

# emerald™ TS200

## Intelligent Access Terminal with VoIP Intercom



### Features that make a difference:

- 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
- Fully integrated built-in VoIP intercom functionality
- Scramble keypad option for Personal Identification Number (PIN)
- PIR motion detection
- 10/100 Mbps Ethernet host connection
- Available with onboard PoE+ technology to power the terminal and additional door furniture\*
- Four analogue 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 onscreen indication
- Off-line database for 250,000 cardholder records
- Support for a range of smart card technologies
- 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)
- Display Advertising/ Information Announcements (available with AC2000 v6.7 & upwards)

emerald™ TS200 is part of a range of advanced, intelligent touch screen access terminals. Used in conjunction with the CEM AC2000 security management system, the TS200 controls access to restricted areas while providing users with card reader and controller functionality and Voice over IP (VoIP) intercom, all in one powerful device.

The TS200 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 'Wrong Door'. Its built in mini PIR sensor provides energy saving motion detection, with the LCD touch screen automatically lighting up upon an approaching person. The TS200 also features a multicoloured LED light which provides users with a visual indication of access status. With hardened glass and an anti-glare coating, the TS200 is durable enough for indoor and outdoor use.

As a powerful IP card reader and controller in one, the TS200 features an on-board 10/100Mbps Ethernet connection and communicates directly with the AC2000 host server.

Utilising a built-in microphone and speaker, the TS200 provides fully integrated audio intercom functionality at the door, enabling communication between the terminal and a dedicated CEM Intercom workstation.

The TS200 is designed with internal reading support for 13.56MHz MiFare (CSN), DESFire (CSN), iClass and iClass SE smart cards.

### VoIP Intercom Functionality

The TS200 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. Running an AC2000 workstation Intercom application, system operators will receive a pop-up notification of requested audio help. The operator will then have the ability to accept or reject the call request and can execute a 'Oneshot' command to remotely open the door. The TS200 allows live video feed on the operator workstation from an interfaced CCTV system when a user presses the intercom request button. This allows the operator to see who they are talking to. With AC2000 v6.8 the operator can also choose to initiate a call with the emerald terminal.

### High Security

The TS200 features a fully secure connection to the CEM RTC (Ethernet controller software). This connection is secured with 128-bit encryption. For sensitive areas that require an additional layer of security, the TS200 features a PIN option, as well as a unique Scramble keypad option.

### Off-Line Card Validation

The TS200 has a large internal encrypted database that enables it to operate in off-line mode. The cardholder database is downloaded to the terminals internal memory to ensure that up-to-date card information is stored. In off-line mode the terminal can hold up to 250,000 cardholder records.

### Power over Ethernet Plus

The TS200 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.

## LCD Touch Screen

The TS200 has a bright, touch sensitive, scrollable 4.3" graphical LCD screen. With hardened glass and an anti-glare coating, TS200 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.

## Easy to Install

The TS200 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.

## 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+ Versions . . . . . 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 (IEEE802.3af) . . . . . -20° to 70°C (-4° to 158°F)  
 Temperature PoE+ (IEEE802.3at) . . . . . -25° to 55°C (-13° to 131°F)

## Remote Configuration

Acting as a maintenance intelligence point, the TS200 network settings and operational door modes can all be remotely configured, with all changes automatically uploaded to the access control server. Multiple door locks include 'Interlock Mode', 'Control Post', 'Multi-swipe', 'Entry Checklist Mode' and 'Passenger Mode'.

## Requirements

- AC2000 AE v6.6 software & upwards
- AC2000 SE v6.6 software & upwards
- AC2000 Lite v6.6 software & upwards

### 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) 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

\* 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.

## Ordering Information

Product Code	Description
TSR/200/105	emerald TS200 terminal (Mifare CSN/ DESFire CSN/ CEM DESFire)
TSR/200/106	emerald TS200 terminal (picopass)
TSR/200/108	emerald TS200 terminal (iClass/ iClass SE)

## Related Products



AC2000



AC2000 Airport



AC2000 Lite

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