



ACCESS CONTROL SOLUTIONS  
THROUGH INNOVATION

# DEALER CATALOG



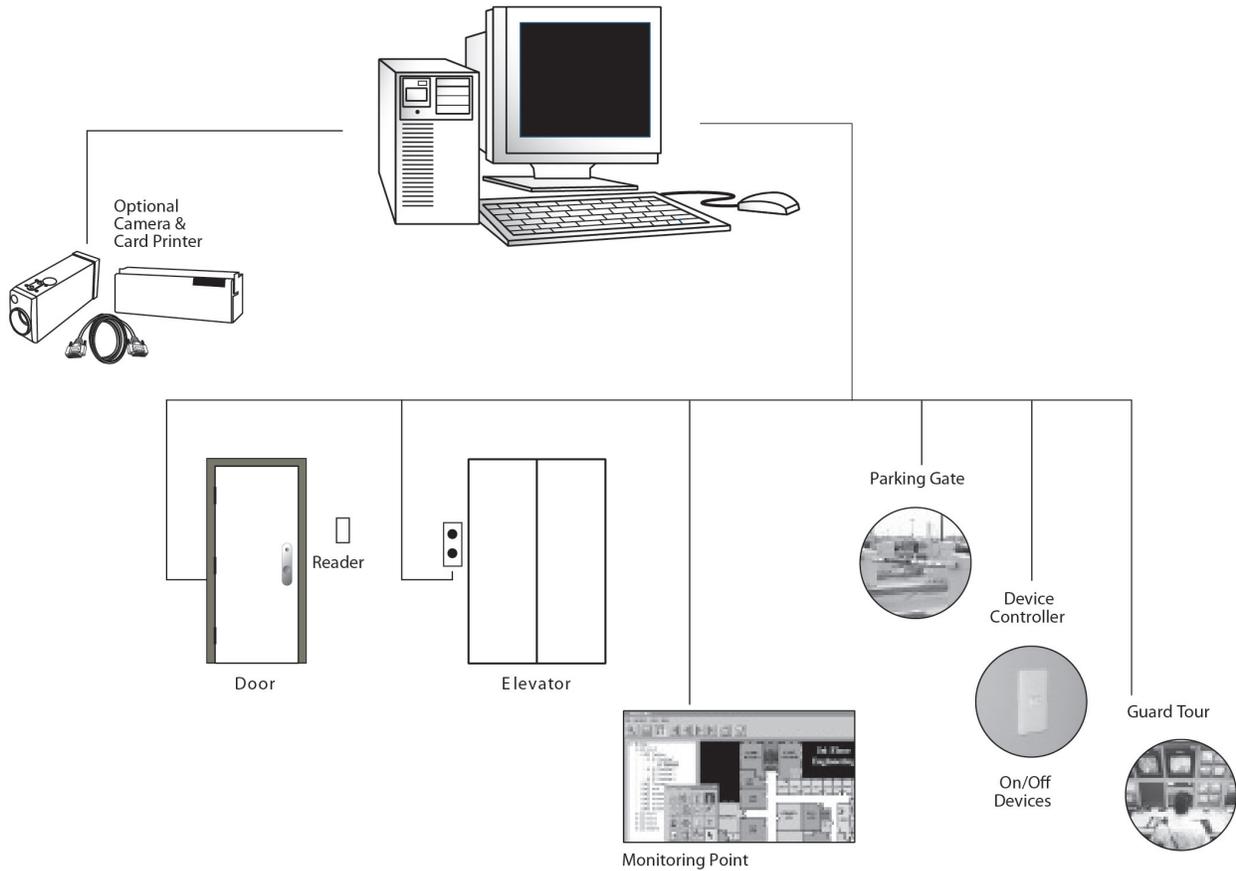
[www.millennium-groupinc.com](http://www.millennium-groupinc.com)

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# Millennium Software

## Millenium System Overview



## System Features

### On-line Network

- LAN/WAN network
- Each site can have a security management workstation
- Within a building, the system instantaneously provides complete, prioritized, on-line activity reports
- Links a multi-building complex via dedicated or dial-up telephone lines, wireless or fiber optics
- High-level access control system that reports all events to a specified workstation, issues ID cards and provides comprehensive management tools
- Anti-passback protection

