IDCUBE

MP Series Controller

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

Mercury Partner

ADVANTAGE HID Platinum Partner

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.

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

Reader Interface	
Reader Power	12-24 VDC +/- 10% regulated, 600 mA maximum.
Data Inputs	TTL compatible, F/2F or 2-wire RS-485
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)
LED Output	TTL levels, high>3 V, low<0.5 V, 5 mA source/sink maximum
Buzzer Output	Open collector, 12 VDC open circuit maximum, 40 mA sink maximum

Mechanical	
Dimensions (Board)	8.0 in. (203mm) W x 6.0 in. (152mm) L x 1.0 in. (25mm) H
Weight	10.65oz (302 g) nominal, board only

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

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

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)
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.

Part Code	
Part Code	ICMMP-4502-EXXXXXX[1] (Mercury Controller Part number: MP4502)

[1] EXXXXXX refers to enclosure type along with accessories such as power supply, charging circuit, battery, and tamper switch; Please refer to the enclosure datasheet for details

Scan to visit the website

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