CEM SYSTEMS

Intelligent two-door Controller
Supports a full two door set and up to four Wiegand or OSDPv2 smart card readers. Supports mixed reader types on the same board

Easy to install
Quick IP address setup via DIP switches, DHCP, or auto-configuration; database download of up to 50,000 cardholders in under 2 minutes

Secure Communication
Open Supervised Device Protocol Version 2 (OSDPv2) with AES encryption ensures safe, bi-directional data exchange between readers and controller

Designed for Security
High performance deterministic door control process, secure boot, encrypted key storage, and IPv4 10/100 Mbps Ethernet host connection

Reliable Offline Operation
Powerful 32-bit processor enables full access decisions at the door, even without host connectivity. Dedicated Fire Input also available

Intuitive Web Dashboard
Remote monitoring, troubleshooting and configuration with real-time status indicators for doors, inputs, outputs, and network

Intelligent True Two-Door Controller

The CEM Systems DCM 200 (Door Control Module) is an intelligent two-door controller designed to be highly secure and directly interface with CEM Systems AC2000 access control software (version 10.2 and higher). It also supports up to four Wiegand or CEM Systems approved Open Supervised Device Protocol (OSDP v2) smart card readers. These OSDP compliant readers can be used (Entry/Exit configuration) for bi-directional control on two doors. Using powerful 32-bit processors, the DCM 200 gives full on-line or off-line verification and decision making at the point of entry, even when host communication is not available.

OSDP V2 Support

OSDPv2 is a secure access control systems protocol standard developed by the Security Industry Association for peripheral devices. With added secure AES 128 encryption, it provides bidirectional communications and advanced security features for connecting OSDPv2 compliant card readers to DCM 200 control panels, eliminating the threat of Wiegand signal cloning.

Optional PoE connectivity

The DCM 200 controller also offers optional High-Power over Ethernet connectivity, delivering both power and data to two complete door sets through a single Ethernet cable.

Easy to Install

The DCM 200 is designed to be extremely easy to install. The installer simply configures IP address by selecting DIP switches, using DHCP or auto-configuration, provides it with power, connects to an Ethernet network and the reader self-configures and receives the database at a rate of up to 50,000 cardholders in under 2 minutes.

Web Dashboard

The DCM 200 dashboard can assist with local and remote troubleshooting, monitoring and configuration of the DCM200, and equipment connected to it. The dashboard provides users with visual indicators and details on power supply status, door status, input states, output status, network status, and database status. The dashboard also allows users connected to the DCM network the ability to remotely configure network settings and current limits for outputs (read heads, locks and auxiliary outputs).

