tyco | CEM Systems

New Product Announcement

CEM Systems AC2000 Version 10.2 including AC2000 Time Hub

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 that increase the performance, simplicity and scope of the system.

AC2000 v10.2 includes:

- **AC2000 Time Hub** enhanced Time & Attendance application.

- Improved **Pass Design** application.

- **Advanced Room Booking**. When booked via Microsoft® Outlook®, access to the meeting room is automatically assigned to attendees for the duration of the meeting.

- Enhanced **AC2000 WEB Personnel**. You now have the ability to add Personnel details, add/print ID card details, batch add/remove Extra Access, and validate cards without the need to install workstation software.

- **AC2000 Security Hub enhancements** include Enterprise Maps, ability to view room bookings and a new dashboard with a range of widgets including swipe, muster zone, user, and enterprise health information.

- **Support for CEM Systems DCM400 Four-Door Controller** (launching 11th September 2019)

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- AC2000 v10.2 additional feature enhancements include:
    - **Emerald Time & Attendance function buttons web page**
    - **Fail-over alarms generated by fail-over RTCs (Real Time Computer) as well as CDC (Central Database Computer) servers**
    - **New validate option** – type in card number on Vehicles, Visitors and Web Visitors applications
    - **AckCan time threshold** – clear all alarms that occurred in a time period
    - Improvements to **Referral & Trace options**
    - **Batch add/remove Extra Access levels**

New **CEM Systems AC2000 integration** interfaces include:

- Support for **Southwest Microwave perimeter detection system** to provide further perimeter detection options to the AC2000 security management portfolio.

- Support for **KONE™ Destination lift system**, improving security with smoother people flow in buildings.

- Support for **Samsung™/ Hanwha Techwin CCTV video**, adding to the choice of video solutions that are supported and can be managed via AC2000 security management system.

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Key Features / Benefits at a Glance

AC2000 Time Hub

The CEM Systems AC2000 Time Hub enhanced Time & Attendance module provides reliable time keeping with improved user experience. AC2000 Time Hub helps to avoid costly payroll errors, under or overstaffing and inefficient time recording.

Integrated into the AC2000 system, Time Hub is available as a client or web application, and is a reporting method for the office manager/administrator who requires statistics on the entering and exiting of staff.

It provides a very powerful, configurable tool that allows the administrator to set up, manage and assign shift patterns (working week and rolling), statutory holidays, and forgotten cards. These can be assigned to an individual cardholder or as a batch to a group of cardholders.
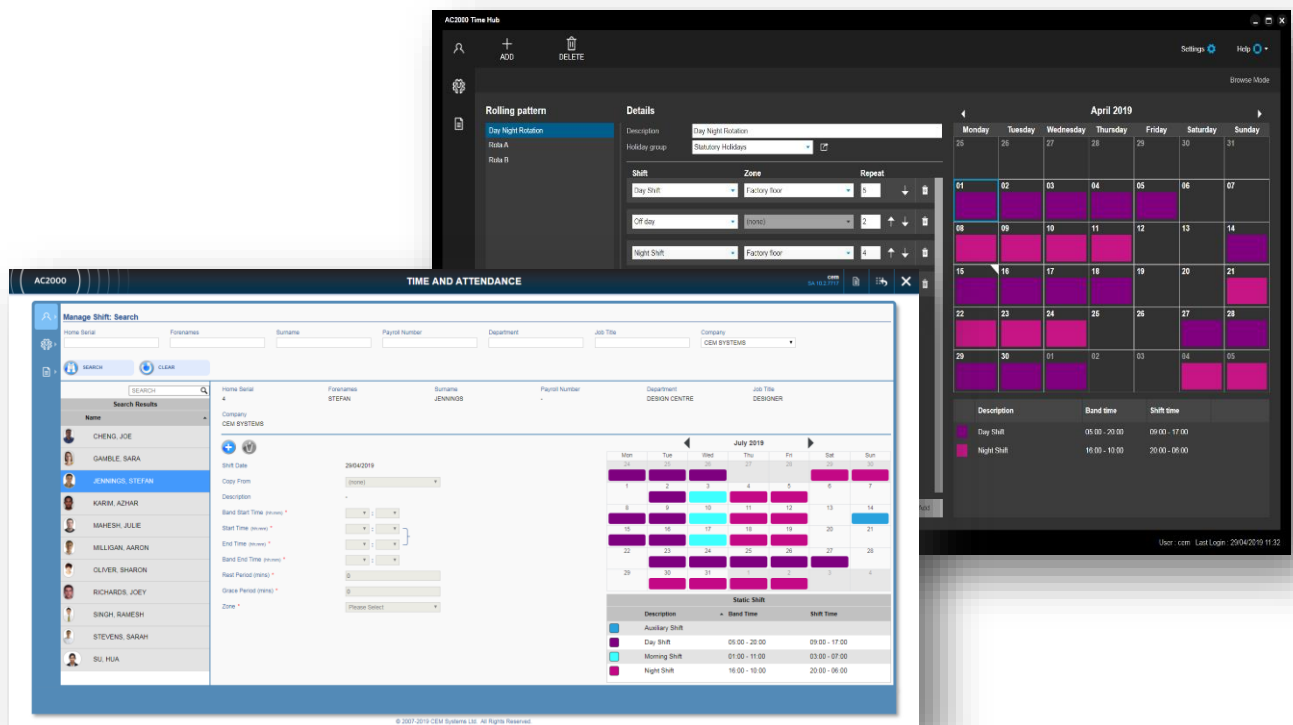
AC2000 Time Hub – Web and Client applications

