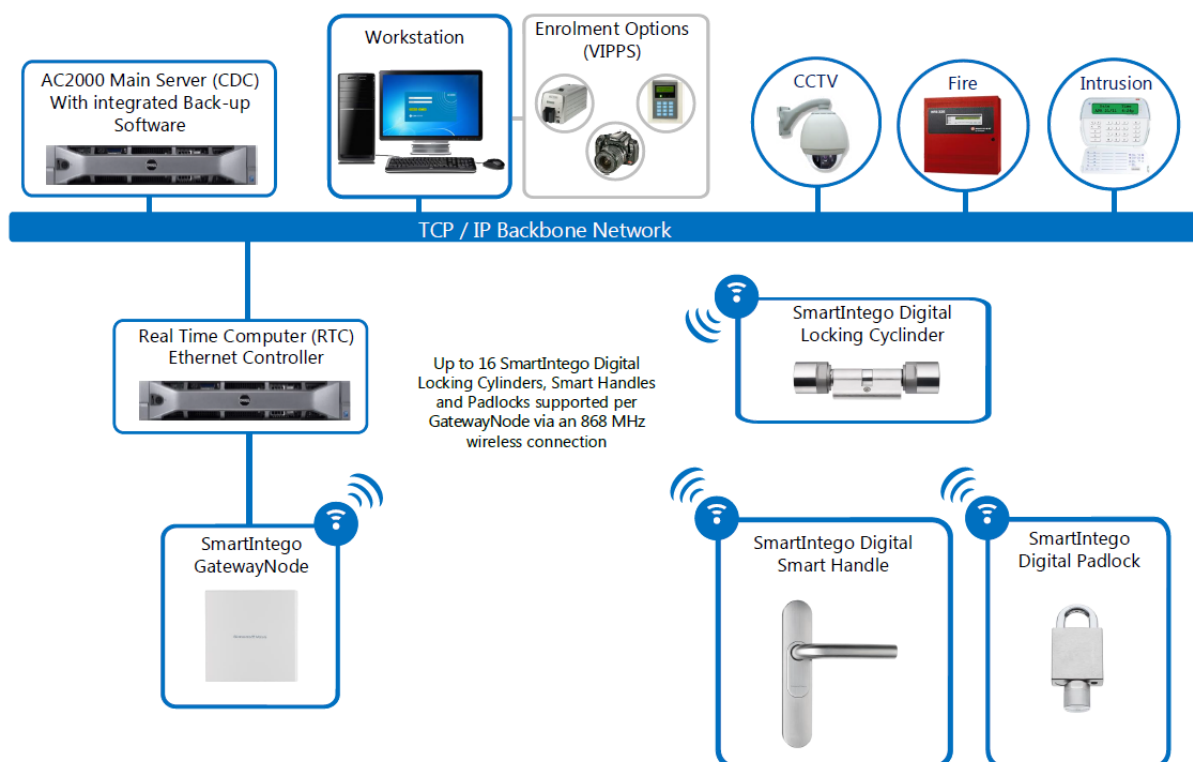


SimonsVoss SmartIntego wireless (on-line) locks

The CEM Systems AC2000 integration with SimonsVoss SmartIntego wireless locking technology provides AC2000 customers with a convenient way to add the flexibility of wireless locks to any door in an AC2000 secured facility.

The wireless locks can be added seamlessly to AC2000 access control secured site. The SimonsVoss SmartIntego locks are managed through the AC2000 security management system, enabling the remote monitoring of alarms and remote door opening.

When highly secure CEM Systems intelligent card readers are not required, or where it is not possible to hardwire communications to a reader, SimonsVoss SmartIntego wireless lock technology can be fitted. This creates a fully integrated and managed lock solution within the AC2000 access control system, and eradicates the need to exchange or update user credentials to support wireless locks.