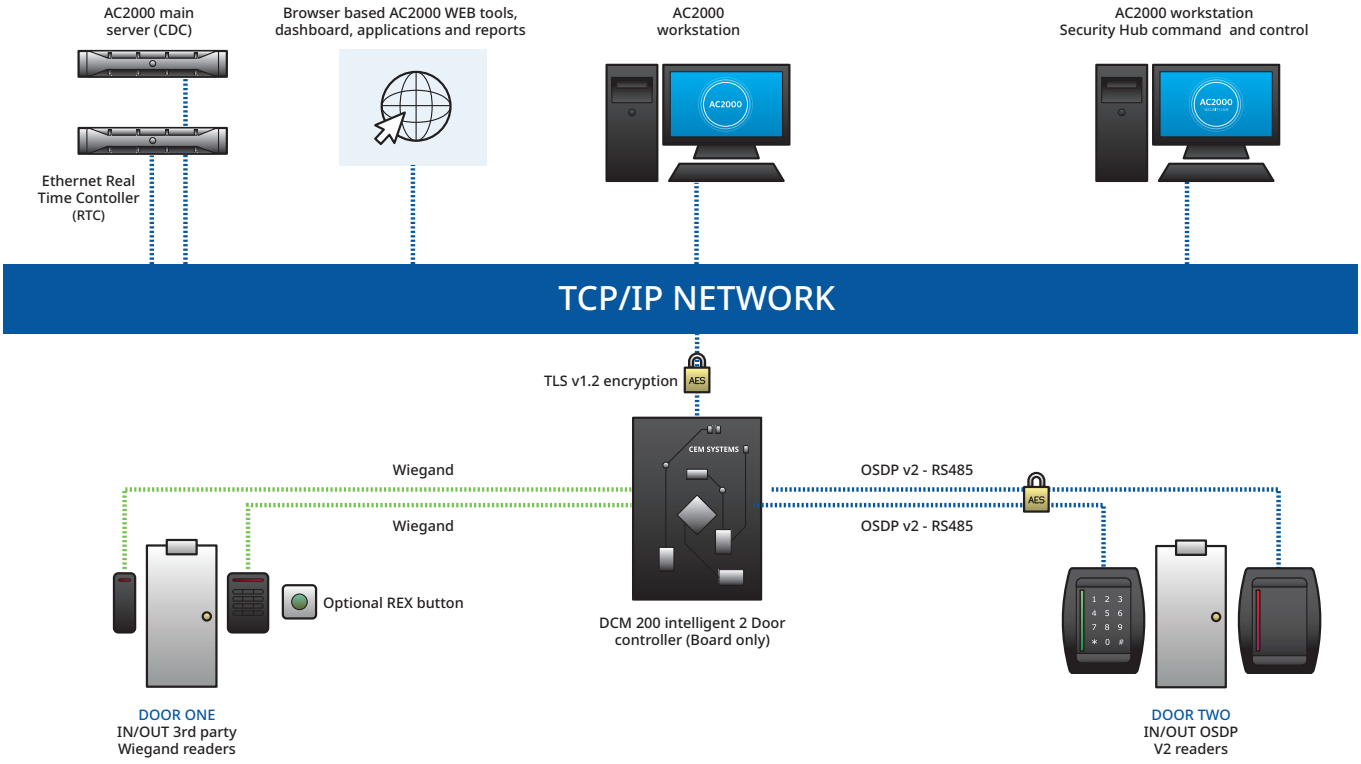
Future Proof Migration

Each door of the DCM 200 Controller can support either Wiegand or OSDPv2 readers, with a mixture of both supported on the same board. This provides a future proof solution for those that wish to migrate from Wiegand readers to more secure OSDPv2 readers.

Designed for Security

The DCM 200 uses a Secure boot and Secure upgrade mechanism to protect the operation of the system.

The DCM 200 supports up to 4 OSDPv2-RS485 Or WIEGAND Readers for both IN/OUT control on 2 doors



High-Power over Ethernet

The DCM 200 controller works with an optional High-Power PoE module that delivers both power and data over a single CAT 5e/6 (or higher) Ethernet cable. When paired with a compatible *PoE++ Midspan injector, it can provide up to 71 W of power through a single Ethernet connection (13.5 V DC output, maximum current: 5.281 A).

