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Data Sheet

emerald TS300
Intelligent Access Terminal with VoIP Intercom & Remote Applications

Key Features

- Industry's most multifunctional access terminal
- User-friendly 4.3″ capacitive LCD touch screen
- Intuitive Graphical User Interface enhancing user experience at the door
- Ethernet Card Reader & Controller in one device
- Scramble keypad option for Personal dentification Number (PIN)
- Fully integrated VoIP intercom functionality
- Ability to run Remote Applications from AC2000 Central Database Server using secure communications
- Available with onboard PoE+ technology to power the terminal and additional door furniture*
- PIR motion detection

emerald TS300 is the industry's most multifunctional touch screen access terminal. Used in conjunction with CEM AC2000 security management system, the TS300 uniquely provides users with a card reader and controller, built in Voice over IP (VoIP) intercom functionality and a range of remote server-based applications, all in one powerful device.

The TS300 has a bright 4.3″ graphical LCD touch screen to display predefined messages and icons to cardholders depending on access privileges. For example 'Expiring Card' and 'Lost/Stolen Card'. Its built in mini PIR sensor provides energy saving motion detection and a multicoloured LED provides users with a visual indication of access status. With hardened glass and an anti-glare coating, the TS300 is durable enough for indoor and outdoor use.

A powerful IP reader and controller in one, the TS300 terminal features an on-board 10/100Mbps Ethernet connection and communicates directly with the AC2000 host server. Utlizing a built-in microphone and speaker, the TS300 provides fully integrated audio intercom functionality at the door, enabling communication between the terminal and a dedicated CEM Intercom workstation.

One of the unique features of the TS300 is the ability to run Remote Applications that are hosted on the AC2000 central server. Access to the Remote Applications can be restricted to certain cardholders who must first swipe their card or card+PIN. These Remote Applications display critical statistics and important information for system maintenance, such as top system alarms and most recent alarms, directly at the door. Additional applications include 'First and Last swipes' for time and attendance purposes, 'Your Card Details' and 'Scheduled Visitors.

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- Four analog inputs to monitor alarm conditions and two changeover, dry contact relay outputs to activate door strike or other equipment
- Remote upload of new firmware directly to the reader with on-screen indication
- Off-line database for 250,000 cardholder records
- Support for a range of smart card technologies
- Maintenance Information / Security Intelligence Point
- Easy to install
- Ability to display live video at the workstation on intercom request, when interfaced with CCTV system (available with AC2000 v6.7 & upwards)
- Ability to display advertising/ information announcements (available with AC2000 v6.7 & upwards)
- Personalized messages (available in AC2000 v7 & upwards)

Remote Applications

AC2000 security intelligence at the door The TS300 uniquely provides users with a range of server-based Remote Applications at the door, which are restricted to certain cardholders who must first swipe their card or card+PIN. Using secure communications, these Remote Applications display real time information and statistics to authorised cardholders such as 'Scheduled Visits', 'Card Status' and 'Change PIN' which allows users to proactively change their own PIN without contacting the system operator. Various maintenance applications are also available to allow engineers to locally diagnose the terminal. These applications include 'Recent Alarms', 'Devices with most alarms' and 'Device settings'. An 'Info' Application also enables administrators to post general company information on the emerald terminal, such as health & safety information. Users can also use the Room Booking application to reserve predefined rooms for a period of time. Users can view the 'All Room Booking' application or use the 'This Room Booking' application, which shows bookings for the room the emerald device in assigned to.

Customised Remote Application Groups

Individual 'Remote Applications' can uniquely be assigned to customised 'Remote

Application Groups'. This means that individual cardholders only have access to remote

applications, depending on their 'Application Group' assigned. For example, system administrators can create an 'Engineer' group where engineers can only get access to maintenance applications at the door.

Off-Line Card Validation

The TS300 has a large internal database that enables it to operate in off-line mode. In off-line mode the terminal can hold up to 250,000 cardholder records.