### Economical

- Can use the wiring and readers of an existing access control system

- Can work simultaneously with up to 3 different reader protocols

### Easy to operate

- Includes a complete interactive help function, complemented by an operation manual
- Easy to use Windows® interface
- Customizable operator levels
- Operator-configurable reports

### Reliable

- Each device controller is intelligent and autonomous so that, in the event of a communication link interruption, the access point will still remain fully operational

### High Tech

- Supports PIN and card technologies by time zone

- Native 32 bit application
- Powerful database tools to import or export data to and from other database systems
- Visual alarm mapping, the pop-up graphical floor plan shows the exact location of an alarm
- Up to four graphical floor plans per monitoring point
- Fully configurable system parameters
- Scalable from 1 door to 100,000
- Monitors from 1 to 700,000 points
- Capable of controlling elevators with a maximum of 64,000 floors
- Capable of controlling up to 80,000 relay devices (on/off)

# Millenium Expert



## Application

Millenium expert is a feature rich access control system designed to fit a wide range of applications and sites. Its architecture is suited for organizations that wish to maintain a solid access control network using different communication modes. In addition, Millenium expert allows operators to manage their access control system from a standard PC workstation anywhere on their communication network.

## System Capacities

- **Number of Sites:** 1,000
- **Access Points per System:** 100,000
- **Readers per Access Point:** 1
- **Monitored Alarmed Points:** 700,000
- **Elevator Control:** 64,000 floors, 10,000 elevator cars
- **Workstations Supported:** 32
- **Relays Supported:** 200,000 (on/off) plus 80,000 optional
- **Cardholders:** Unlimited
- **Time Zones:** 200
- **Alarms per Access Point:** 7 including door contact

## Attributes

- **Reliable network with distributed intelligence:**  
Doors function normally even if communication is off-line
- **Modular expansion;** one door or one site at a time
- **Economical upgrade** from other access control systems
- **Adapts** to facilities of any size
- **Interfaces** to most types of readers and cards in the industry
- **Interconnects** with most communication networks (TCP/IP, twisted pair, leased line, fiber optic, dial up and wireless technologies)
- **ODBC compliant** database with easy data export and import
- **Increased security** between panels with a proprietary communication protocol

## System Features

### Scheduler:

- Book events
- Schedule door locks/unlocks, even days or weeks in advance
- Event Recurrence Manager

### Alarm Monitoring:

- Graphical Screens: 4 maps per alarm point

- Alarm Sound: Attach .wav files to alarms
- Acknowledgements, instructions and descriptions

### Facility (Guard) Tours:

- Up to 96 tours; global or individual

### Access Point Relays:

- 2 per access point

- 8 modes available including alarm response modes

### MusterTrac Reporting:

- Exceptions - Attendance
- Overtime - Absence/Presence

### Anti-passback:

- Global, Paired or Timed

### Multiple Reader Technologies Supported

Model #	Picture	Description
135-510951-FCD		Millenium Expert Software Package
		Network License per PC

Model #	Picture	Description
135-510951-UPG		Upgrade from version 1.1, 1.5 and 2.1
PK2934		Millenium Expert User Guide

# Millenium Enterprise



# MILLENNIUM ENTERPRISE

## Application

Millenium Enterprise is an advanced access control system designed for multiple site environments, typically over a Local Area Network (LAN) or a Wide Area Network (WAN). Its architecture is specially suited for organizations that wish to maintain operations in multiple locations utilizing a common SQL Server database. In addition, Millenium Enterprise allows individual tenants, through data partitioning, to manage their own building using their own workstations, while giving overall control of the system to the facility manager.

## System Capacities

- **Number of Sites:** 1,000
- **Access Points per System:** 100,000
- **Readers per Access Point:** 1
- **Monitored Alarmed Points:** 700,000
- **Elevator Control:** 64,000 floors, 10,000 elevator cars
- **Workstations Supported:** Depends on your product licensing
- **Relays Supported:** 200,000 (on/off) plus 80,000 optional
- **Cardholders:** Unlimited
- **Time Zones:** Global 200 (available to all tenant groups), 4 intervals each zone
- **Alarms per Access Point:** 7 supervised inputs with 4 states

## Attributes

- **Reliable network with distributed intelligence:** Doors function normally even if communication is off-line
- **Modular expansion;** one door or one site at a time
- **Economical upgrade** from other access control systems
- **Adapts** to facilities of any size
- **Interfaces** to most types of readers and cards in the industry
- **Interconnects** with most communication networks (TCP/IP, twisted pair, leased line, fiber optic, dial up and wireless technologies)
- **Instant alarm annunciation** supported by maps, sounds, instructions and reports
- **Powerful database tools** to export or import data to and from other systems
- **Increased security** between panels with a proprietary communication protocol