Rather than installing a separate timekeeping system, existing pass cards and readers can be used for both access control and Time & Attendance. Any number of readers on the system, at any location, can be configured as designated IN and OUT readers for the purposes of time and attendance. As each member of staff presents a card their transactions are populated into the AC2000 database.

Statutory holidays can be defined and assigned to ensure accurate Time & Attendance reporting. AC2000 Time Hub can also record out of office reasons (holiday, sickness, off site meeting, etc.) and forgotten cards that will be reflected on the Time & Attendance reports.

Easy to read reports are generated to provide an overview of employee IN and OUT times.

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The AC2000 Time Hub module automates time-consuming administrative tasks and provides accurate employee attendance data that can be used with many third party products such as a dedicated payroll system for accounting purposes.

Highly configurable

AC2000 Time Hub is highly configurable with administrators able to create and manage as many shifts, zones, out of office reasons and statutory holidays as required. Shifts and zones make up the building blocks for the AC2000 Time Hub shift patterns.

A working week or rolling pattern can then be assigned to an individual or to a group of employees. Start and end dates can be configured and colour coding can be applied to shifts for ease of use by the administrator.

Zones

Configure multiple zones specifying which access control readers are IN/OUT readers for each zone. Zones are then assigned to a shift pattern.
(Note: a reader can be an IN reader to one zone and an OUT reader for another zone.)

Out of Office reasons

The administrator can define a custom set of Out of Office reasons (e.g. Annual leave, Sick, Out on business, Un-paid leave) which can then be assigned to cardholders for specific dates/times. It is also possible to specify if hours are accrued or not (e.g. 'Annual leave' hours will count to the total hours, while 'Un-paid leave' would not).

Common/statutory holidays

Each year the administrator can specify the statutory holidays i.e. when people are not expected to work. These holiday groups are assigned to shift patterns. Again there is an option to specify whether these accrue.

Static Shifts

A static shift has a fixed start and end time. AC2000 Time Hub improves on the previous Time & Attendance application by providing static shift options that go beyond specifying a start time and end time. These include:

- **Band Time** – Outlying band defining max period for swipes to be credited to the shift.
- **Grace Time** – Allows a little time for fluctuations, such as arriving late for a shift. If this occurs within the grace period then it will not be flagged on a report.
- **Rest Period** – Automatically takes shift workers rest periods from their working hours and reflects this in the Time & Attendance reports.
- **Default zone** – A zone can be specified so that it pre-populates when assigning a shift.
- **Colour** – Each shift can be colour coded to make it easier from a rota management perspective to pick out which shift is which.
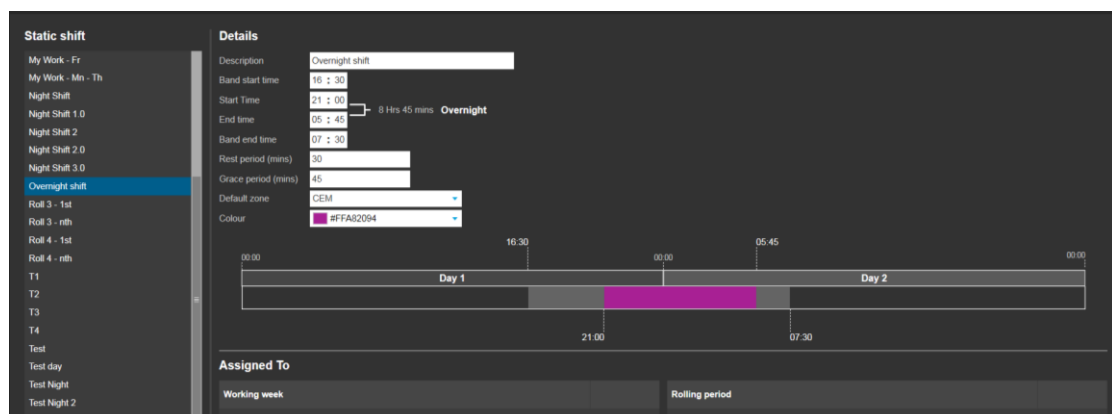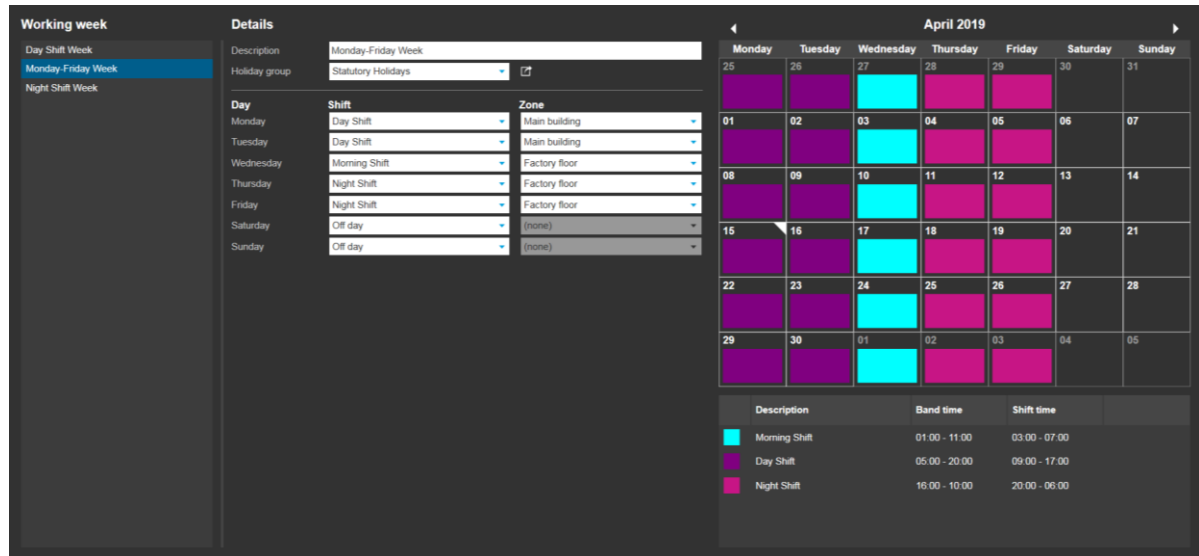