LCD Touch Screen

The TS300 has a bright, touch sensitive, scrollable 4.3″ graphical LCD screen. With hardened glass and an anti-glare coating, TS300 displays predefined messages and icons to cardholders depending on their privileges e.g. Wrong Door, Lost/Stolen Card, Expiring Card and Access Granted. The screen can also be used to display advertising and information announcements when idle.

VoIP Intercom Functionality

The TS300 terminal features a built-in microphone and speaker to support fully integrated access control and intercom functionality. This allows for two-way conversation between the user at the terminal and an AC2000 workstation operator. The operator has the ability to accept or reject the call request and can execute a 'Oneshot' command to remotely open the door. With AC2000 v6.8 and above the operator can also choose to initiate a call with the emerald terminal. When interfaced with a CCTV system, the operator can also see who they are talking to through the live video feed (AC2000 v6.7 and upwards).

Power over Ethernet Plus

The TS300 is available with onboard Power over Ethernet Plus (PoE+) technology allowing the terminal and additional door furniture* to be powered using a single Cat 5e/6 cable at the door.

Easy to Install

The TS300 is designed to be easy to install, without the requirement for specialist tools. Installers simply assign an IP address via the terminal's user friendly interface, which then connects automatically to the AC2000 server over an Ethernet network. Once powered, the terminal self configures and quickly receives a full cardholder database.

Image on Swipe

Image on swipe offers improved security compliance at guarded checkpoints. With this feature the emerald is enhanced to provide a clear visible display of the cardholder's image. This image, which is displayed on the emerald screen, acts as a simple biometric check enabling security personnel to verify the cardholders identity. A dedicated remote application to customize Image on Swipe settings directly from the terminal is available on the TS300.

Personalized Messages

A specific personalized message for an individual card holder can be displayed directly on the emerald terminal. AC2000 system administrators are able to configure a message that is then assigned to a personnel record. When the cardholder swipes their card at any emerald terminal, the personal message will be displayed with an acknowledgement button. If the message is not acknowledged, it will reappear on the emerald terminal each time the cardholder swipes, until the message is acknowledged or removed by the system administrator. This feature is only available on AC2000 v7 and above.

Checklist Mode

The emerald intelligent access terminal features the ability to create a series of user defined questions and associated images that cardholders must answer positively to before access is granted. This feature can be used to improve company compliance and for health and safety enforcement. For example, staff may require personal protection equipment (PPE) before entering a restricted or hazardous zone, which can be included as a reminder as part of an emerald checklist.

The selections made by users of Checklist mode are stored on the AC2000 server, also recording the questions which receive a Negative answer.

Custom Logo

The emerald intelligent access terminal features the ability to display a customized logo at the centre of the emerald home screen. The custom logo can be uploaded to the system via the AC2000 WEB application and will be displayed on the emerald terminal when idle. This feature is only available on AC2000 v7 and above, and requires a separate system license.

Multi Date Check

As an additional safety and security layer applied on top of system card validity checks, this mode allows the emerald to check the validity of any additional criteria such as training certificates or contracts that might be required at the site. System administrators can easily configure Multi Date Check using the dedicated intuitive AC2000 Web interface and run detailed reports on the configured Multi Date Check criteria and expiry dates, to ensure that personnel's certificates and permissions stay up to date. Whether it's applied for an individual cardholder or company-wide, additional date checks will take place after a valid transaction and a detailed result message will be displayed on emerald screen. This feature is only available with AC2000 v7.0 and above.

Time & Attendance

In T&A mode, the emerald allows users to select either the IN or OUT transaction on a single terminal, before swiping their cards. Depending on the selection, the emerald will allocate valid transactions against either the IN or OUT swipe. System administrators can then easily report on the T&A activity using AC2000 Time and Attendance module or system reports. For highly secure locations, Time & Attendance mode can work in conjunction with Fingerprint verification and other modes such as PIN or Image on Swipe. (T&A is a dedicated door mode. emerald will not control door access when in T&A mode.)

PIN as Card

PIN as Card is a special emerald feature, offering cardless verification using a unique 6 digit PIN to verify transactions. Where necessary, this removes the need for a physical card while maintaining security at the door.