## System Features

### Monitoring of Alarm Points:

- Broadcasting of alarm acknowledgement to selected workstations
- Independently program monitoring options at each workstation
- Write instructions for selected alarms

- Link sounds and maps to alarms

### Guard Tours:

- Build up to 96 independent tours
- ### Anti-passback:
- Global, Paired, Timed & Time out reset (refusal of user's card for a selectable time period)

### Controllable Relay Modes:

- No action; 1st user auto activate; Auto activate
- Valid user; Rejected user; Any user; Dual custody
- Selected alarms; Mirror selected alarms; Last person out

### Multiple Reader Technologies Supported

Model #	Picture	Description
135-509636-FCD		Millenium Enterprise Software Package
135-507591-SGL		Network License per PC

Model #	Picture	Description
135-509636-UCD		Upgrade from version 2.1/ Expert to Enterprise
PK2932		Millenium Enterprise User Guide

Model #	Picture	Description
135-509636-EUD		Millenium Enterprise Version Upgrade
135-101806		CCTV Interface/ Call for Details

Model #	Picture	Description
135-101884		Third Party Data Interface
CALL		Database Conversion to Millenium Enterprise

# Millennium Xtra

## Application

Millennium Xtra is easy to use, fully featured access control software managed directly from an Internet Browser. With this convenience, control functions may be administered without the setup of additional, specialized workstations, saving time and money.



In the past, multiple workstations communicated with a software server with complicated connections that often presented challenges to the system administrators. Xtra simplifies this with one server and a local website accessible within the network. To add portability, any alarm event can be sent automatically via text or e-mail to any network supported device. This device can also be configured to have complete access from outside of the network. Highly secure communication protocols such as 128 bit SSL encryption ensure secure access to Millennium Xtra only for authorized personnel.

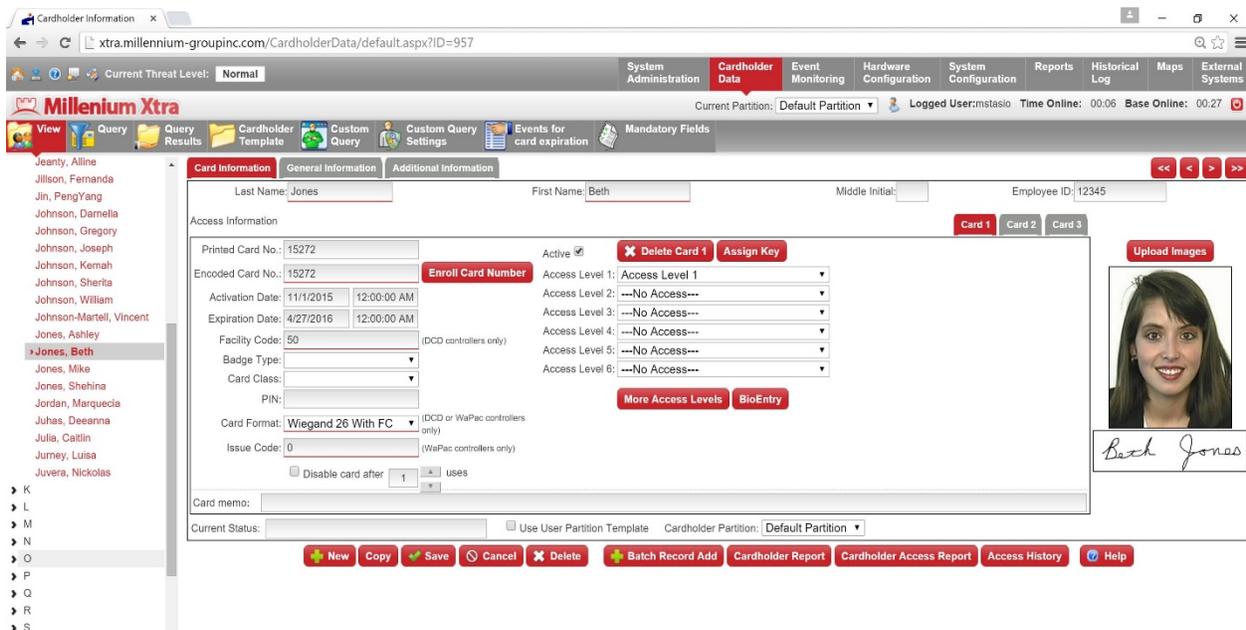
## System Features

- Reliable proven hardware with modularity for flexible solutions
- Data import/export capabilities
- Real-time event monitoring
- Multiple sessions with different operators
- E-mail/text alarm notification
- Reports via scheduled e-mail
- Partitioned database

