



Integrated Mx Controllers

High-Security Access Control Integrated with Altronix® Trove™2



With Hirsch Mx Controllers at the core, these systems provide a high-integrity, enterprise-class access control and security management solution.

Hirsch's integrated Mx Controllers are available in 2, 4 and 8-door fully supervised models with power supplied to readers, locks, and peripherals.

Each Hirsch Mx Controller includes extensive onboard firmware for control sequences as basic as "who goes where when" to sophisticated functions like two person rule, occupancy counting, individual user tagging, door interlocking, and anti-passback. Mx controller functionality is maintained even when the Velocity security management system server is offline.

All versions are available in both Trove2HR2R Rack Mount (2U) and standard Trove2HR2 Wall Mount.

Each enclosure provides mounting for one Mx, one SNIB3, three additional

expansion boards (combination of RREB, AEB8 & REB8) and multiple Altronix devices.

Mx Controllers are designed for "high availability" as a complete system for global markets. Standby batteries for both memory and system operation are standard. All door relays are socketed. All reader terminals and power circuits are fused (onboard resettable).

These features are foundational for the critical U.S. federal government security standards based on FICAM and enabling OSDP readers and optional OSDP secure channel communications.

High-Security Access Control

- Designed for use with Hirsch Velocity security management system
- Scalable from a single controller to networked, multi-site installations
- Connectivity with up to 8 doors over MATCH, Wiegand, or OSDP
- 12v, 24v or dual voltage power supply for 8 locks and 8 auxiliary devices
- Network monitoring of power supply and battery operations
- Multiple expansion board configurations

Integrated Mx Controller

Parameter	Details	
Communications		
Serial Interface Ports	Controller to controller: <ul style="list-style-type: none"> RS-485 multi-drop protocol X*NET2 Optically isolated port 	Controller to server: <ul style="list-style-type: none"> 10/100 Ethernet (TCP/IP) Encrypted communication X*NET2 or X*NET3
MATCH Protocol	24V DC nominal	
Onboard Reader Support	ScramblePad/MATCH2: <ul style="list-style-type: none"> Proprietary MATCH protocol Reader ports: 8 with 16 addresses (8 entry & 8 exit) Wiring: 18 AWB, 2 pair, stranded, twisted, overall shield 	Onboard Wiegand: <ul style="list-style-type: none"> Industry standard Wiegand Up to 8 doors Maximum wiring run: 500 ft (150 m) with 18 AWG shielded cable
RREB	Controller to OSDP reader: <ul style="list-style-type: none"> Buzzer, LED and security assurance control Up to 8 door ports for entry and exit OSDP readers Up to 4,000 ft (1,200 m) with 18 gauge, 2 pair, stranded, twisted, and shielded Optional Secure Channel 	
Command and Control Module (CCMx)	<ul style="list-style-type: none"> Removable and upgradeable CCM updates all microprocessors (including onboard MATCH) Time zones: 150 	<ul style="list-style-type: none"> Door groups: 128 Control zones: 256 Holiday groups Daylight savings time adjustment
Memory		
Buffers	<ul style="list-style-type: none"> Standard: 1,500 events and 1,500 alarms 	
Credentials	<ul style="list-style-type: none"> CCMx database up to 4,000 or SNIB3 database up to 500,000 	
Memory Protection Battery	<ul style="list-style-type: none"> 30 days for code, setups, clock, and buffers 	
Physical		
	Rack Mount	Wall Mount
Trove Dimensions	33" D x 19" W x 3.5" H (40" Internal Depth with Z Bracket Attached)	27.25" D x 21.5" W x 6.5" H
Weight	55 lbs.	44 lbs.
Operating Temperature Range	32° to 140°F (0° to 60°C)	32° to 140°F (0° to 60°C)
Relative Humidity	0 to 90%, non-condensing	0 to 90%, non-condensing
Electrical		
MATCH Power (2 Terminals)	<ul style="list-style-type: none"> 1.0 Amp at 24VDC each, fused and resettable 2.9 Amp at 24VDC each 	
Wiegand (2 Terminals)	<ul style="list-style-type: none"> 500 mA at 12VDC each, fused and resettable 2.0 Amp at 12VDC total 	
OSDP Reader	<ul style="list-style-type: none"> 500 mA at 12VDC each, fused limited 2.2 Amp max draw per RREB 	
Door Relays	<ul style="list-style-type: none"> 5 Amp, form C 	
Alarm Relays	<ul style="list-style-type: none"> 2 Amp, form C 	
Listings and Approvals	<ul style="list-style-type: none"> UL 294: Access Control Systems Units; UL 1076: Proprietary Burglar Alarm Systems 	
Warranty	<ul style="list-style-type: none"> Two Year Limited 	

