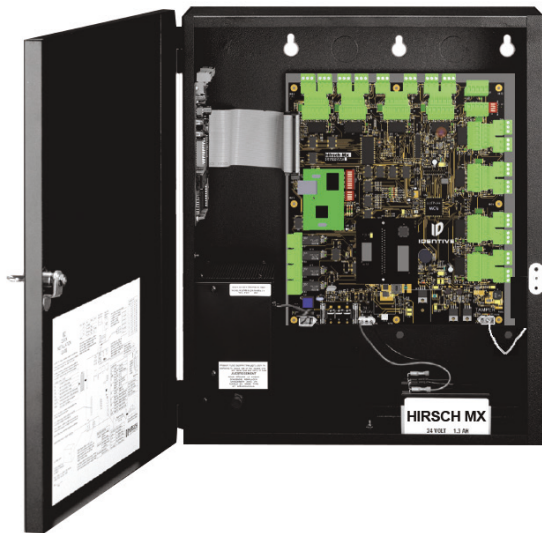




**IDENTIVE**

# HIRSCH Mx Controllers

High Secure Access Control



- Fully supervised 2, 4 and 8 door models
- Integrated network communication
- Designed for use with HIRSCH Velocity Security Management System Software
- Scalable from single controller to networked multi-site installations
- Connectivity to HIRSCH ScramblePad and MATCH2 reader interfaces standard
- Onboard MATCH for connection of standard Wiegand readers
- Multi-microprocessor architecture
- Firmware upgrade via HIRSCH Velocity

## Description

The HIRSCH Mx controller is available in 2, 4, and 8 door models, with each door being fully supervised.

The modular design and the scalable architecture of the HIRSCH Mx Controller enables an installation to start small and grow large, from a single controller system to a larger, multi-site enterprise.

The Mx controller is fully firmware, function and communication protocol compatible to the HIRSCH DIGI\*TRAC line of controllers. The HIRSCH Mx controller is designed to seamlessly integrate with existing HIRSCH systems, so that existing credentials, readers, and user databases can be retained. The Mx Controller is the core of the HIRSCH Physical Access Control System (PACS), and is designed for use with HIRSCH Velocity™ 3.5 Security Management System Software; HIRSCH ScramblePad®, HIRSCH ScrambleProx®, and HIRSCH ScrambleSmartProx® and secure keypads.

A range of models and expansion options in the HIRSCH Mx and HIRSCH DIGI\*TRAC product lines provide a variety of access control, high-security alarm monitoring, relay control outputs, and programmable logic configurations to fit most applications.

With the Mx Controller at its core, the HIRSCH system provides a high-integrity, enterprise-class access control and security management solution.

## Mx Modular Controller Features

- Controls 2, 4, or 8 fully supervised doors with entry and optional exit keypads/readers
  - Field upgradeable from 2 to 4, 2 to 8, or 4 to 8 doors
- Scalable from single controller to networked multi-site installations
- Multi-microprocessor architecture with dedicated Crypto-processor
- Integrated network communication with onboard Ethernet IP port
- Dedicated alarm relay outputs
- Integrated hardware encryption with enabled devices
- High security supervised alarm inputs
- Configurable relay outputs (door or general purpose in HIRSCH Velocity)
- Bay for up to 5 expansion boards
  - Memory (up to 132,000 users)
  - Alarms expansion (max. 4)
  - Relays expansion (max. 5)
- MATCH Protocol
  - ScramblePads and MATCH2 interfaces
  - for extended cable runs
  - for entry/exit reader setup
- Wiegand entry reader connectivity for each door
- Wiegand setup via HIRSCH Velocity
- Multi-drop global I/O using RS485
- Firmware can be updated through HIRSCH Velocity
- Supports a wide variety of readers and credentials



# HIRSCH Mx Controllers

## Access Control System

As an access control system, the HIRSCH Mx controller includes extensive onboard firmware for control sequences as basic as “who goes where when” to sophisticated functions like 2-person rule, occupancy counting, individual user tagging, door interlocking, and anti-passback. Full functionality is maintained even when the Velocity Security Management System is not available, for example during a network outage.

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.

While the standard Mx Controller has an extensive array of options, there are many custom features that are available through the Professional Services Group (PSG). These range from integration with time and attendance systems to PKI certificate authentication services.