- Enterprise-class software that supports thousands of doors
- Supports industry standard readers and cards
- Elevator Control
- Multiple access levels per card
- Zoned Anti-Passback
- User defined data fields
- Full system Lockdown

### OPTIONS

- exacqVision Video Interface
- DMP Alarm Panel interface
- Badging system
- Suprema biometric readers
- Salto door lock interface
- Intercom interface
- CBORD interface
- Door toggle lock/unlock



**OPERATING ENVIRONMENT:**

Processor:  
2.8 GHz or faster, 64 Bit Compatible

**Memory:**

Minimum of 8 GB

As the system is enlarged more memory should be added to ensure adequate performance

**Hard Disk:**

Minimum of 120 GB Allocated for Millennium

**Supported Operating Systems:**

Windows 7 SP1 Professional 64-bit  
Windows 8.1 Professional 64-bit  
Windows 10 Professional 64-bit  
Windows Server 2008 R2 SP1 Datacenter 64-bit  
Windows Server 2008 R2 SP1 Enterprise 64-bit  
Windows Server 2008 R2 SP1 Standard 64-bit  
Windows Server 2012 R2 Datacenter 64-bit  
Windows Server 2012 R2 Standard 64-bit

VMWare or MS Hyper-V Virtual hosts

**Millennium Xtra includes the Microsoft SQL database engine****Browsers Supported:**

Internet Explorer  
Safari  
Chrome  
Firefox

**Standard Features:**

Unlimited number of readers

Supports Millennium Door Control Devices and Site Control Units

Up to 100,000 cardholders

Multiple cards per user

User configurable card data

30 access levels per cardholder

Scheduled door lock/unlock

Full system lockdown capability

Alarm events via text/email

Anti-Passback capabilities

Easy Card Data import/export

Elevator Control

**Optional Features:**

Badging System Interface

Dedicated Alarm Screen for alarm only monitoring

Video integration with exacqVision

Wireless lock integrations with Salto and VingCard

Suprema Biometric reader integration

Mercury Hardware integration, EP 1501/1502, MR52, 16IN, 16OUT

DMP Alarm Panel Integration  
Requires IP communications board in DMP 100/500 series controls

IP Intercom interface

Custom Database integrations are available, including CBORD

Full API

# Millennium Hardware

# Door Control Device (DCD)



Part Number – 149-1000958  
 Included in kits 135-510016 and 135-510017 (2),  
 064-510299 (1) and 064-510430 (1)

## Application

- The DCD (Door Control Device) is designed to control a single access point. This device can accept inputs from most reader technology, analog alarm devices, and analog inputs from request to exit devices.
- In the event of a computer or communications failure it will still operate and log history transactions into the memory buffer.

## Features

- Supports Wiegand Card Reader protocols, configurable from 0-50 bits; Magstripe technologies ABA/ISO Track 2 with configurable data bits; Clock and Data, and Marlok optical key protocol.
- Communicates using various types of supervised wiring methods including; Daisy-Chaining, T-Tapping, Home Running, Star Configuration, and High Security Loop Back.
- Up to 100,000 DCD's can be connected over 1000 SCU's (Site Control Units).

## Specifications

### Power Requirements

- 9-14 VDC, from our standard Power Supply . Current consumption is 50mA nominal, and 150 mA maximum.

### Circuit Protection

- Input power is protected from reverse polarity, over voltage, and transient surges.

### DCD Device Communications

- A twisted pair, multi-drop, RS-485 polling scheme is used to communicate from the DCD to the other Millennium Devices.

### Dimensions

- 4.24" x 7.35" @ < 1lb, 10.4 x 18.7cm @ < 0.4Kg

### Programmable Relays

- Each DCD employs 2 programmable Single pole, Form C relays that are rated for 2 amps @ 24 VDC.