Mx Controller Features

- Available in 2, 4 or 8 fully supervised door options with entry and exit readers
- Field upgradeable to control additional doors, up to 8 per unit
- Integrated network communication with onboard Ethernet IP port
- Global I/O using IP or RS485
- Dedicated alarm relay outputs
- High-security supervised alarm inputs
- Configurable relay outputs (door or general purpose in Velocity)
- Firmware can be updated through Velocity

Altronix Power Features

- Wallmount: one 2" diameter knockout; sixteen 3/4" or 1" diameter double knockouts
- Rackmount: drawer slide assembly for wiring and maintenance
- Network Monitoring enables remote servicing and reporting
- Configuration
 - Aux power distribution and relay-buffered lock control with FAI
 - Individual output selection for fail-safe, fail-secure and lock voltage
- Supervision
 - AC fail; low battery and battery presence; low power shutdown

Altronix Power Specifications

Name	Options
Input Power	<ul style="list-style-type: none"> • 115 VAC 60 Hz, 4.2A (AL1024ULXB2) • 120VAC 4.5A (eFlow104NB) • Thermal overload protection / Short circuit protection
Output Power	<ul style="list-style-type: none"> • 28VDC @ 10A • 12VDC @ 6A and/or 24VDC @ 10A (240W total power)
Power Distribution	<ul style="list-style-type: none"> • PDS8 • Eight auxiliary outputs: PDS8 fused at 3A/ea • Linq8ACM • Eight relay control outputs: ACM fused at 2.5A/ea • Fire alarm disconnect for any or all of the 8 outputs • Individually selectable outputs on dual voltage systems
Power Supervision	<ul style="list-style-type: none"> • Low battery and battery presence supervision (form C contacts) • AC fail supervision (form C contacts) • System Fault, AC Fault, Ground Fault, Reverse Battery
External Indications	<ul style="list-style-type: none"> • AC Power LED
Battery Charging (eFlow)	<ul style="list-style-type: none"> • 1.5A maximum current charge • 65Ah maximum battery capacity
BTU Rating	<ul style="list-style-type: none"> • eFlow104NB 145BTU/Hr • AL1024ULXB2 123BTU/Hr
Warranty	<ul style="list-style-type: none"> • Lifetime on power supply/chargers and sub-assemblies

Recommended Rack Specifications

Type	Details
42U Deep Rack Enclosure Server Cabinet	<ul style="list-style-type: none"> • Minimum Internal Depth of 40" • Minimum Internal Width of 19" • Four Vertical Posts • 3/8" Square Holes • Minimum Rolling Capacity of 1500 lbs

Ordering Information

Item Number	Description
Mx-2-RM24-12-B	Mx-2-S3OB controller in Altronix Trove2R rack mount enclosure with 115VAC power supply.
Mx-2-RM24-12-AT	Mx-2-S3OB controller in Altronix Trove2R rack mount enclosure with AEB8, REB8 and 115VAC power supply.
Mx-2-WM24-12-B	Mx-2-S3OB Altronix Trove2 wall mount enclosure with 115VAC power supply.
Mx-2-WM24-12-AT	Mx-2-S3OB Altronix Trove2 wall mount enclosure with AEB8, REB8 and 115VAC power supply.
Mx-4-RM24-12-B	Mx-4-S3OB controller in Altronix Trove2R rack mount enclosure with 115VAC power supply.
Mx-4-RM24-12-AT	Mx-4-S3OB controller in Altronix Trove2R rack mount enclosure with AEB8, REB8 and 115VAC power supply.
Mx-4-WM24-12-B	Mx-4-S3OB Altronix Trove2 wall mount enclosure with 115VAC power supply.
Mx-4-WM24-12-AT	Mx-4-S3OB Altronix Trove2 wall mount enclosure with AEB8, REB8 and 115VAC power supply.
Mx-8-RM24-12-B	Mx-8-S3OB controller in Altronix Trove2R rack mount enclosure with 115VAC power supply.
Mx-8-RM24-12-AT	Mx-8-S3OB controller in Altronix Trove2R rack mount enclosure with AEB8, REB8 and 115VAC power supply.
Mx-8-WM24-12-B	Mx-8-S3OB Altronix Trove2 wall mount enclosure with 115VAC power supply.
Mx-8-WM24-12-AT	Mx-8-S3OB Altronix Trove2 wall mount enclosure with AEB8, REB8 and 115VAC power supply.