SimonsVoss GatewayNode ensures continued connectivity and acts as an intermediary device, facilitating two-way communication between the SmartIntego locking products and CEM Systems AC2000. A series of unique characteristics transform the radio-based GatewayNode with TCP/IP interface (PoE 802.3af) into a powerful access manager. Each GatewayNode is capable of communicating with up to 16 locking devices via an 868 MHz wireless connection capable of transmitting white list data from AC2000 to the locks. The 'White list' can hold up to 250 card holders and are stored locally within the locking device itself so that access through the doors is assured in the event of a system failure.



SimonsVoss SmartIntego GatewayNode

SimonsVoss SmartIntego Smart Handle uses a contactless system to communicate with the user's card via the card reader integrated into the Smart Handle. It has an average battery life of five years and, like the cylinder, is maintenance-free in wireless online mode for up to 80,000 locking activations. The innovative snap-in installation can be used on doors up to 100 mm thick without any need to drill additional holes.

SimonsVoss SmartIntego Digital Locking Cylinder provides high security standards, remarkable flexibility, and is also extremely easy to fit. It is installed in minutes with no need for any wiring or drilling. Standard button cells reliably ensure up to 80,000 locking operations in a wireless online network. An average battery life of five years can be expected in standby mode. In other words, like other SmartIntego components, the locking cylinder is maintenance-free for many years.

SimonsVoss SmartIntego Digital Padlock is available in manual and self-locking versions with different shackle diameters. It is suitable for outdoor use and can record who and when a lock has been opened.



SimonsVoss SmartIntego Smart Handle, Digital Locking Cylinder and Digital Padlock



STid Architect® RFID Access Control Readers

CEM Systems AC2000 users now have even more choice for their access control management with the addition of the **STid Architect® series** of ergonomic and highly secure RFID readers.

The STid Architect series offers secure end-to-end control of an organization's access control data, from reader to controller, using stringent encryption and authentication methods. With STid readers, customers can manage their own secret keys to read DESFire EV1 and EV2 cards. The STid readers are available with a standard Wiegand interface or with a secured communication channel that mitigates the risk associated with credentials tapping or man-in-the-middle attacks. This is particularly interesting for compliance reasons in instances where keys cannot be stored on the reader itself.

The following **STid Architect series** solutions are now available from CEM Systems:

- **ARC1 Architect One** – Mini mullion RFID card reader with ultra-compact design for installation in small spaces.
- **ARC-A Architect Standard Reader**- Smart RFID card reader.
- **ARC-B Keypad Architect Standard Reader** - Smart RFID capacitive keypad card reader.
- **WALL2 Wall Switch Reader** - High security slim line proximity reader.
- **ATEX & IECEx Reader** - High Security access control reader for explosive environments.



Pictured from left to right: WALL2 Wall Switch Reader, ARC-A Architect Standard Reader, ARC-B Keypad Architect Standard Reader, ARC1 Architect One, ATEX Reader



Enhanced Snapshell integration

Enhanced Snapshell integration to AC2000 Personnel and AC2000 Visitors applications allows users to select fields from a passport or driver license and map them to user selected fields on both Personnel and Visitors application. This helps to reduce visitor and personnel entry time and removes the risk of manual data input errors.



For full details of all integrations and OEMS supported on AC2000, please contact CEM Systems cem.info@tycoint.com