### Alarm Monitoring

- The DCD has the capability to monitor up to 7 independent alarm inputs. 4 are supervised with 1K EOL resistors, and the other 3 are normally closed circuits. The circuit must have a break time of at least 500 ms for the alarm to trigger.

### All Events History Buffer

- 200 all events history, stored in RAM memory with a minimum of 24 hours backup.

### Operating Temperature

- 14° to 104°F (-10° to 40°C) less than 90% non-condensing humidity.

### Event Buffer

- 100 software selectable priority events (alarms, com fail, etc.). These events are stored on-board if the SCU is off-line with the host computer. They can be programmed to send signals back to the computer if they are activated.

### Cover Tamper

- On-board integrated tamper switch.

### Approvals and Listing

- UL 294

Model #	Picture	Description
149-100958		Door Control Device (DCD)
060-101025		Standard Back Box

Model #	Picture	Description
041-100992		Back Box with Lock Cover

See page 19 for enclosure specifications

# Site Control Unit (SCU)



## Application

- The SCU (Site Control Unit) is a communications hub and memory buffer for the door controllers and other devices within the Millennium family. A single SCU can support up to 100 DCDS, 4 ECUs and 10 ECDs. On-board security measures ensure the integrity of the data as well as preventing attempted hacking or pirating of accounts.

## Features

- All bi-directional communications to and from the PC can use either RS-232 or RS-485 protocols
- Communications for the access control device node use a twisted pair, shielded cable on an RS-485 bus

- Up to 1000 fully supervised SCUs can be connected to a single PC running the Millennium for Windows® software
- The SCU is compatible with all of the popular communication modes found in today's installation environments: dial-up, fiber optic, leased line, radio frequency, and TCP/IP Networking protocol

## Specifications

### Power Requirements:

- 9-14 VDC, supplied by the Kaba PS1 power supply; Current consumption is 50mA nominal, and 90mA maximum

### Circuit Protection:

- Input power is protected from reverse polarity, over-voltage and transient surges

### PC and SCU Communications:

- RS-232 via DB-9F connector or a 4-wire RS-485 connection using terminal blocks. (RS-485 requires TIU)

### SCU Device Communications:

- A twisted pair, multi-drop, RS-485 polling scheme is used to communicate with other Millennium devices

### Dial-up Modem Support:

- Hayes ATcommand set, at 9600 baud.

- Call back feature when event buffer is 80% full, or following specific events

### Supervisory Relay:

- A 2 Amp, 24 VDC, single Form C relay that changes state when the SCU loses communication with the other board system

### All Events History Buffer:

- 2000 event, stored in RAM memory with a minimum of 24 hours backup

### Priority Event Buffer:

- 100 software selectable priority events (alarms, com fail, etc.)
- These events are stored on-board if the SCU is off-line with the host computer. Stored events are sent to the host computer once communications are re-established

### Cover Tamper Switch:

- On-board integrated tamper switch

### External Clock Sync:

- Terminal block connections are available for syncing the real time clock to an external AC source
- Used for international AC situations and infrequent call-ins

### Approval and Listings:

- UL 294

### Operating Temperature:

- 14° to 104°F (-10° to 40°C) less than 90% non-condensing humidity

### Dimensions:

- 4.24" x 7.35" @ < 1lb
- 10.8 x 18.7cm @ < 0.45Kg

Model #	Picture	Description
149-101117		Site Control Unit (SCU)
060-101025		Standard Back Box

Model #	Picture	Description
041-100992		Back Box with Lock Cover

See page 19 for enclosure specifications

# Enhanced Door Control Device (EDCD)



## Application

- The EDCC (Enhanced Door Control Device) offers a larger cardholder database and significantly faster processing and communications speed than the standard DCD. It controls a single access point accepts connections to most reader technologies.
- Stores data for up to 60,000 cards. Because the cardholder access levels are stored here, in the event of a computer or communications failure it will provide uninterrupted access control and log up to 2000 transactions into memory.

## Features

- Supports Wiegand Card Reader protocols, configurable from 0-256, Magstripe formats of ABA/ISO Track 2 with configurable data bits; Clock and Data, and Marlok.
- Communications between EDCCs is via RS-485 using various types of supervised wiring methods; Daisy-Chaining, T-Tapping, Home Running, and High Security Loop Back.
- EDCC's communicate to the Millennium Software through Site Control Units (SCU or ESCU). Each SCU/ESCU can support up to 99 EDCCs, depending on system configuration needs.