AC2000 Time Hub – Static Shift configuration

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Shift Patterns

Shift working is an important aspect for many businesses. AC2000 Time Hub supports two types of shift patterns:

- **Working week**
  A working week defines which static shifts and zones are to be worked Monday to Sunday, along with any holidays. Multiple working weeks can be created and then assigned to either individual employees or a group of employees.

AC2000 Time Hub – Working Week configuration

- **Rolling pattern**
  Rolling patterns specify a sequence of shifts and how often each one **repeats** from a specified start date as illustrated below (e.g. five 'day shifts' followed by two days off and then three 'night shifts' followed by two days off, repeated until a specified end date).

AC2000 Time Hub – Rolling period configuration

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Manage shift

The 'Manage shift' page allows administrators to create auxiliary shifts that can be added into an employee's shift pattern ad hoc (e.g. in the event of an employee having to cover a sick colleagues shift).

AC2000 Time Hub – Manage shift

Reports

Three different reports are available in AC2000 Time Hub:

- **Time & Attendance report**
  This report shows the hours worked along with any exceptions for staff matching the configured report criteria. As with Extended Reports, this can be saved to .csv or .pdf, emailed, or scheduled.

- **Swipe report**
  This report shows every IN/OUT swipe to the Time & Attendance zone for personnel records matching the configured report criteria. This can be saved to .csv or .pdf, emailed, or scheduled.

- **Missing Swipe report**
 This report shows any missing IN/OUT swipes. A user can then amend each row in the report to input the missing IN/OUT time. The ability to complete the data makes it possible to run accurate Time & Attendance reports. This report also includes option to add missing swipe data (creates a Time & Attendance transaction).

AC2000 Time Hub – Time & Attendance reports (client and web)

Client and Web application

AC2000 Time Hub is available as a Client or Web application. The only difference in functionality between the two applications is that AC2000 Time Hub Web interface is accessed via a web browser. This allows administrators to manage AC2000 Time Hub without the need to install the full AC2000 client onto their workstation.

Note: Additional Time & Attendance features are only available on the AC2000 Personnel workstation application and not in AC2000 Web Personnel.
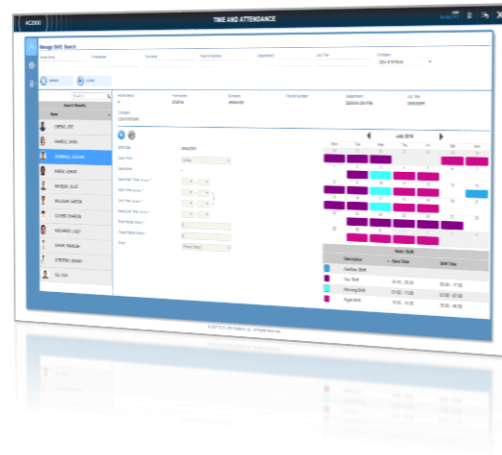
Pass Design