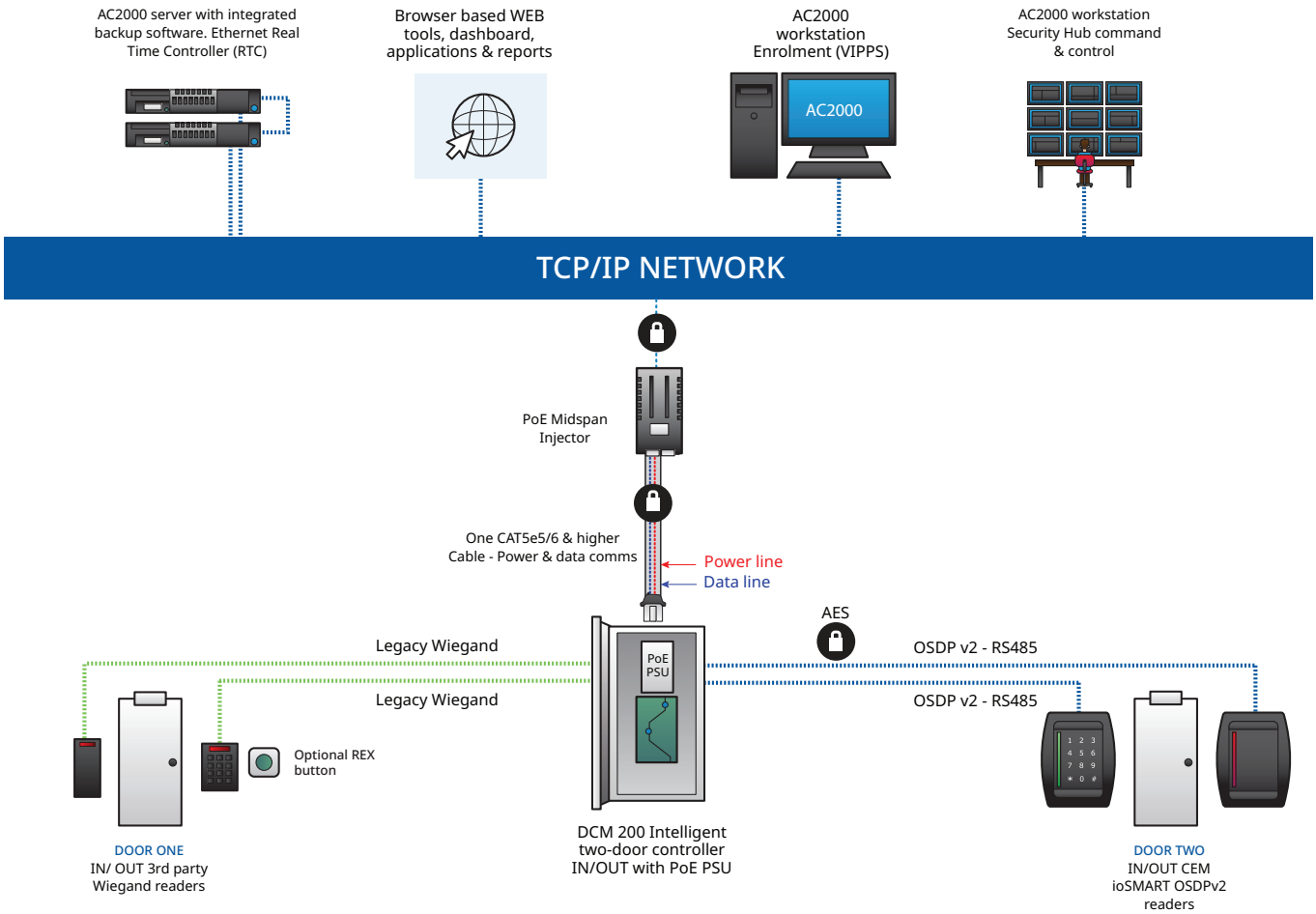
This solution powers the DCM 200 controller along with door hardware, including:

- Up to four heavy-duty maglocks (two per door)
- Four CEM Systems ioSmart or third-party readers (IN/OUT)
- Additional devices such as door holders and sounders

This eliminates the need for local mains power at the door—simplifying installation, reducing cabling complexity, and delivering significant cost savings, especially in locations where local power is unavailable. The unit also features PoE fail sensors and automatic restart after power restoration.

***CEM Systems recommends using an IEEE 802.3bt Type 4 (90 W) PoE++ Midspan to ensure full compatibility and optimal performance. For more information please contact CEM Systems directly.**