## Specifications

### Card Data Storage

- Each EDCC stores data for up to 60,000 cards

### Transaction History Buffer

- 2,000 transaction history provides retention of card activity if communications with the ESCU is lost

### Alarm Event History Buffer

- 100 software selectable alarm events (alarms, com fail, etc.) are stored if communications with the ESCU is lost.

### EDCC Device Communications

- A twisted pair, multi-drop, RS-485 polling scheme is used to communicate between the EDCC, the ESCU, and other Millennium Devices.

### Programmable Relays

- Each EDCC includes 2 programmable Single pole, Form C relays that are rated for 10 amps @ 24 VDC. These are typically used for door locking devices

### Alarm Monitoring

- The EDCC has the capability to monitor up to 7 independent alarm inputs. 4 are supervised, and the other 3 are normally closed circuits.

### Circuit Protection

- Input power is protected from reverse polarity, over voltage, and transient surges.

### Operating Temperature

- 14° to 104°F (-10° to 40°C) less than 90% non-condensing humidity.

### Power Requirements

- 9-14 VDC, from our standard Power Supply. Current consumption is 50mA nominal, and 150 mA maximum.

### Cover Tamper

- On-board integrated tamper switch.

### Approvals and Listing

- UL 294 pending

### Dimensions

- 4.24" x 7.35" @ < 1lb, 10.4 x 18.7cm @ < 0.4Kg

Model #	Picture	Description
149-101966		EDCC Door Control Device
060-101025		Standard Back Box

Model #	Picture	Description
041-100992		Back Box with Lock and cover

# Enhanced Site Control Unit (ESCU)



## Application

- The Enhanced Site Control Unit (ESCU) is a communications hub and memory buffer that sits between Millennium devices (DCD/EDCDs, ECUs, etc.), and the Millennium software running on a computer/server. Depending upon system operational needs and configuration, a single ESCU can support up to 99 DCD/EDCDs or 4 ECUs and 10 ECDs.

## Features

- All communications between the ESCU and the computer/server is IP which connects via an Ethernet socket on the ESCU. Communications between the ESCU and the Millennium devices is RS-485, on a twisted pair, shielded cable.
- When used with EDCDs, the communications speed on the RS-485 network can be as high as 38.4k.

- Depending upon the Millennium software chosen, up to 1000 fully supervised ESCUs can be connected to a single Computer/Server.

## Specifications

### Computer to ESCU Communications:

- IP via the on board Ethernet connector and Cat5/Cat6 cable.

### ESCU to Millennium Device Communications:

- Two wire, multi-drop, RS-485 via shielded, twisted pair

### Transaction History Buffer:

- 2000 event on board storage

### Alarm Event History Buffer:

- 100 software selectable priority event (alarms, com fail, etc.) storage
- These events are stored on-board if the ESCU is off-line with the host software. Stored events are sent to the host software once communications are re-established

### Circuit Protection:

- Input power is protected from reverse polarity, over-voltage and transient surges

### Power Requirements:

- 9-14 VDC, supplied by the PS1 power supply; Current consumption is 50mA nominal, and 90mA maximum

### Cover Tamper Switch:

- On-board integrated tamper switch

### Approval and Listings:

- UL 294 pending

### Operating Temperature:

- 14° to 104°F (-10° to 40°C) less than 90% non-condensing humidity

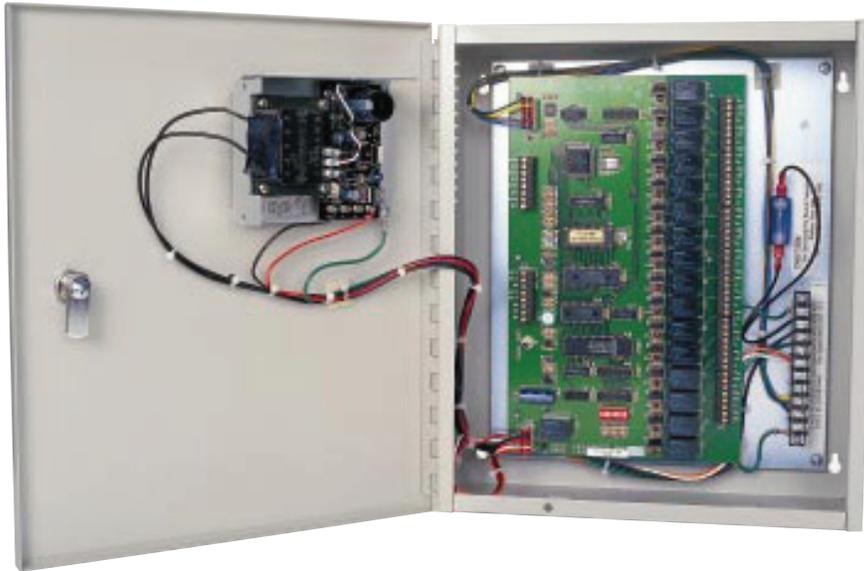
### Dimensions:

