HID®

HID® Mercury™ LP4502 Intelligent Controller

HIGHLIGHTS

Third Party Integration Supported
- Wireless Locks
- FICAM Strong Authentication for FIPS-201 US Government
- Elevator Destination Dispatch
- Power Supply Alerts and Events
- Building Control using BACnet IP

Security and Network
- IPv4/v6
- Host communications protected by TLS 1.2/1.1 or AES-256/128
- Controller/IO Expansion connection protected by AES
- Generate and load custom peer certificates for TLS
- Port based network access control using 802.1X
- FIPS 140-2 user of OpenSSL

Card Reader Functions
- Supports multiple card formats, paired and alternate readers, elevator, turnstile and biometric devices
- Anti-passback support (area, reader and time based)
- Programmable keypad user commands
- Threat level and operating modes

INTELLIGENT CONTROLLER WITH EXTENDED APPLICATIONS (4 READERS, 8 INPUTS, 4 OUTPUTS)

- **Open Architecture** – High performance, reliable platform enables use of hardware with HID Mercury OEM partners' software solutions.
- **Device Integration** – Supports a wide range of third party integrations and applications.
- **Enhanced Security** – Embedded crypto memory chip and data at rest encryption provides secured layer of protection of sensitive data.
- **OSDP Protocol** – Secure channel communications for reader connectivity and extended applications such as biometrics and US government (FICAM).
- **Versatile Interoperability** – Same reliable interface and identical footprint as the EP Controllers, enabling seamless upgrades for existing deployments.

The HID Mercury LP Series Intelligent Controllers are HID Global's next generation advanced access control platform that runs on embedded Linux. The enhanced platform offers an improved processor and increased memory, plus feature an embedded crypto memory chip that provides a secured layer of encryption to onboard sensitive data. Built on the HID Mercury open platform, LP Series controllers provide the necessary flexibility for OEMs, channel partners and end customers to choose the controller configuration that best fits their needs.

The LP4502 supports a variety of extended features including High Assurance Credential Authentication and complies with the BACnet IP communication protocol. A USB-to-Ethernet IP adapter provides a redundant host IP connection. It has direct hardware support for 2 openings and can scale to 64 access points. Built on proven HID Mercury hardware, this high-performance intelligent controller embeds elevator destination dispatch and provides integrated power management analytics to proactively detect failure before it occurs.

For partners seeking a comprehensive and open access control platform, increased user capacity, and a reliable hardware platform running an expanded set of applications, the LP4502 is the clear solution. It delivers a complete security and access control solution as well as innovative application extensions, interoperability and data security.

HID Mercury LP4502 Intelligent Controller

Access Control	2,000,000 cardholder capacity 50,000 transaction buffer Supports up to 2 RS-485 IO protocols 255 access levels per cardholder Cardholder - 19 Digit (64 Bit) User ID with 15 digit PIN MAX Activation/Deactivation If/Then macro capabilities Anti-passback support Nested, area, hard, soft and timed forgiveness Adjustable cardholder capacity Supports up to 1024 inputs and 1024 outputs
Door Control	Natively supports for up to 4 readers and 2 openings Expands to support up to 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: 3 Volt Lithium, type BR2330 or CR2330
microSD Card	Format: microSD or microSDHC; 2GB to 8GB
Host Communication	Ethernet: 10Base T/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%, 300 mA maximum for each reader
Data Inputs	TTL compatible inputs, F/2F or 2-wire RS-485 standards supported
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
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
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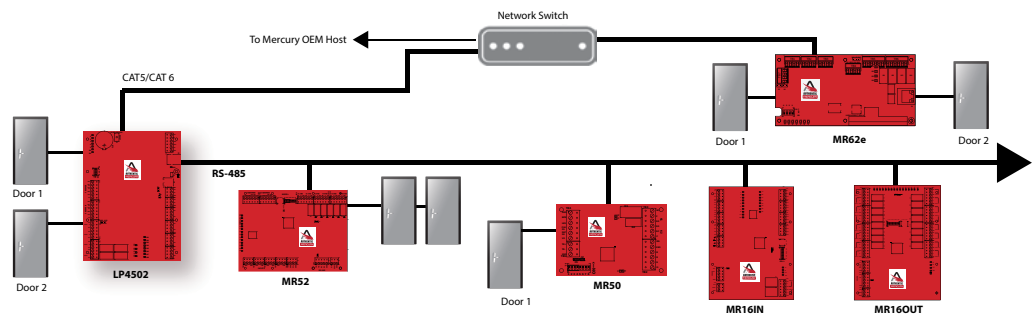| CABLE REQUIREMENTS	
Power and Relays	1 twisted pair, 18 to 16 AWG
Ethernet	CAT-5, minimum
Reader TTL	6-conductor, 18 AWG, 500 feet (150 m) maximum
Reader F/2F	4-conductor, 18 AWG, 500 feet (150 m) maximum
Reader RS-485	1 twisted pair, shielded. 24 AWG, 120 ohm impedance, 2,000 feet (610 m) maximum
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	Storage: -55° to 85°C Operating: 0° to 70 °C
Humidity	5 to 95% RHNC

MECHANICAL	
Dimensions	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

COMPLIANCE AND WARRANTY	
Product Compliance	UL294 Recognized, FCC Part 15 Class A, CE Compliant, RoHS (2011/65/EU & 2015/863), EU REACH (1907/2006), California Proposition 65, NIST Certified Encryption
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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