Readers/keypads supported include HIRSCH Scramble-Pad, ScrambleProx, ScrambleSmartProx, and many other technologies including: Magnetic Stripe, Smart Card (such as DESFire, MIFARE, PIV, or PIV-I), Proximity, Bar Code, RF, IR, and Biometric. Technologies may be combined on the same controller or the same door in many different combinations.

## High Security Alarm Monitoring

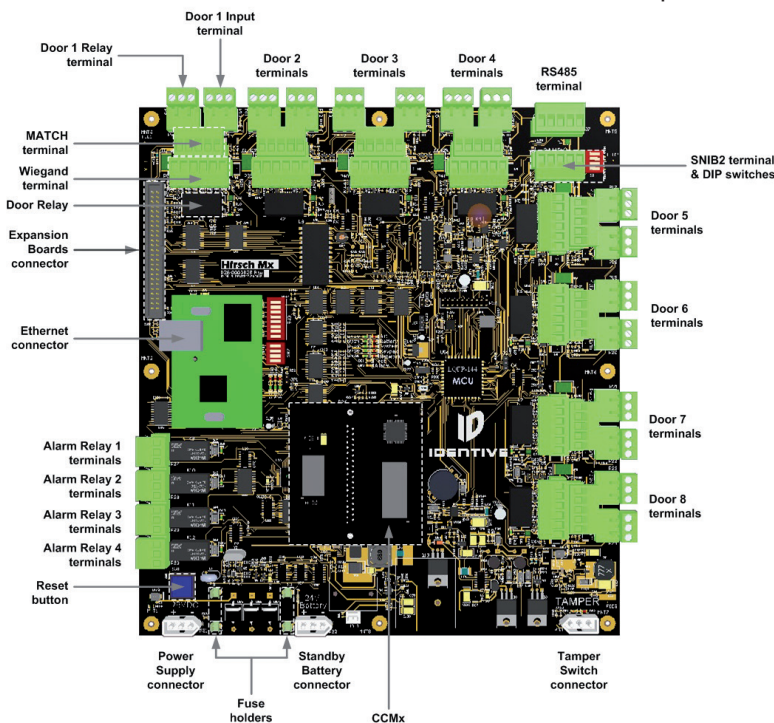
HIRSCH uses very stable digitally processed analog inputs with line supervision for high security alarm monitoring. A line supervision module is located at the door contact, alarm sensor, request to exit (RQE), or similar device to establish this supervision. Conditions reported include: Alarm, Secure,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

## Relay Control System

Relay outputs on HIRSCH Mx controllers can be used for: electric door locks and strikes, arming/disarming security systems, alarm annunciation, elevator floor control, HVAC control, lighting control, storage locker control, and many other equipment control applications. These relays may be activated by codes (via the ScramblePad family), cards (via reader), time zones, alarms, or logic sequences linked to other relays. Mx controllers are also ideal for after-hours tenant override systems. A history of who issued the override command is available for tenant billing or audit trails. The same reader/keypad used for access control can be used for tenant override and remote operator command functions.

## Reliability By Design

Mx controllers are designed for “high availability” as a complete system for global markets. Standby batteries for both memory and system operation are standard. The controller ships with an internal switching power supply. All door relays are socketed. All keypad/reader terminals and power circuits are fused (onboard resettable). Each unit is configured in a heavy duty, NEMA style enclosure, with lock and tamper alarm.





