

Mercury MP Series Intelligent Controller

Expandable access control for the modern
workplace



The Avigilon Alta Access system supports open-field hardware from Mercury Security allowing organizations to leverage investments in non-proprietary field hardware, with retrofit programs available for industry standard multi-device interface panels, power and communication controller boards, and intelligent controllers. The Mercury MP Intelligent Controllers provide a bridge between today's urgent security needs and tomorrow's emerging realities. Featuring Secure world processing within a trusted execution environment and a future-ready, on-device application environment to drive advanced enterprise strategies with sophisticated programs and analytics adjacent to the door.

The AC-MER-CONT-MP1502 from Avigilon supports two-to-four card readers for controlling two connected doors. It also supports keypads, biometric readers, OSDP, Wiegand, clock and data, and magnetic stripe reader technologies. With enhanced processing, memory and component continuity, the MP1502 includes improved cybersecurity measures like secure boot, TLS 1.3, and FIPS 140-3 use of OpenSSL. System configuration and setup are provided through the Alta Access system.

Highlights

Security and network:

- IPv4/v6
- Host communications protected by TLS 1.2/1.3 or AES-256/128
- Controller/IO Expansion connection protected by AES
- Generate and load custom device and peer certificates in support of mutual TLS (mTLS)
- Port-based network access control using 802.1X
- FIPS 140-3 user of OpenSSL (in process)

Open architecture

High performance, reliable platform enables use of hardware with the Alta Access system.

Enhanced cybersecurity

ARM TrustZone, secure boot CPU, crypto chip, and data-at-rest encryption provide a layered security approach to protect sensitive data.

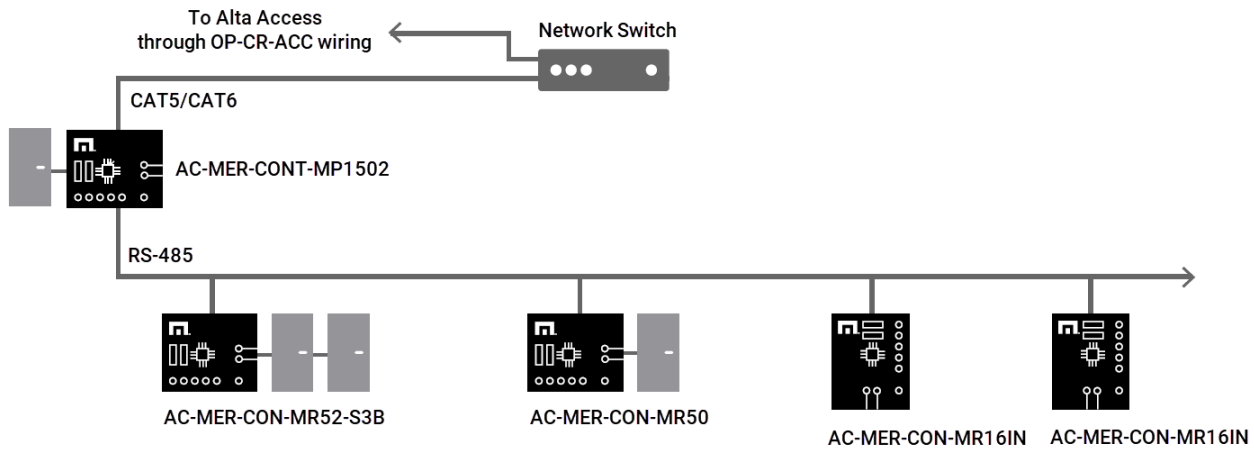
Edge processing

Advanced processing capabilities allow for custom applications to run in the controller, exponentially expanding the platform's processing possibilities at the edge.

Business continuity

New processor part of multi-year longevity program, dual footprint circuit designs, and the same reliable LP/EP interface and footprint.

Specifications



MERCURY MP1502 INTELLIGENT CONTROLLER

Access Control	Supports total of 1 RS-485 IO protocol Activation/deactivation If/Then rule capabilities Anti-passback support Nested, area, hard, soft, and timed forgiveness Supports up to 264 inputs and 260 outputs
Door Control	Natively supports up to 4 readers and 2 opening, and can support up to 16 additional RS-485 expansion modules for a maximum of 32 entries.

GENERAL

Primary Power	12 to 24 VDC \pm 10 %, 500 mA maximum (reader and USB ports not included)
Reader Port	600 mA 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 days). 3 Volt Lithium, type BR2330 or CR2330 slot available for additional capacity. (CR2330 battery not included)
microSD Card	Format: microSD or microSDHC; 2GB to 8GB
Host Communication	Ethernet: 10-BaseT/100Base-TX and USB port (2.0) with optional adapter: pluggable model USB2- OTGE100
Serial I/O Device	2-wire RS-485, 2,400 to 115,200 bps, asynchronous, half-duplex, 1 start bit, 8 data bits, and 1 stop bit
Inputs	8 unsupervised/supervised, standard EOL: 1k/1k ohm, 1%, ¼ watt 2 unsupervised dedicated for cabinet tamper and UPS fault monitoring
Output Relays	4 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 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



CABLE REQUIREMENTS

Power and Relays	1 twisted pair, 18 to 16 AWG
Ethernet	CAT-5, minimum
Reader TTL	6-conductor, 18 AWG, 500 ft. (152 m) maximum
Reader RS-485	1 twisted pair, shielded, 120 ohm impedance, 24 AWG, 2,000 ft. (610 m) max.
I/O Devices	RS-485 1 twisted pair with drain wire and 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) maximum

ENVIRONMENTAL

Temperature	Storage: -55° to 85° C Operating: 0° to 70° C
Humidity	5 to 95% RHNC

MECHANICAL

Dimensions	8 in. (203.2 mm) W x 6 in. (152.4 mm) L x 1 in. (25 mm) H
Weight	9 oz. (255 g) nominal, board only

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)
Third-Party Warranty	For more information, visit avigilon.com/support/warranty/third-party

For UL, the Power Sourcing Equipment (PSE) such as a PoE or PoE+ enabled network switch and/or PoE or PoE+ power injectors must be UL Listed under UL 294B.



Ordering Information

PART NUMBER	DESCRIPTION
AC-MER-CONT-MP1502	MP Series Intelligent Controller, Linux-based with 2 doors, 8 inputs and 4 outputs (Mercury part number: MP1502)

Support

For product support, visit: [avigilon.com](https://www.avigilon.com) or sales@avigilon.com

To learn more, visit:
[avigilon.com/access-control/cloud](https://www.avigilon.com/access-control/cloud)



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