The DCM 200 PoE securely powers two fully resilient door sets



Specifications

Operational	
Inputs	4 Tamper Supervised Door Inputs (Analogue 2/4 state) per door: • Door Position • Lock Status • Request to Exit (REX) • Interlock Unused door inputs can be used for general purpose sensor monitoring. Additional board inputs: • Tamper • Fire • Power Fail Sense Input (for mains fail on the power supply) Automatic door release for Fail-safe locks
Outputs	2 outputs per door: FET and Relay Supports fault reporting for Reader power violations
FET Outputs	Thermal-fuse-based current limit for Door power, Max. 15V at 1.5A
Relay Outputs	Volt-free Operation, Nominal DC load current 2A, Nominal operating voltage 9-30VDC
LED indicators	Power, Link to host, Comms Tx/Rx, Fault / Tamper, Fire, Error, Heartbeat, Reader status LED's, Lock and Relay Status per door
Database Memory	256MB NAND Flash
Database Size	Supports at least 250,000 cardholders and 50,000 transactions
Database records	24bit, 32bit and 128bit card database records
Card Support	Most card types, depending on read head; Wiegand, CSN, PSN
Fire Interface Functions	Monitoring of a Fire system dry-contact relay output. Onboard LED indication of status. Firmware event processing and ability to map alarm. Hardware control of all onboard power to release mechanisms (fail-safe)
Configuration	Local Secure Web Server (https) Operational parameters are downloaded from host computer
Special Modes of Operation	Some of the special modes include: • Interlock • Turnstile Mode (including Fast Pulse operation) • Passenger Mode (MEDOT) • Multi-Card Mode • Local Override • External System Control Mode
Electrical	
Voltage – Board only	9 to 14.5 VDC, 250mA (minimum 10.5 VDC recommended for 12V locks)
Voltage – A.C Enclosure (DCM/200/112)	100-240VAC, 50- 60Hz,1.6A fuse. PSU output voltage to board: 13.5 VDC, 55W output
Voltage - PoE Enclosure (DCM/200/132)	Input: IEEE 802.3bt (57 VDC), protected by 10 A fuse PSU Output to Board: 13.5 VDC, 71.3 W (maximum current: 5.281 A @ 13.5 VDC)
Current Consumption	Board-only: 231mA @ 13.5 VDC
Power available to door accessories (e.g. Readers, Locks, etc.)	5.05 A @ 13.5 VDC
Clock Power Backup	Battery powered, 3.0V rechargeable Lithium Min. 120-hours after power shutdown (IEC60839-11-1)

Backup Battery - Enclosure	Connection for emergency power changeover detection, with a nominal 12VDC operation (in excess of 2 hours using a 7AH battery and 350mA locks). Provision for charging 7Ah battery using constant 13.5VDC at limited current 0.23A: 80% capacity within 24 hours 100% capacity within 72 hours Backup battery not included. Evaluated with Yuasa NP7-12 (12V 7Ah) VRLA Battery
Communication	
Host Interface	10/100BaseT, Single RJ45 connector
Host Protocol	IPv4 Ethernet, DHCP Support
Reader Interface	4 x Wiegand 2 x OSDPv2 RS485 ports with Auto-Detect and Power Sequencing Control for 4 x OSDPv2 read heads
Security	TLS v1.2 Encrypted Host Communication. Onboard Secure Element for Secure Key Storage. Trusted Boot architecture with locked-down boot sector. Future Support for IEEE 802.1X Network Port Security
Physical	
Dimensions – Board only	200 x 150 x 25mm (8 x 6 x 1 inches)
Dimensions – Enclosure	460 x 250 x 90mm (18 x 10 x 3.5 inches)
Weight - Board Only	0.1 kg (0.22 lbs)
Weight - Enclosure (Mains supply)	5kg (11.0 lbs)
Weight – Enclosure (PoE supply)	3.5 kg (7.7 lbs)
Housing	Wall mount 1.2mm steel enclosure
Housing Colour	Grey
Environmental	
Temperature	Operating: -10°C to +55°C (EN50130-5 Class II) Storage: -40° to 60°C
Humidity	Operating: 0 to 90% RH non-condensing Storage: 0 to 95% RH non-condensing
Regulatory	
Safety	IEC/EN 62368-1:2014+A11:2017
Emissions	EN-55032:2015 Class A
Immunity	EN-50130-4:2011 + A1:2014
Environment	RoHS, REACH & WEEE

Ordering Information

Model Number	Description
DCM/200/002	DCM200 Two Door Controller Module Board Only
DCM/200/102	DCM200 Two Door Controller Module mounted in enclosure without PSU
DCM/200/112	DCM200 Two Door Controller Module mounted in enclosure with 12V DC PSU
DCM/200/132	DCM200 Two Door Controller Module mounted in enclosure with PoE PSU

CE1550-DS-202512-R01-HS-EN