

Next-Generation

Access Control Panel

ICMMP-4502



Reference image only*

IDCUBE's ICMMP Series, built on the Authentic Mercury MP Series Intelligent Controller (MP4502), is a future-ready, open-architecture access control platform natively integrated with Access360.

Supporting 2 million cardholders and up to 64 access points, it unifies access control, alarm management, elevator dispatch, and power analytics in a single solution. Combining Mercury's proven hardware with IDCUBE's open framework.

HIGHLIGHTS

Open Architecture: Built on Authentic Mercury hardware, the ICMMP-4502 works seamlessly with IDCUBE Access360 and OEM software partners for maximum flexibility.

Enhanced Cybersecurity: ARM TrustZone, secure boot CPU, crypto chip, and data-at-rest encryption provide multi-layered security.

Edge Processing: Advanced on-device intelligence allows running custom applications directly on the controller, driving enterprise-ready integrations.

Business Continuity: Equipped with a long-life processor, dual-footprint design, and Mercury's trusted LP/EP interface for consistent uptime.

Enterprise Scalability: Supports 2 million cardholders, High Assurance Credential Authentication*, and BACnet/IP building integration with built-in support for elevator destination dispatch and power analytics

* In process

FEATURES

Security and Network

- IPv4/IPv6 network support
- Host communications secured by TLS 1.2/1.3 or AES-128/256
- AES-protected controller/IO expansion connections
- Custom peer certificate generation for TLS
- Port-based network access control (802.1X)
- FIPS 140-3 (OpenSSL*)

Local Access Control Processing

- 2 million cardholder capacity, 500,000 transaction buffer
- Supports multiple card formats, paired and alternate readers
- Compatible with elevators, turnstiles, and biometric devices
- Anti-passback support (area, reader, and time-based)
- Programmable keypad user commands and threat level modes
- Power cycle capability for each reader port

Third-Party Integration Supported

- Wireless locks
- FICAM strong authentication (FIPS-201, firmware update*)
- Elevator destination dispatch (firmware update*)
- Power supply alerts and events
- Building automation via BACnet/IP

TECHNICAL SPECIFICATIONS

Intelligent Controller	
Card Holders Capacity	2,000,000 cardholder capacity 500,000 transaction buffer

Door Control	Natively supports up to 4 readers and 2 openings and can support up to 32 additional RS-485 expansion modules for a maximum of 64 readers and openings.
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General

Primary Power	12-24 VDC +/- 10%, 550mA maximum (reader and USB current not included)
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Reader Ports	600mA maximum (add 600 mA to primary power current)
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Micro USB Port	5 VDC, 500 mA maximum (add 270 mA to primary power current)
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Battery	Memory/Clock Backup: Super Capacitor (10 hours)
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microSD Card	Format: microSD or microSDHC; 2GB to 8GB
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Host Communication	Ethernet: 10-BaseT/100Base-TX and Micro USB port (2.0) with optional adapter: pluggable model USB2-OTGE100
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Serial I/O Device	Two each: 2-wire RS-485, 2,400 to 115,200 bps, asynchronous, half-duplex, 1 start bit, 8 data bits, and 1 stop bit
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Inputs	Eight unsupervised/supervised, standard EOL: 1k/1k ohm, 1%, ¼ watt. Two unsupervised dedicated for cabinet tamper and UPS fault monitoring
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Output Relays	Four relays, Form C, NO 5 A @ 30 VDC resistive, NC 3 A @ 30 VDC resistive
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Mechanical

Dimensions (Board)	8.0 in. (203mm) W x 6.0 in. (152mm) L x 1.0 in. (25mm) H
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Weight	10.65oz (302 g) nominal, board only
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Reader Interface	
Reader Power	12-24 VDC +/- 10% regulated, 600 mA maximum.

Data Inputs	TTL compatible, F/2F or 2-wire RS-485
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RS-485 Mode	9,600 to 115,200 bps, asynchronous, half-duplex, 1 start bit, 8 data bits, and 1 stop bit. Maximum cable length: 2000 ft. (609.6 m)
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LED Output	TTL levels, high>3 V, low<0.5 V, 5 mA source/sink maximum
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Buzzer Output	Open collector, 12 VDC open circuit maximum, 40 mA sink maximum
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Cable Requirements

Power and Relays	1 twisted pair, 18 to 16 AWG
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Ethernet	CAT-5, minimum
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Reader TTL	6-conductor, 18 AWG, 500 feet (150 m) maximum
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Reader F/2F	4-conductor, 18 AWG, 500 feet (150 m) maximum
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I/O Devices RS-485	1 twisted pair, shielded. 24 AWG, 120 ohm impedance, 2,000 feet (610 m) maximum
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RS-485 I/O Devices	1 twisted pair, shield. 120 ohm impedance, 24 AWG, 4,000 ft. (1,219 m) maximum
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Alarm Input	1 twisted pair, 30 ohms maximum, typically 22 AWG @ 1000 ft. (304.8 m)
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Environmental

Temperature	-55 to +85 °C, storage, 0 to +70 °C, operating
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Humidity	5 to 95% RHNC
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Compliance and Warranty

Product Compliance	UL 294 Recognized, FCC Part 15 Class A, CE Compliant, RoHS (2011/65/EU & 2015/863), EU REACH (1907/2006), California Proposition 65, NIST Certified Encryption (in process)
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Warranty	The product is warranted free from defects in material and workmanship under normal use and service with proper maintenance for one year from the date of factory shipment.
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