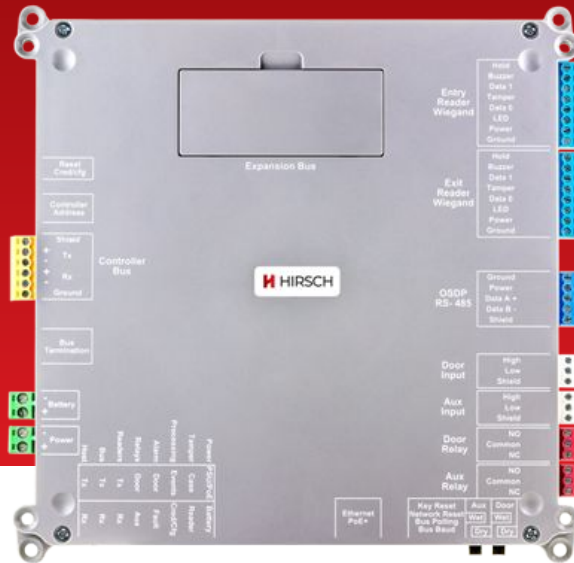




Hirsch Mx-1 Controller

High-Security Access Control



Hirsch's Power over Ethernet edge Hirsch Mx-1 Controller manages a single fully supervised door for controlled entry and exit or up to 8 wireless locks.

The modular design and scalable architecture enables an installation to start small and expand as needed, from a single controller system to a larger, multi-site enterprise environment.

The controller is designed for use with the Hirsch Velocity security management system, uTrust TS Readers and secure keypads, or wireless door locks.

With firmware, functionality, and communication protocols compatible with the Hirsch DIGI*TRAC and Mx Controllers, the Mx-1 seamlessly integrates with existing systems, retaining credentials, readers, and user databases, and adds edge capability to a system.

Flexible Configuration

- Supports OSDP and Wiegand readers
- Powered by PoE+ or external power supply

Intelligent Architecture

- Easy to configure access restrictions
- Simple door control and monitoring

Wireless Locks

- Multiple vendors
- Supports up to eight (8) per Mx-1-W

Outputs

- Wet or dry relays
- Tamper detection

Features

- Controls one (1) fully supervised door with entry and optional exit keypads/readers or eight (8) wireless door locks
- Scalable from single controller to networked multi-site installations
- Multi-microprocessor architecture with dedicated crypto- processor
- Integrated network communication with onboard 10/100/1000 Ethernet IP port
- Auxiliary/alarm relay output
- Integrated hardware encryption with enabled devices
- High-security supervised alarm inputs
- Configurable relay outputs (door or general purpose)
- Open Secure Device Protocol (OSDP)
 - ScramblePads, TS Readers, and third-party OSDP readers (i.e., Veridt Stealth Series)
 - Reader LED and buzzer control
 - Extended cable runs
 - Entry/exit reader setup
- Supports Wiegand readers
- Global I/O
- Firmware can be updated through Velocity
- Powered at the edge by PoE+ or external power supply
- Special circuitry to protect reader/relay terminals from excessive current draws
- Supports a wide variety of readers and credentials
- Built-in protection from door strikes and mag locks that generate large inrush current demand during power-up and large induced current demand during power-down

Intelligent Distributed Architecture

Access may be restricted based on Time of Day, Day of Week, and Door. Access may be granted when the user presents the correct code, card, or both. The user may be granted temporary access based on Use Count Limits, Temporary Day Limits, and Absentee Rule Limits, with Auto-Disable or Auto- Delete on Expiration of Temporary Users. Additional functions include Unlock/Relock, Alarm Mask/Unmask, and Lock Down/ Lock Down Release. The associated door may be monitored for Door Forced Open and Door Open Too Long, while providing Auto Relock Control.

High Security Alarm Monitoring

Hirsch uses very stable digitally processed analog inputs with line supervision for high-security alarm monitoring. A line supervision module is located at the door contact, alarm sensor, request to exit (RQE), or similar device to establish this supervision. Conditions reported include Alarm, Secure, RQE, Mask, Tamper Alarm, Tamper Secure, Short, Open, Noisy, and Input-Out-of-Spec.