# HIRSCH Mx Controllers

## Specifications

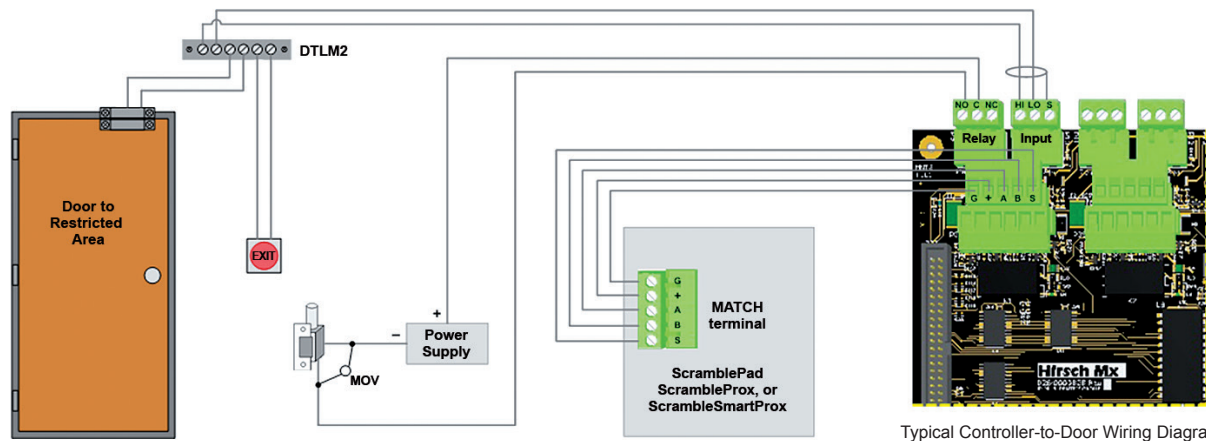
Parameter	Details
<b>Communications</b>	
Serial Interface Ports	<p><b>Controller to Controller:</b></p> <ul style="list-style-type: none"> <li>• RS-485 multi-drop protocol (X*NET2)</li> <li>• Optically isolated port</li> <li>• Up to 4,000 ft (1,220m) with 22 gauge, 2 pair, stranded, twisted and shielded</li> </ul> <p><b>Controller to Server:</b></p> <ul style="list-style-type: none"> <li>• 10/100 Ethernet (TCP/IP)</li> <li>• Encrypted Communication</li> </ul>
MATCH Protocol	<ul style="list-style-type: none"> <li>• 24V DC nominal</li> </ul>
Reader Support	<p><b>ScramblePad/MATCH2</b></p> <ul style="list-style-type: none"> <li>• Proprietary MATCH protocol</li> <li>• Keypad/reader ports (8) with 16 device addresses (8 entry, 8 exit)</li> <li>• Max. wiring run: 750 ft (230 m) with 22 gauge, or 1,800 ft (550 m) with 18 gauge, 2 pair, stranded, twisted, overall shield</li> </ul> <p><b>Onboard MATCH</b></p> <ul style="list-style-type: none"> <li>• Industry standard Wiegand</li> <li>• Reader Ports (8) using Mx device addresses 1-8</li> <li>• Max. wiring run: 500 ft (150) with 18 gauge, 2 pair, stranded, twisted, overall shield.</li> </ul>
Dial-Up to Remote Host (external SNIB required)	<ul style="list-style-type: none"> <li>• Phone numbers: 4, with roll over</li> <li>• User-selectable retry attempts</li> <li>• Call-back mode for security</li> <li>• Initiation by alarm, buffer % full, and/or time</li> </ul>
Industry Standard Wiegand devices	
<b>Firmware</b>	
Command & Control Module (CCMx)	<ul style="list-style-type: none"> <li>• Removable and upgradable</li> <li>• CCM upgradeable through Velocity</li> <li>• CCM updates all microprocessors (including onboard MATCH)</li> <li>• Time Zones: 150</li> <li>• Door Groups: 128</li> <li>• Control Zones: 256</li> <li>• Holiday Schedules: Four (366 Days x 2 Years each)</li> <li>• Daylight Savings Time Adjustment</li> </ul>
Dial-Up to Remote Host (external SNIB required)	<ul style="list-style-type: none"> <li>• Phone Numbers: 4, with roll over</li> <li>• User-selectable retry attempts</li> <li>• Call-back mode for security</li> <li>• Initiation by alarm, buffer % full, and/or time</li> </ul>
Public Private Key Processor and Secure Digital Key Vault	Global Platform compatible secure storage of key material
<b>Memory</b>	
Buffers	<ul style="list-style-type: none"> <li>• 1,500 events and 1,500 alarms standard</li> <li>• 20,000 events and 2,000 alarms with MEB/CB128 (reduces users by 20%) or MEB/BE</li> <li>• If buffer is full, oldest info is discarded first</li> </ul>
Users	<ul style="list-style-type: none"> <li>• 4,000 standard</li> <li>• 132,000 with MEB/CB128</li> </ul>
Memory Protection Battery	<ul style="list-style-type: none"> <li>• 30 days for code, setups, clock, and buffers</li> </ul>
<b>Physical</b>	
Security	<ul style="list-style-type: none"> <li>• Door Tamper Switch</li> <li>• Key Lock</li> </ul>
Enclosure	<ul style="list-style-type: none"> <li>• NEMA type with conduit knockouts and removable door</li> </ul>
Dimensions	<ul style="list-style-type: none"> <li>• 18" H x 15.25" W x 5.5" D (457mm H x 387mm W x 140mm D)</li> </ul>
Weight	<ul style="list-style-type: none"> <li>• 30 lbs (13.6 kg)</li> </ul>
Expansion Boards	<ul style="list-style-type: none"> <li>• 6" H x 4.25" W x 0.75" D (152mm H x 108mm W x 19mm D) and 1.0 lb (0.45kg)</li> </ul>
Operating Temperature Range	<ul style="list-style-type: none"> <li>• 32°F to 140°F (0°C to 60°C)</li> </ul>
Relative Humidity	<ul style="list-style-type: none"> <li>• 0 to 90%, noncondensing</li> </ul>
<b>Electrical</b>	
Keypad/Reader Power: 8 terminals	<ul style="list-style-type: none"> <li>• 1.0 Amp @24VDC each, fused (resettable)</li> <li>• 2.9 Amp @24VDC total</li> <li>• Powers ScramblePads and MATCH2</li> </ul>
Wiegand Keypad/Reader: 8 terminals	<ul style="list-style-type: none"> <li>• 500 mA @12VDC each, fused (resettable)</li> <li>• 2.0 Amp @12VDC total</li> <li>• Powers standard PACS readers</li> </ul>
Power Supply	<ul style="list-style-type: none"> <li>• Switching</li> <li>• 110-240 VAC, 50/60 Hz, fused</li> </ul>
Standby Batteries	<ul style="list-style-type: none"> <li>• 7 AH included</li> </ul>
Door Relays	<ul style="list-style-type: none"> <li>• 5 Amp, Form C</li> </ul>
Alarm Relays	<ul style="list-style-type: none"> <li>• 2 Amp, Form C</li> </ul>
<b>Listings and Approvals</b>	
	<ul style="list-style-type: none"> <li>• UL 294: Access Control Systems Units (pending)</li> <li>• UL 1076: Proprietary Burglar Alarm Systems (pending)</li> </ul>