The improved **Pass Design application** provides an improved user experience with a more intuitive user interface, more control of badge designs, and features that reduce the configuration time.
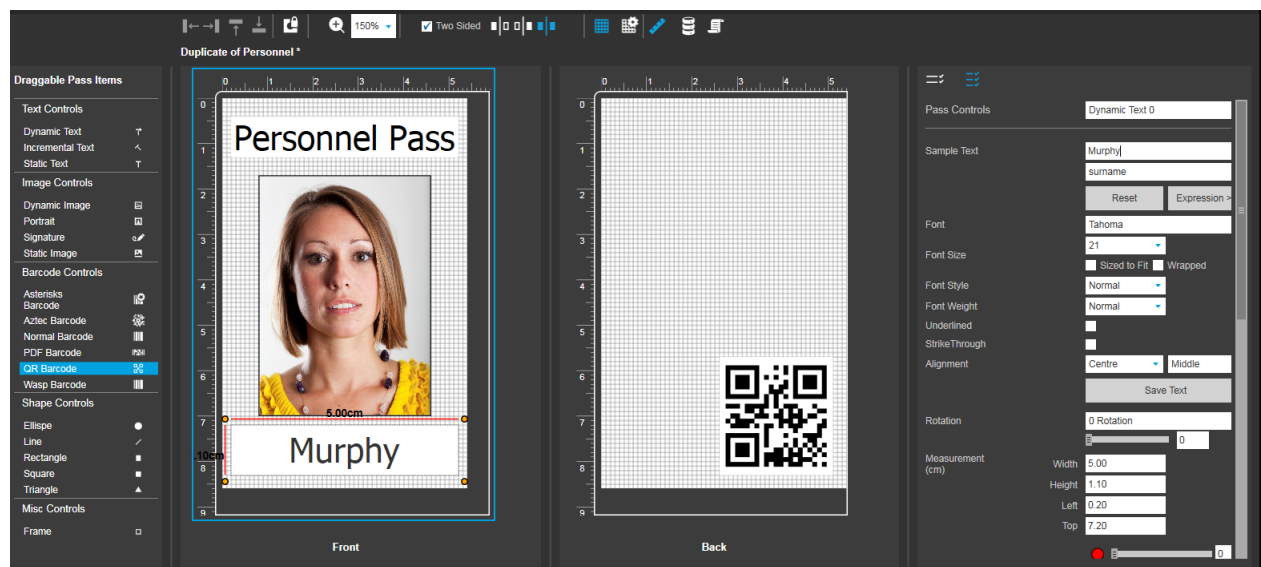
AC2000 v10.2 – Pass Design

The enhanced user interface is easy to use and includes:

- The ability to select, drag, and place items on the Pass Design screen
- Improved design layout with a grid and snap feature
- A powerful SQL builder that displays lists of tables and fields to select from
- An Expression builder to merge multiple fields into a single field controls
- Support for five different types of barcode plus QR codes
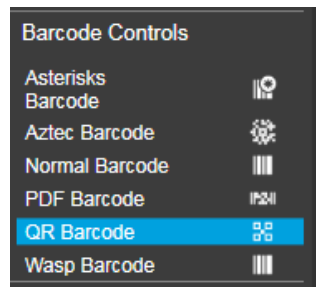
AC2000 v10.2 – Pass Design barcode and QR code options

Additional AC2000 Pass Design user experience improvements include:

- **Master pass child relationship** allowing the user to create a master template and then create child passes which are based on the master but are different in one attribute (e.g. background colour). As you update the master template, changes are automatically applied to the child passes that have been created.
- **New incremental text control** allowing the user to automate numbering on passes, e.g. when printing one-hundred visitor passes from 'Visitor 1' to 'Visitor 100'.
- **Improved shape controls** with options for curved edges and circles.
- Pass Design data is now stored in both directory of flat files and the database.
- **New Pass Export / Import feature** for when pass files are to be used on another related AC2000 system.
- **Auto-conversion feature** converts current .pss file format to new format the first time a pass file is loaded in the new app.

Advanced Room Booking

This **Advanced Room Booking** feature improves resource management, ensuring that only the meeting organiser and invitees can access the booked meeting room at the time required.

emerald intelligent access terminals controlling meeting rooms can now also control access. This ensures that only card holders that are on the meeting invite list can gain access to the meeting room during the assigned meeting period.

When booked via Outlook, invitees that have access to meeting rooms will be assigned as Temporary Extra Access for the duration of the meeting (plus grace period at start and end).

The email address of meeting invitees will be used to link to their Personnel record in AC2000 so that the appropriate extra Temporary Extra Access can be assigned.

Access is added when a Personnel record with same email address is found and the invite is accepted.

Advanced Room Booking supports email groups (i.e. distribution lists) but when booking the room at the door, it will not be possible to invite attendees or give them access to the room.

AC2000 WEB Personnel Enhancements

AC2000 WEB Personnel has been enhanced to improve the user experience. WEB Personnel now has the ability to add Personnel details, add/print ID card details, batch add/remove Extra Access, and validate cards without the need to install workstation software

AC2000 WEB Personnel at AC2000 v10.1 was improved with support for Find, Edit, Assign Extra Access, Online validation and User-Defined Fields.