Feature	Function	Benefit
New Induction Remote app	Card holders swipe on emerald to indicate they have attended the Induction training. Emerald automatically updates their Induction Training Date on the AC2000 Personnel app.	Track all personnel and ensure Safety training is completed before access to site. Company mitigates risk of having people on site who are not trained. Personnel records automatically updated to show that they have completed induction. Reduce time/effort in data entry, record management
Emergency Responder Remote app	Support for Emergency/First Responders within Zone Monitor New Emergency/First Responders remote app for emerald	Ability to see where and how many emergency responders on site. Ensure you are compliant to your policies. Ensure safety of staff and assets. Mitigate risk of injury, fire, H&S risk, legal fees etc.
RTD Improvements (Web and Client)	Outcome description larger with a clear tick or cross to distinguish between valid and invalid outcomes. Allows for two custom icons on the card record e.g. <i>display a vehicle icon for those card holders who are drivers or a suitcase for those who have Baggage access.</i> Now possible to pop the three views (Detail / List / Image) out onto different displays.	Increased usability with enhanced visual icons to quickly identify user privileges at a glance.
Local Access Remote app	Local Access can be added/amended/removed via the Local Access Remote app on the emerald Intelligent Access Terminal.	Enhanced functionality at the edge with optional workstation cost savings and improved usability providing more at the door.
AC2000 WEB Personnel	Provides the ability to search and edit cardholder records via a web browser.	Access AC2000 personnel records via a web browser without the need to install AC2000 workstation software
User Access Level Controls	AC2000 User Options web and client applications have been enhanced to allow System Administrator to specify which access levels each system user is able to assign as extra access.	Improved security controls for the System Administrator.
Swipe to remove extra access	System revokes extra access once a contractor/card holder swipes out so they cannot re-enter	Improved security as contractor's access removed once they have swiped on a designated out reader.
T&A Check	Option to configure emerald to display date and time of last swipe.	Visual confirmation for cardholder that T&A records updated correctly.
Enterprise enhancement	Allow batch export/un-export of cardholder records from one site to another by query (e.g. by Company or Department).	Improved usability, reducing time to export/un-export.



Rescaling support	Support for low (laptop) and high (4K) resolution monitors.	Improved user experience with option to change resolution to provide optimal viewing experience.
New validation option on Personnel-Type in card no.	New validation option on Personnel-Type in card number in decimal or hex.	Removes the need for a validation reader as the user simply types in the decimal or hexadecimal card number.
Enhanced API and Restful API	Requires integrators to use a secure web connection over https to access the API procedures and views. Results are returned as XML or JSON.	More secure interface into AC2000
SimonsVoss SmartIntego wireless (on-line) locks	AC2000 now supports SimonsVoss SmartIntego wireless (on-line) locks.	Connect wirelessly to locks for infrastructure that is limited by the communication network available. Provides customers with a convenient way to add the flexibility of wireless locks to any door in an AC2000 secured facility.
STid Architect series of ergonomic and highly secure RFID readers	The STid Architect series of ergonomic and highly secure RFID readers, are now supported by CEM Systems AC2000 access control system, and are available for purchase through Johnson Controls' CEM Systems team.	CEM Systems AC2000 users now have even more choice for their access control management with the addition of the STid Architect series of ergonomic and highly secure RFID readers.
MorphoWave Compact frictionless biometric access control reader by IDEMIA.	Support added for MorphoWave Compact frictionless biometric access control reader.	The high speed, touchless acquisition capability allows users to remain in motion while being identified. Faster access control transactions reduce overall costs and improve the flow of users. The touchless sensor copes with wet and dry fingers, and mitigates hygiene concerns with no prints left on scanner.
Enhanced Snapshell integration	Snapshell integration extended to Personnel and Visitors applications. User can select the fields from a passport or driver license and map them to user selected fields on both Personnel and Visitors.	Reduction in time for visitor entry onto the AC2000 systems by automatically importing visitor details seamlessly into the Personnel and Visitor applications.



FREQUENTLY ASKED QUESTIONS

CEM Systems AC2000 v10.1

Q. What AC2000 products are being released as version 10.1?

A. AC2000 version 10.1 is being released for the core AC2000 product, AC2000 Airport and AC2000 Lite editions.

Q. Is Alarm & Event Display (AED) supported with AC2000 v10.1?

A. No. AED is not supported with v10.1 but AC2000 Security Hub is available. AC2000 Security Hub is the state of the art central command and control application for AC2000. AC2000 Security Hub offers modern, centralized security management for the real-time monitoring and control of alarms and events across multi-sites and multiple security systems including access control, video, fire, intrusion and building systems. Standard Security Hub is included with AC2000 Security Management software and is not licensed; however if Graphical Maps functionality is required then an additional license will be needed.

Q. If I upgrade my AC2000 system and migrate from using Alarm & Event Display (AED) to Security Hub, will I retain the AED map and device configuration?