Technical data are subject to change without notice.



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# HIRSCH Mx Controllers



## Ordering Information for Mx Controllers

Model	Description	Comments
Mx-2	Model Mx-2 controller, for up to 2 doors	Controls 2 Supervised Doors. 4,000 Users. Includes 2 door relays, 2 Alarm Inputs (requires Line Modules), enclosure, power supply, battery, tamper switch, key lock, and integrated SNIB2. Supports Expansion Boards. 110-240 VAC.
Mx-4	Model Mx-4 controller, for up to 4 doors	Controls 4 Supervised Doors. 4,000 Users. Includes 4 door relays, 4 Alarm Inputs (requires Line Modules), enclosure, power supply, battery, tamper switch, key lock, and integrated SNIB2. Supports Expansion Boards. 110-240 VAC.
Mx-8	Model Mx-8 controller, for up to 8 doors	Controls 8 Supervised Doors. 4,000 Users. Includes 8 door relays, 8 Alarm Inputs (requires Line Modules), enclosure, power supply, battery, tamper switch, key lock, and integrated SNIB2. Supports Expansion Boards. 110-240 VAC.

## Ordering Information for Expansion Boards

Model	Description	Comments
AEB8	Alarm Expansion Board with 8 Inputs	Adds 8 additional high security alarm inputs. Velocity supports up to 5 boards. Each input requires an appropriate Line Module. Features removable connectors.
REB8	Relay Expansion Board with 8 Relays	Adds additional 2 Amp Form C relays. Up to five (5) REB8s per controller. Status LEDs and removable connectors.
MEB/BE	Memory Expansion Board – Buffer Expansion	Expands standard buffer from 1,500 events and 1,500 alarms to 20,000 events and 2,000 alarms. Protected from data loss during power failures for up to 30 days by controller memory battery.
MEB/CB128	Memory Expansion Board – CODE Expansion of 128,000 with Buffer Option	Expands CODE Memory by 128,000 (from 4,000 to 132,000) credentials. A portion of the Code Memory may be allocated to alarm and event buffers, which will reduce the number of users. Protected from data loss during power failures for up to 30 days by controller memory battery.

HIRSCH Mx Controllers are made in USA of U.S. and imported parts.

## Contacts

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