In this release we have enhanced the AC2000 WEB Personnel application with the following:

- Add Personnel details
- Add ID Card details
- Print ID Card
- Batch Add/Remove Extra Access
- Validate card by typing in the card number or generating the card number

AC2000 Security Hub Enhancements

Enhancements to AC2000 Security Hub central command and control application include:

- **Rooms**
  The Rooms tab provides improved operational resource management with greater visibility of meeting resources.
  The operator can view a list of rooms that have been configured in AC2000. Each room will show a colour based on the current availability of the room and gives a summary of the next booking for the room. When you right click on a specified room, the operator can view bookings for the next seven days.

Room ▾	Booked by	Booked date	Next start time	Next end time
Conference Room	bob	2018-08-11	08/12/2018 11:59:20	08/12/2018 14:59:20
Glass Room	enid	2018-08-11	10/11/2018 11:59:24	10/11/2018 12:59:24
Sales Room	cem	2018-08-11	08/11/2018 11:58:43	08/11/2018 12:58:43

AC2000 Security Hub – Rooms tab overview

Room	Booked by	Booked date	Start Time	End time
Conference Room	bob	2018-08-11	08/12/2018 11:59:20	08/12/2018 14:59:20
Conference Room	dave	2018-08-11	09/12/2018 11:59:22	09/12/2018 13:59:22

AC2000 Security Hub – Rooms tab future bookings view

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- **Enterprise maps**

  The ability to add maps on the enterprise server has been added. Local site maps can now be placed on enterprise maps for increased site-wide graphical visibility of events. *Note: Only maps from local sites and miscellaneous map items can be placed on an enterprise map. Local site maps can only be created at local site servers and cannot be created from the Enterprise server.*
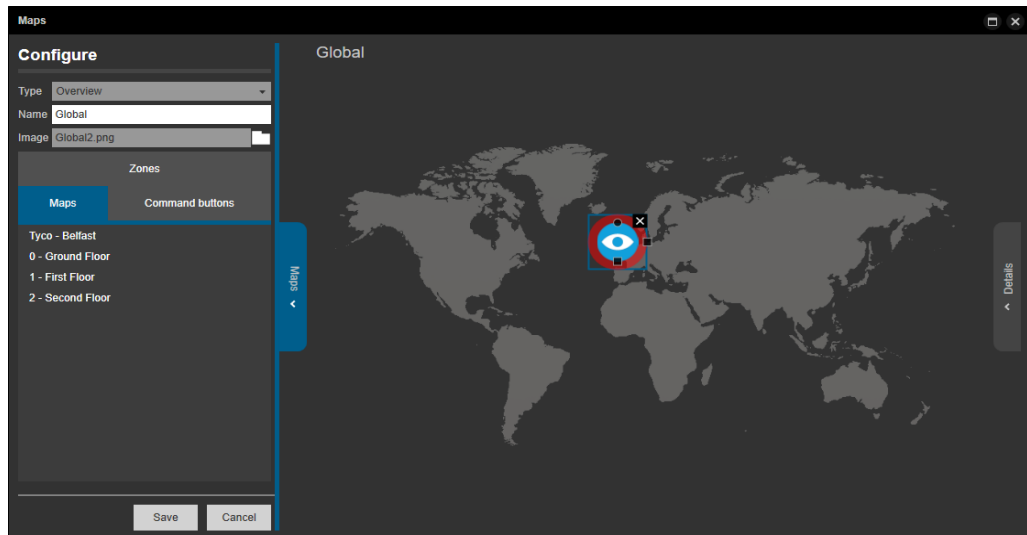
AC2000 Security Hub – Maps

- **Trace/Guard Tour pop-up**

  A pop-up notification when a trace/guard tour event occurs provides improved visibility and response times to trace/guard tour events.

- **Dashboard**

  The Dashboard is a dynamic one-to-four column view of a set of widgets that displays system status. Widgets can be positioned using drag and drop and some have configurable settings such as refresh interval and fixed height display.
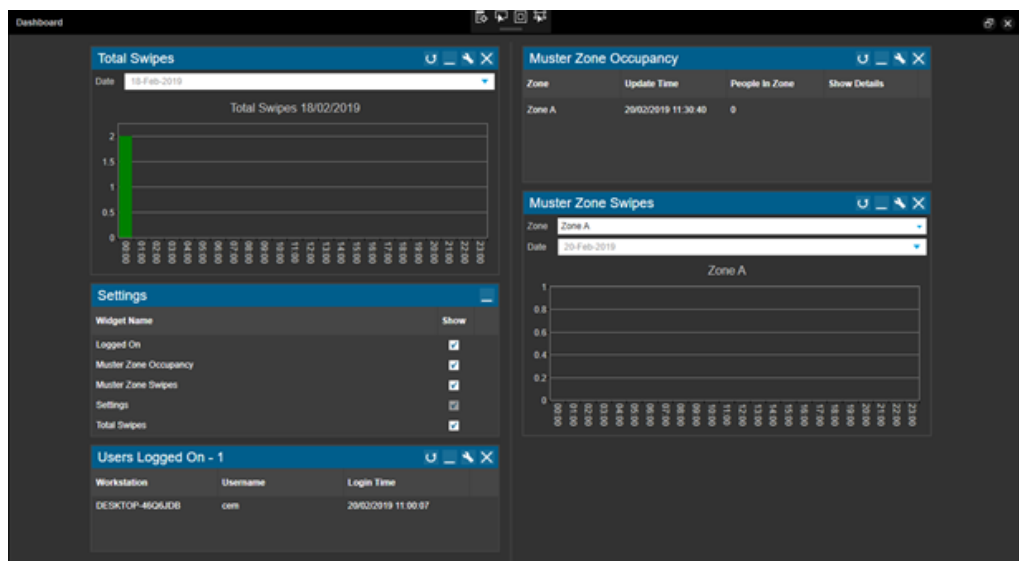
AC2000 Security Hub dashboard and widgets

