

emerald™ TS100

Intelligent Access Terminal



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
- 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 terminal with on-screen indication
- Off-line database for 250,000 cardholder records
- Support for a range of smart card technologies
- Easy to install
- Display Advertising/ Information Announcements (available with AC2000 v6.7 & upwards)

emerald™ TS100 is part of a range of advanced, intelligent touch screen access terminals. Used in conjunction with the CEM AC2000 access control and security management system, the TS100 controls access to restricted areas while providing users with an innovative and future proof access control solution.

The TS100 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 screen automatically lighting up upon an approaching person. The TS100 also features a multicoloured LED light which provides users with a visual indication of access status.

To enhance user experience at the door, the TS100 features an information icon that can assist users with helpful guidance. The TS100 also offers high levels of security at the door using the latest technologies, including a scramble keypad option for PIN verification. With hardened glass and an anti-glare coating, the TS100 is durable enough for indoor and outdoor use.

A powerful IP card reader and controller in one device, the TS100 features an on-board 10/100Mbps Ethernet connection and communicates directly with the AC2000 host server.

The TS100 is designed with internal reading support for 13.56MHz MiFare (CSN), DESFire (CSN), iClass and iClass SE smart cards.

LCD Touch Screen

The TS100 has a bright, touch sensitive, scrollable 4.3" graphical LCD screen. With hardened glass and an anti-glare coating, TS100 displays predefined messages and icons to cardholders depending on their privileges e.g. Wrong Door, Lost/ Stolen Card and Access Granted. The screen can also be used to display advertising and information announcements when idle.

High Security

The TS100 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 TS100 features a PIN option, as well as a unique Scramble keypad option.

Off-Line Card Validation

The TS100 has a large internal encrypted database that enables it to operate in off-line mode. The cardholder database is downloaded to the terminal's 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.

Card Reader and Controller in One

The TS100 communicates directly to the CEM AC2000 server using Ethernet connectivity. This removes the need for an additional controller in the system design.

Power over Ethernet Plus

The TS100 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 TS100 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.

Remote Configuration

Acting as a maintenance intelligence point, the TS100 network settings and operational door modes can 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'.

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

Onboard Card Reading Technologies

The TS100 supports 13.56MHz MiFare (CSN), DESFire (CSN), iClass and iClass SE smart cards. An additional Wiegand input is supported for connecting external 3rd party non-keypad exit read heads or additional security devices, I/O's and serial channels (RS485).

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-oin

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, 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/100/105	emerald TS100 terminal (MiFare CSN/ DESFire CSN/ CEM DESFire)
TSR/100/106	emerald TS100 terminal (picopass)
TSR/100/108	emerald TS100 terminal (iClass/ iClass SE)

Related Products



AC2000



AC2000 Airport



AC2000 Lite

www.cemsys.com