Emerald Link

Emerald link allows operators to activate passenger mode at both sides of the door while providing visual feedback of the remaining passenger time. Emerald Link is the deployment of two emeralds back to back in passenger mode to control a single door. The emeralds communicate with each other over Ethernet using secure 128-bit AES encryption. Alarms generated on either emerald are visually displayed on both sides of the door.

Requirements

· AC2000 Airport v6.6 and upwards

· AC2000 v6.6 and upwards

· AC2000 Lite v6.6 and upwards

· RTC Ethernet Reader Controller

Specifications

Physical	
Size	157 x 108 x 49mm (At widest point) (6.1 x 4.25 x 1.9″)
Weight	< 450g (16oz) with connectors
Housing	Flame retardant polycarbonate containing fully encapsulated electronics
LCD	Capacitive light touch 4.3″ Diagonal, 480 * 272 square pixel 16 bit colour
Colour	Black
Voltage	10 – 14V DC
PoE Version	**when powered from IEEE802.af compliant source**
Current	350mA (typical) 500mA (peak)
Current available to power door furniture	None
PoE+ Version	**when powered from IEEE802.at PoE+ compliant source**
Current	350mA (typical) 500mA (peak)
Current available to power door furniture	850mA*
Environmental	
IP Rating	IP65 Temperature PoE
Temperature PoE (IEEE802.3af)	-20° to 70°C (-4° to 158°F)
Temperature PoE+ (IEEE802.3at)	-25° to 55°C (-13° to 131°F)
Functionality	
Inputs	Four analog inputs – voltage provided
Outputs	2 relays volt free contacts (dry contact)
Switchable wet outputs Rating	Internal: 12Vdc @ 1.6A External: Up to 30Vdc @ 2A (60W)
Memory	128 MB RAM, 256MB NAND Flash
Expansion	Micro SD slot for optional memory expansion
RTC Battery Backup	3.0V rechargeable Lithium-on

Off-line Database	
Cardholders	Up to 250,000 cardholders
Transactions	Up to 50,000 transactions
Card technologies	MIFARE (CSN)/ DESFire(CSN)/ CEM DESFire/ iCLASS/ iCLASS SE

Communication Interface	
To Exit Reader	RS485 (CEM S610 Exit Reader/ CEM S700 Exit Reader) Wiegand (3rd party read heads)
Cable Connection	M3 Screw terminals
To System Host	10/100 Base-T TCP/IP using CAT5e Unshielded twisted pair cable
Cable Connection	RJ45
Operating Modes	Door Mode, Interlock, Control Post, Passenger, Multi-swipe, Global PIN
Intercom	SIP, VoIP, VOX 2-way Half-duplex or Push-to-Talk (configurable), G.711 Audio Codec, Entry Checklist Mode

Regulatory	
Agency Certifications	FCC Part 15** CE UL 294**

* Only PoE+ IEEE802.at provides power for both the terminal and additional door furniture (current available to power door furniture: 850mA). Power requirements beyond this limit will require the DIU230.
** MiFare/DESFire version only

Ordering Information

Product Code	Description
TSR/300/105	emerald TS300 terminal (MIFARE CSN/ DESFireCSN/ CEM DESFire)
TSR/300/106	emerald TS300 terminal (PicoPass)
TSR/300/108	emerald TS300 terminal (iCLASS/ iCLASS SE)
TSR-LOGO	emerald Custom Logo License
TSR/075/000	emerald Mounting Kit - For uneven surfaces. Includes a metal mounting plate, 2 gaskets and 4 machine screws and washers

To order contact cem.sales@tycoint.com or call +44(0) 2890 456 767

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Related Products

- AC2000
- AC2000 Airport
- AC2000 Lite

emerald TS300f

About Johnson Controls

Johnson Controls is a global diversified technology and multi-industrial leader serving a wide range of customers in more than 150 countries. Our 120,000 employees create intelligent buildings, efficient energy solutions, integrated infrastructure and next generation transportation systems that work seamlessly together to deliver on the promise of smart cities and communities. Our commitment to sustainability dates back to our roots in 1885, with the invention of the first electric room thermostat.

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