The following widgets are currently available:

- o **Total Swipes** – Total by hour
- o **Muster Zone Occupancy** – Current occupancy count in the muster zones
- o **Muster Zone Swipes** – Total in and out swipes for a muster zone on a specific day
- o **Users Logged On** –current users logged in to AC2000
- o **Enterprise Health** – A list of sites, the current total of alarms on each site, and if the site is currently online or offline.
- o **Settings** – Controls which widgets are shown on the Dashboard.

Note: The widgets available can also be restricted through User Options and will vary based on the type of system configuration.

CEM Systems DCM 400 Four-door Controller Support

AC2000 has been modified to support the new DCM 400 four-door controller configuration (due for launch August 2019) with a focus on secure communications between the RTC (Real Time Computer) and DCM 400.

Certificates are used to prevent a 'man in the middle' attack after the first connection of the DCM 400 to the RTC. Two-way authentication is used as both the CDC server and each DCM 400 have a unique self-signed certificate.

Note: The DCM 400 four-door controller will only be supported on AC2000 v10.2. Earlier AC2000 releases will not support it.

The AC2000 Devices application has been updated to make addition and configuration of the DCM 400 four-door controller as quick and easy as possible with the ability to auto create doors. The Create Doors dropdown allows the user to select between 1 and 4 and then the Devices application will auto populate the device address, copy the base location and add Door A, B, C and D. The user can edit the location description or change the configuration mode, if necessary.

AC2000 v10.2 Devices – DCM 400 configuration

Additional AC2000 v10.2 features

Additional features in CEM Systems AC2000 v10.2 include:

- **Emerald Time & Attendance function buttons web page** – New web page added to enable operators to amend the function button labels in the emerald Time & Attendance mode.

- **Failover alarms generated by failover RTCs as well as CDCs** – Details of uncancelled RTC fail-over alarms are shown on the Failover web page.

- **New validation option to type in card number** – Added to Vehicles and Visitors Client applications, plus Web Visitors.
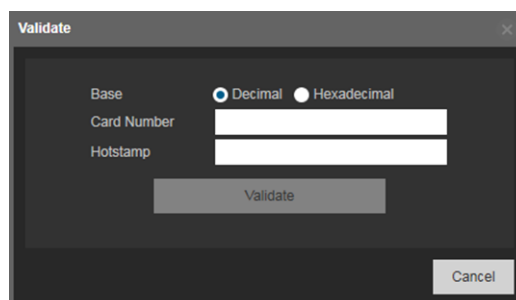
AC2000 v10.2 – Validate card number

- **AckCan time threshold** to clear all alarms that occurred in a time period, e.g. more than four hours ago.

- Improvements to **Referral & Trace options** – Optimised for simpler operation.

- **Batch add/remove Extra Access levels** – Extra Access levels can now be added or removed in batches via a new checkbox feature.
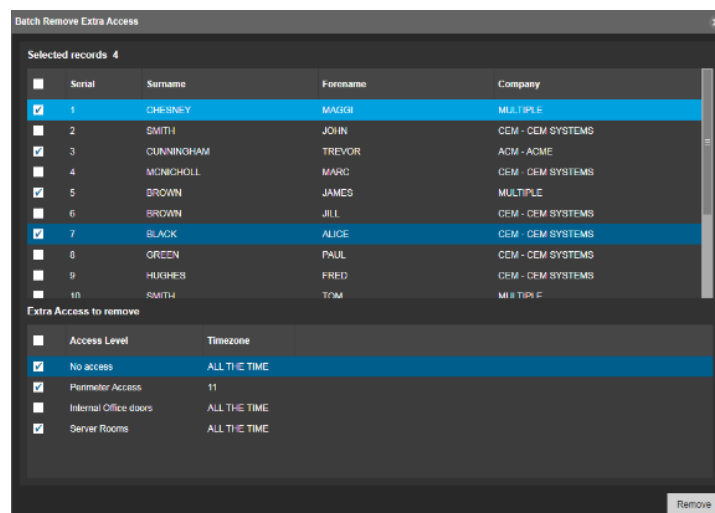
AC2000 v10.2 – Batch remove Extra Access

CEM Systems AC2000 Integrations

Southwest Microwave perimeter detection interface

AC2000 now contains a full system integration to Southwest Microwave perimeter detection system to provide further perimeter detection options to the AC2000 security management portfolio.

