The PW-M5 Series Modular Control System is an advanced access control hardware architecture capable of providing solutions for large enterprise applications. The PWM5 boards feature a plug and play format that makes Casi upgrades a “screwdriverless” change over. This solution combines the flexibility and capabilities of Pro-Watch® with the power of the PWM5IC with its 32-bit architecture, TCP/IP support, flash memory, large local cardholder database, and large reader and I/O module support.

The PW-M5 series consist of the following eight boards –

- **PWM5IC** – Intelligent Controller
- **PWM52SRP** – 2 Reader Board with Supervised Inputs
- **PWM52RP** – 2 Reader Board
- **PWM58RP** – 8 Reader Board
- **PWM516DO** – 16 Digital Output Board
- **PWM516DOR** – 16 Output Board with Relays
- **PWM520IN** – 20 Input Board
- **PWM5COM** – Communication Board

Pro-Watch handles system configuration, alarm/event monitoring and operation of the Intelligent Controller via TCP/IP. In the event of a communication break the Intelligent Controller is fully capable of operating off-line, making access control decisions independently of Pro-Watch. Connectivity to the host computer is accomplished via TCP/IP network connection.

The PWM5IC Intelligent Controller is a direct replacement for the Casi PX, PXN and PXNplus CPU controller.

It supports up to 64 Readers and up to 3 separate additional Micro5 enclosures via RS485 using the PWM5COM board allowing Reader, Output and Input boards to be combined as needed to minimize cost and optimize mounting options.

**KEY FEATURES**

- Up to 12 intervals per time zone where each interval is a start time, stop time and day map. The day map indicates the day of the week or holiday
- 255 possible holidays are defined by a starting date and duration
- Automatic calculation of leap year and Daylight Saving Time
- 19-digit (64-bit) user ID
- Support for FIPS long card numbers
- Up to eight card formats per reader
- Activation and deactivation dates by card
- Up to 12 access levels per card or individual time zones per readers
- Up to 15-digit Personal Identification Numbers (PIN)
- Operating modes include locked, unlocked, facility code, card only, card and PIN, card or PIN, and PIN only
- Strike modes include fail-safe and fail-secure
- Entire card bit-stream reported with invalid facility code or invalid card format
- Anti-passback support – free pass and exempt flags, last area accessed, last reader accessed and time/date of last access
- Configurable as standard, entry delay latching, entry delay non-latching and exit delay
- Configurable as standard (energize to activate) or fail-safe (de-energize to activate)
- Pulse control: single pulse (up to 24 hours) or repeating pulses (on/off in 0.1 second increments, up to 255 times)
PW-M5 Series Modular Access Control System

Intelligent Controllers

SPECIFICATIONS

Database:
- Cardholders: 600,000
- Transaction storage: 50,000
- Flash programming for firmware revision updates
- Access codes: virtually unlimited
- Holidays: virtually unlimited
- Time codes: 255
- Card reader formats: 8 per reader
- Credential facility codes: 8
- Elevator support: 128 floors
- Dedicated tamper alarm
- Dedicated power fail alarm
- Real time clock:
  - Geographic time zone support
  - Daylight Saving Time
  - Leap year support
  - 4 bit parallel accurate to 50 ppm

Communication Modules:
- Communication Ports
  - Host Port 0: 10/100- TX Ethernet
  - Optional alternative Port 10-Baset/100Base-TX Ethernet port using a Lantronix Micro125 interface daughter board, p/n MO11AA003-01R, or equivalent
  - Peripheral interface Port 2: 2-wire RS-485, asynchronous
  - Peripheral interface Port 3: 2-wire RS-485, asynchronous
  - Inputs: Two dedicated: tamper and power monitor

Readers and Credentials:
- Prox:
  - OmniProx
  - HID Prox
  - DigiReaders
  - Indala Readers
- Smart:
  - OmniClass
  - iClass
  - Mifare
  - DESFire
- Keypad
- Magstripe
- Wiegand
- Casi F/2F

Operational Functionality:
- Duress detection
- Operational modes:
  - Credential only
  - PIN only
  - Credential or PIN
  - Credential and PIN
  - Facility code only
- Maximum PIN size: 15 digit
- Door object support
- Threat level support: 100 levels
- Two person access rule
- Offline modes (selectable per reader):
  - Facility code access
  - Locked (no access)
  - Unlocked (free access)
- Anti-passback support:
  - While preventing access (hard)
  - While allowing access (soft)
- Transaction prioritization: 999 levels

COMMON SPECIFICATIONS

Board Dimensions:
- PWM5IC
  10.25" L x 4.56" W x 0.8" H (260.4 mm L x 115.8 mm W x 20.3 mm H)
- PWM52SRP
  10.25" L x 3.5" W x 0.69" H (260.35mm L x 88.9mm W x 17.5mm H)
- PWM52RP
  10.25" L x 3.5" W x 0.69" H (260.35mm L x 88.9mm W x 17.5mm H)
- PWM58RP
  10.25" L x 3.5" W x 0.69" H (260.35mm L x 88.9mm W x 17.5mm H)
- PWM516DO
  10.25" L x 3.5" W x 0.69" H (260.35mm L x 88.9mm W x 17.5mm H)
- PWM516DOR
  10.25" L x 3.5" W x 0.5" H (260.35mm L x 88.9mm W x 12.7mm H)
- PWM520IN
  10.25" L x 3.5" W x 0.69" H (260.35mm L x 88.9mm W x 17.5mm H)
- PWM5COM
  10.25" L x 3.5" W x 0.6" H (260.35mm L x 88.9mm W x 15.24mm H)

Environment:
- Temperature: 32 to 158° F (0 to 70° C) operational;
  -67 to 185° F (-55 to 85° C) storage
- Humidity: 0 to 95% RHNC

Wire requirements:
- Power - twisted pair, 18 AWG
- RS485 - 24 AWG, 4,000’ (1,200m) max, 2 twisted pairs with shield (120W, 23 pF, Belden 9842 or equiv.)
- Alarm input - twisted pair, 30 ohms max

Communications: Back plane supplied
- 9600, 19200, 38400, or 115200 bps, asynchronous
BENEFITS

• True 32-bit microprocessor provides fast transaction processing for the most demanding network applications
• Modular hardware architecture provides flexibility and expansion capabilities
• Flash memory allows new versions of firmware to be downloaded from the host computer to the controller(s) through the central network
• Large, local controller database allows access control decisions to be made by controller in real time without the need to communicate to the server
• Scalable architecture ensures optimal performance with a seamless upgrade path to accommodate future growth beyond its initial installation
• Seamless support for TCP/IP protocols to allow intelligent controllers to tap into a LAN or WAN connectivity
• Supports multiple reader and card formats for maximum flexibility and security options
• Supervised communication and Lithium battery backup ensures system reliability
• System offline modes customizable per reader include facility code access, locked (no access), and unlocked (full access)

PW-M5 SERIES CONFIGURATION

[Diagram showing the PW-M5 series configuration, including components such as Pro-Watch Corporate Edition, PWM5iC controllers, up to 64 readers per panel, LAN/WAN connectivity, and connectivity to Pro-Watch Workstation, Badging Workstation, and Pro-Watch Workstation.]
## PW-Series Modular Access Control System

### Intelligent Controllers

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<th>Description</th>
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<tbody>
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<td>PW-M5 Series</td>
<td></td>
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<tr>
<td>PWM5IC</td>
<td>PWM5IC Intelligent Controller – Capacity for up to 64 Readers</td>
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<tr>
<td>PWM52SRP</td>
<td>PWM52SRP 2 Reader Board w/Supervised Inputs</td>
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