A. A conversion tool is available. Please contact CEM Systems for further details.

Q. My current system has a third-party interface using AC2000 API. Will it still work after I upgrade to AC2000 10.1?

A. API Integrations may require updates when upgrading to v10.1. Please contact CEM Systems for details.

SimonsVoss SmartIntego wireless locks

Q. What version of AC2000 supports SimonsVoss SmartIntego wireless locks?

A. SimonsVoss SmartIntego wireless locks are supported with AC2000 v10.1 and higher.

Q. Is there any limitation on the number of SimonsVoss SmartIntego devices that can be connected to AC2000?

A. Each GatewayNode supports up to 16 wireless locks. SimonVoss devices are treated in AC2000 in the same way as any other reader in the system and are therefore subject to AC2000 CDC/RTC license.

Q. Is there any specialised training required to supply SimonsVoss SmartIntego solutions?

A. Yes. SimonsVoss approved training is required for any dealer wishing to distribute SimonsVoss SmartIntego solutions.



Q. What SimonsVoss devices are supported?

A. CEM Systems currently can provide the following supported wireless locks:

- SimonsVoss SmartHandles
- SimonsVoss Digital Cylinders
- SimonsVoss Digital Padlocks
- SimonsVoss GatewayNodes (TCP/IP model)
- SimonsVoss Node I/O

STid Architect series

Q. What version of AC2000 supports STid Architect readers?

A. STid Architect readers are connected via Wiegand connection and supported on all AC2000 versions.

Q. What STid Architect devices are supported?

A. CEM Systems can provide support for the full STid Architect range but currently sell select configurations. For further details please contact cem.info@tycoint.com.

IDEMIA MorphoWave™ Compact

Q. What version of AC2000 supports IDEMIA Morpho Wave Compact?

A. MorphoCompact Wave is supported in AC2000 v7.1 and higher, running AC2000 BioBridge and MorphoManager v13.

Q. What version of AC2000 is Morpho BioBridge supported?

A. Morpho BioBridge is supported in AC2000 v7.1 and higher.

Q. What version of Morpho Manager is required for Morpho BioBridge?

A. MorphoManager v9.5.5 and above.

Q. Is the information sent from AC2000 to Morpho Manager sent in real time?

A. No, the Morpho BioBridge interface polls the AC2000 database on a scheduled basis to pull cardholder information directly into the MorphoManager database. The data synchronisation intervals are fully configurable to specify when data is pulled from the AC2000 database via the Morpho BioBridge in one minute intervals.

Q. What information is sent to Morpho Manager from AC2000?

A. Information sent across BioBridge is the minimum requirements for Morpho Manager Enrollment:

- First Name
- Surname
- Personnel Serial Number
- Card Number
- Access Level



Q. Do I need a validation reader for AC2000 and for MorphoManager?

A. Yes, you will need to ensure you have a validation reader for AC2000 enrollment and also a Morpho Biometric desktop enrollment reader for biometric capture.

Q. Do I need two separate network points at the door for Morpho readers and CEM Systems readers?

A. Yes, Morpho readers will receive biometric templates directly from the MorphoManager database across TCP/IP network. Once biometric templates have been verified, the card number will be sent to the CEM Systems hardware over Wiegand for identification. The CEM Systems reader/controller will send the card number up to AC2000 server over TCP/IP. Once matched, the CEM Systems reader/controller will deny or allow access through the door.

Q. What IDEMIA Morpho biometric terminals are supported?

A. CEM Systems currently can provide the following supported readers:

- MorphoWave Compact
- SIGMA Lite Series
- SIGMA Series
- 3D Face Reader
- Morpho FingerVein