The interface allows operators to manage perimeter detection alarms from Southwest Microwave on AC2000 Security Hub. Operators can acknowledge and cancel Southwest Microwave perimeter detection alarms on AC2000 Security Hub. Using AC2000 Security Hub operators can also remotely trigger relays (e.g. opening gates, turning on floodlights, etc.). The interface also streamlines the importing of devices for easy configuration and set up.

The integration supports MicroPoint™ II (PM II) Fence detection systems, MicroTrack™ II (MTP II) buried cable detection systems, and Microwave™ 330 (MW330) digital microwave links showing customisable alarms as they occur in AC2000 Security Hub. The integration also supports customisable remote triggering of relays on a Relay Output Module II (ROM II-16 and ROM II-8) from AC2000 Security Hub (e.g. opening gates, turning on floodlights, etc).

Southwest Microwave perimeter detection interface

AC2000 KONE™ Destination interface

AC2000 now contains a full system integration to KONE Destination lift system, improving security by restricting access to floors dependent on access privileges and providing smoother people flow in buildings.

The full system integration allows AC2000 to act as a single interface for floor management. Using AC2000 the system administrator can control lift usage and improve security, by defining open and closed floors for public access and single lift calls for identified persons.

It also includes features that can enhance people flow and user experience such as defining different service level for different user groups (such as disabled users, cargo users, or VIP users), and ensures smooth movement of cardholders to their destination by making direct calls for their home floor.

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Samsung™/Hanwha Techwin CCTV video interface

The AC2000 video interface for Samsung/Hanwha Techwin CCTV provides the ability to associate access control and any other integrated subsystem alarm with digital video clips, as well as to view live camera footage. This enables AC2000 to act as the central Security Management System (SMS).

AC2000 seamlessly integrates with Samsung/Hanwha Techwin CCTV giving the operator a range of video related facilities to generate alarm reports with recorded video playback. The interface also allows system operators to view live video feed, configure live video popup on alarm, take video snapshots, and control camera positioning.

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

Feature	Function	Benefit
New AC2000 Time Hub client and web application	Enhanced Time & Attendance application for AC2000 client and web.	• Smooth and efficient business operations. • Helps to manage employee attendance issues effectively. • Easy and efficient shift management, especially for businesses that run 24/7. • Effectively manage and track overtime hours. • Maximise your existing security infrastructure to go beyond just access without the need for an additional Time & Attendance system.
New Pass Design	Enhanced user interface. Support for QR codes and five different types of barcode added. New incremental text control. Master/child pass relationship. Pass import/export feature.	• Intuitive user experience with improvements to design and layout options available to the user. • Incremental text control reduces the time taken to create multiple passes. • Reduces configuration time across the system
Advanced Room Booking	emerald intelligent access terminals controlling meeting rooms can now also control access.	Improved resource management, ensuring that only the meeting organiser and invitees can access the booked meeting room at the time required.
Enhanced Web Personnel	Provides the ability to add cardholder records and validate cards via a web browser.	Add AC2000 personnel records and validate cards via a web browser without the need to install AC2000 workstation software
Security Hub enhancements	**Room Booking** Identify which devices belong to a room and if they are currently booked The ability to view bookings for each room for the next 7 days **Enterprise Maps** The ability to add maps on the enterprise server **Trace/Guard Tour Pop-up** A pop-up notification when a trace/guard tour event occurs **New Dashboard** Configurable with widgets for visibility of metrics relating to swipes, occupancy, users logged on and enterprise health.	• Improved operational resource management with greater visibility of meeting resources. • Improved visibility and configuration of site wide maps from the Enterprise server • Improved visibility and response times to trace and guard tour events. • Enhanced user experience with improved visibility of command and control metrics on a single screen.