Reliability by Design

Mx-1 Controllers are designed for high availability as a complete system for global markets. A standby battery for memory is standard, while a standby UPS or battery for operation is optional. The controller ships ready to be connected to a PoE+ power source, and has support for optional external power supplies. Power connectors are fused. Readers and relays are protected by built-in hardware circuits which will cut off power when they detect over- power consumption, protecting the board against unintended damage.

Features and Benefits

The Mx-1 has a built-in Secure Network Interface Board 3 (SNIB3) with enhanced memory storage at 500K credentials, security, TLS, 128-bit, or 256-bit encryption options, and network functionality and capabilities. The SNIB3 is a leading edge communication device that provides IPv6, Gigabit Ethernet, and FIPS 140-2 certified cryptography, including AES 256 bit encryption. These features are foundational for the critical U.S. federal government security standard known as FICAM and enabling OSDP readers and optional OSDP encrypted communications.

Specifications

Communications	
Serial Interface Ports	Controller to controller: <ul style="list-style-type: none"> • RS-485 multi-drop protocol (X*NET2, X*NET3) • Up to 4,000 ft (1,200 m) with 22 gauge, 2 pair, stranded, twisted, and shielded
OSDP Protocol	Controller to reader: <ul style="list-style-type: none"> • Buzzer, LED, and optional secure OSDP • Single port for entry and exit readers • Up to 4,000 ft (1,200 m) with 18 gauge, 2 pair, stranded, twisted, and shielded
Wiegand Protocol	Onboard Wiegand: <ul style="list-style-type: none"> • Industry standard Wiegand • Reader ports: 2 (1 entry port and 1 exit port) • Maximum wiring run: 500 ft (150 m) with 18 gauge, 2 pair, stranded, twisted, overall shield
Firmware	
Command and Control Module (CCMx)	<ul style="list-style-type: none"> • Flash upgradeable • Time zones: 150 • Door groups: 128 • Control zones: 256 • Holiday schedules: 4 (366 days x 2 years) • Daylight savings time adjustment
SNIB3	<ul style="list-style-type: none"> • Flash upgradeable with signed and encrypted firmware • FIPS AES 256 encryption • TLS 1.2 Encryption (Requires Velocity 3.7 SP2 or later) • 10/100/1000 Ethernet (TCP/IPv4 or v6)
Memory	
Buffers	Standard: 1,500 events and 1,500 alarms
Credentials	Up to 500,000
Memory Protection Battery	10 days for code, setups, clock, and buffers
Physical	
Security	Cover opening tamper switch
Enclosure	Flame retardant plastic enclosure with exposed connectors and diagnostic LEDs
Dimensions	1.25 x 8.0 x 8.0 in (3.18 x 20.32 x 20.32 cm)

Specifications (continued)

Physical	
Weight	1.5 lbs (0.69 kg)
Operating Temperature Range	32° to 140°F (0° to 60°C)
Relative Humidity	0 to 90%, non-condensing
Electrical	
OSDP Keypad/Reader Power (1 Terminal)	750mA at 12V (up to 2 readers)
Wiegand Keypad/Reader (2 Terminals)	750mA at 12V
Power Supply	PoE+ 802.3at Type 2 or UL-listed 2.0 A switching power supply at 110 - 240VAC and 50/60 Hz providing 24V - 28VDC power
Door Relay	<ul style="list-style-type: none"> Dry 2A at 30V Wet 750mA at 24V
Auxiliary Relay	<ul style="list-style-type: none"> Dry 1A at 30V Wet 750mA at 24V
Listings and Approvals	<ul style="list-style-type: none"> UL 294: Access Control Systems Units UL 1076: Proprietary Burglar Alarm Systems CE and UKCA

Controller Part Numbers

Part Number	Description
MX-1	Mx-1 Controller, 1 door relay, 1 auxiliary relay (both relays support optional wet power setting), 2 Alarm Inputs (requires Line Modules), plastic enclosure, requires PoE+ power supply, tamper switch, integrated SNIB3 and RREB
MX-1-W	Velocity security management application software license. For Mx-1 only, adds 8 wireless locks, counts against module license. First year SSA (Software Support Agreement) required, not included.
SSA-MX-1-W	Velocity Mx-1, 8 wireless locks Software Support Agreement - 1 Year.*

*One Month, 3 Year and 5 Year options available.