Ordering Information

Product Codes	Description
HDS/722/008	MorphoWave Compact Touchless 3D fingerprint reader (Prox, iCLASS/MIFARE/DESFire)
HDS/722/007	MorphoWave Compact Touchless 3D fingerprint reader (MIFARE/DESFire)
SimonsVoss SmartIntego	
SVG/100/721	SimonsVoss SmartHandle WO Euro-profile 72-F8 Snapin Fixing
SVG/100/002	SimonsVoss SmartHandle WO Euro-profile 00-F8 Door Monitoring
SVG/100/054	SimonsVoss SmartHandle WO Scandinavian Oval 05-F8 Escape Return
SVG/100/001	SimonsVoss SmartHandle WO Euro-profile 00-F8 Conventional Fixing
SVG/100/051	SimonsVoss SmartHandle WO Scandinavian Oval 05-F8
SVG/101/721	SimonsVoss SmartHandle WO Euro-profile conventional fixing with mechanical override
SVG/110/002	SimonsVoss Mockup case
SVG/201/330	SimonsVoss Digital Cylinder WO Euro-profile 30-30 Comfort
SVG/202/330	SimonsVoss Digital Cylinder WO Euro-profile 30-30 FD
SVG/201/335	SimonsVoss Digital Cylinder WO Euro-profile 35-35 Comfort
SVG/202/335	SimonsVoss Digital Cylinder WO Euro-profile 35-35 FD
SVG/203/310	SimonsVoss Digital Cylinder WO Half Euro-profile 30-10
SVG/203/A40	SimonsVoss Digital Cylinder WO Scandinavian Oval A40
SVG/205/000	SimonsVoss Digital cylinder installation and battery change tool
SVG/205/Z40	SimonsVoss Digital Cylinder Mock-up
SVG/300/860	SimonsVoss Digital Padlock WO non self-locking shackle 8mm diameter 60mm high
SVG/300/861	SimonsVoss Digital Padlock WO self-locking shackle 8mm diameter 60mm high
SVG/300/000	SimonsVoss Securing chain for padlock
SVG/800/001	SimonsVoss GatewayNode TCP/IP version
SVG/800/002	SimonsVoss GatewayNode Repeater
SVG/800/003	SimonsVoss GatewayNode power supply
SVG/800/004	SimonsVoss Wireless network test kit



SVG/802/001	SimonsVoss Node I/O
SVG/802/002	SimonsVoss Node I/O sensor cable
SVG/803/001	SimonsVoss SmartIntego Configuration Device
SVG/803/002	SimonsVoss SmartIntego Configuration Software
STid Architect Range	
HDS/064/310	ARC1 - CEM DESFire - Secure Architect® One Mullion reader - Wiegand
HDS/064/31A	ARC-A - CEM DESFire - Architect® Secure Standard reader - Wiegand
HDS/064/31B	ARC-B - Keypad - CEM DESFire - Architect® Secure Standard reader - Wiegand
HDS/064/31E	WAL2 - CEM DESFire - Secure Wall Switch reader - Wiegand
HDS/065/310	ARC1 - MIFARE/DESFire CSN Only - Architect® One Mullion reader - Wiegand
HDS/065/31A	ARC-A - MIFARE/DESFire CSN Only - Architect® Standard reader - Wiegand
HDS/065/31B	ARC-B - Keypad - MIFARE/DESFire CSN Only - Architect® Standard reader - Wiegand
HDS/065/31E	WAL2 - MIFARE/DESFire CSN Only - Wall Switch reader - Wiegand
HDS/068/310	ARC1 - Bluetooth - MIFARE/DESFire CSN Only - Architect® One Mullion reader - Wiegand
HDS/068/31A	ARC-A - Bluetooth - MIFARE/DESFire CSN Only - Architect® Standard reader - Wiegand
HDS/068/31B	ARC-B - Keypad - Bluetooth - MIFARE/DESFire CSN Only - Architect® Standard reader - Wiegand
HDS/105/431	ATX - Secure ATEX & IECEx - CEM DESFire - Wiegand
HDS/105/531	ATX - CSN ATEX & IECEx - MIFARE/DESFire CSN Only - Wiegand

For more information email cem.info@tycoint.com or contact your account manager.

© 2019 Johnson Controls. All Rights Reserved. Tyco and the product names listed above are marks and/or registered marks. Unauthorized use is strictly prohibited. Product offerings and specifications are subject to change without notice. Actual products may vary from photos. Not all products include all features. Availability varies by region and may require certification; please verify conditions with your Regional Sales Manager.