DCM400 four door controller support	Devices application has been updated to make addition and configuration of the DCM400 four door controller as quick and easy as possible	Enhanced user experience with auto-populate tool for ease of door configuration.
Emerald Time & Attendance function buttons web page	Each customer can define the labels on emerald function buttons.	More detailed, powerful Time & Attendance reporting.
Fail-over alarms generated by fail-over RTCs as well as CDCs	Failover alarms will now be generated by failover RTCs as well as CDCs. Also include details of uncancelled RTC failover alarms on the failover web page.	Security personnel rapidly informed of server problems.
New validation option on to type in card number	New validation option on Web Personnel, Client Vehicles, and Client Visitors application -Type in card number in decimal or hexadecimal.	Removes the need for a validation reader as the user simply types in the decimal or hexadecimal card number.
AckCan time threshold	Clear all alarms that occurred in a time period, e.g. more than four hours ago.	Removes the need to cancel outdated alarms one by one.
Improvements to Referral & Trace options	Optimised for simpler operation.	User experience improvement.
Batch add/remove Extra Access levels	Extra Access levels can now be added or removed in batches via a new checkbox feature.	Improved user experience with the ability to streamline multiple Extra Access updates.
AC2000 Southwest Microwave perimeter detection interface	Full system integration to Southwest Microwave perimeter detection. Manage your perimeter detection alarms from Southwest Microwave on AC2000. Acknowledge and cancel alarms. Alert security guards of potential breaches.	▪ One stop shop security management system. ▪ Seamless interface to Southwest Microwave perimeter detection. Monitor perimeter and receive alarms and transactions in AC2000. Remove the need for multiple disparate systems.
AC2000 KONE™ Destination interface	Full system integration to Kone destination lift system. Use the power of AC2000 as a single interface to floor management Schedule-based floor access for all personnel. Assign access to certain floors.	▪ Improving people flow in buildings. ▪ Higher security solution. Improved access control by restricting access to floors dependent on access privileges.
AC2000 Samsung™/Hanwha Techwin CCTV interface	The AC2000 video interface for Samsung/Hanwha Techwin CCTV provides the ability to associate access control and any other integrated sub-system alarm with digital video clips, as well as to view live camera footage	Enables AC2000 to act as the central Security Management System (SMS).

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Frequently Asked Questions

CEM Systems AC2000 v10.2

Q: What AC2000 products are being released as version 10.2?
A: AC2000 version 10.2 is being released for the core AC2000 product, AC2000 Airport, and AC2000 Lite editions.

Q: Will AC2000 Virtual Lite be supported on 32-bit systems?
A: With this release of version 10.2, AC2000 Virtual Lite is not supported on 32-bit systems. AC2000 Virtual Lite now uses the latest version of VirtualBox (version 6) which can only be supported on 64-bit systems. When upgrading to AC2000 v10.2, ensure that Virtual Lite is installed on a 64-bit PC.

Q: Is Alarm & Event Display (AED) supported with AC2000 v10.2?
A: No. AED is not supported with v10.2 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: Yes, using a conversion tool that 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 10.2?
A: API Integrations may require updates when upgrading to v10.2. Please contact CEM Systems for details.

KONE™ Destination interface

Q: What version of AC2000 is KONE Destination interface supported on?
A: KONE Destination interface is supported on AC2000 v10.0. Please check with your CEM Systems account manager for support on other versions and before upgrading your system to ensure compatibility with this version of the RPM IP Protocol.

Q: What version of KONE does this interface support?
A: CEM Systems wrote this interface against Kone Group Controller Access Control Interface Specification Rev 1.8 (for the Destination Control System connections) and Socket Based Destination Call Giving Interface Specification Rev 1.11 (for the Turnstile connections). Kone software will need to be compatible with these two Kone Protocols. Please contact your Kone account manager before you upgrade your Kone software to ensure compatibility.

Samsung™/Hanwha Techwin CCTV interface

Q: What version of AC2000 is Samsung/Hanwha Techwin CCTV interface supported on?
   A: Samsung/Hanwha Techwin CCTV interface is supported on AC2000 v10.1 – v10.2. Please
   check with your CEM Systems account manager for support on other versions and before
   upgrading your system to ensure compatibility.

Q: What version of Samsung CCTV does this interface support?
   A: CEM Systems wrote this interface against SUN API v2.5.4. Please contact your Samsung
   CCTV account manager before you upgrade your Samsung CCTV software to ensure
   compatibility.

Southwest Microwave perimeter detection interface

**Q: What version of AC2000 is Southwest Microwave perimeter detection interface
supported on?**
   A: Southwest Microwave perimeter detection interface is supported on AC2000 v10.2. Please
   check with your CEM Systems account manager for support on other versions and before
   upgrading your system to ensure compatibility.

Q: What version of Southwest Microwave perimeter detection does this interface support?
   A: CEM Systems wrote this interface against Southwest Microwave perimeter detection RPM IP
   Protocol v0. Please contact your Southwest Microwave account manager before you
   upgrade your Southwest Microwave software to ensure compatibility.

   The integration is compatible with Remote Polling Module II (RPM II) system controllers via
   TCP/IP SDK connections with any of the following Intrepid II modules attached to the RPM II:
   - MicroPoint II (PM II) Fence detection systems
   - MicroTrack II (MTP II) buried cable detection systems
   - Microwave 330 (MW330) digital microwave links
   - Relay Output Module II (ROM II-16 and ROM II-8)
   - Auxiliary Input Module (AIM II)

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Ordering Information

Product Codes	Description
SWA2TIME-C	AC2000 Time Hub Client
SWA2TIME-W	AC2000 Time Hub Web
SWINT-SWMICRO	AC2000 Southwest Microwave
SWLIFT-KONEDEST	AC2000 Kone Destination Lift interface
SWINT-SAMSUNG	AC2000 Samsung/Hanwha Techwin CCTV video interface

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