- 4.24" x 7.35" @ < 1lb
- 10.8 x 18.7cm @ < 0.45Kg

Model #	Picture	Description
149-101992		Site Control Unit (SCU)
060-101025		Standard Back Box

Model #	Picture	Description
041-100992		Back Box with Lock Cover

# Elevator Control Unit (ECU)



## Application

- The ECU (Elevator Control Unit) is the device that interfaces between the SCU and the ECDs. Each ECU has 16 built-in relays to control elevator functions. Up to 4 ECUs can be connected to a single SCU, giving the Millennium system the capability of controlling up to 64,000 floor relays.

## Features

- Controls as many as 10 elevator cars and 64 floors when four units are cascaded on a single SCU.
- 10,000 user capacity. When four units are connected together on a single SCU, 40,000 users are available.

## Specifications

### Input Power Requirements:

- 120 VAC input on a 2 Amp unswitched dedicated circuit (EC2-101190)
- For international power requirements there is a 240 VAC model available (EC2-101191)

### Programmable Relays:

- Each ECU employs 16 programmable single pole, Form C relays that are rated for 5 Amps at 24 VDC

### All Events History Buffer:

- 2000 events, stored in RAM memory with a minimum of 24 hours backup

### Alarm Monitoring:

- Monitors up to 4 independent

Normally Closed (nonsupervised) alarm inputs. The circuit must have a break time of at least 500ms for the alarm to trigger

### Priority Event Buffer:

- 100 software selectable priority events (alarms, com fail, etc)
- These events are stored on-board if the ECU is off-line with the host computer. Stored events are sent to the host computer once communications are re-established

### Cover Tamper Switch:

- On-board integrated tamper switch

### Fuse Protection:

- A 2 Amp slow blow fuse protects the AC input

### Keyswitch Override:

- Used by Fire Department personnel to override the access control system during an emergency

### Operating Temperature:

- 14° to 104°F (-10° to 40°C) less than 90% non-condensing humidity

### Dimensions:

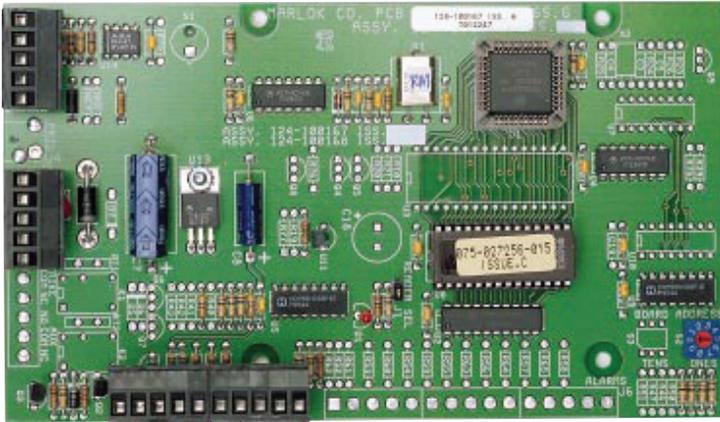
- 14.25" X 12.25" X 4.25" @ 20lbs
- 36.2 X 31.1 X 10.8 cm @ 9.1kg

### Certification / Listing:

- UL 294

Model #	Picture	Description
EC2-101190		120V Elevator Control Unit
EC2-101191		240V Elevator Control Unit

## Elevator Control Device (ECD)



### Application

- The ECD (Elevator Control Device) allows a key/card reader to communicate with the Elevator Control Unit (ECU) in order to control elevator access.

### Features

- Supports Wiegand card reader protocols, configurable from 0-50 bits; magnetic stripe technologies ABA/ ISO Track 2 with configurable data bits; Marlok™ optical key protocol
- The ECD communicates using a supervised, home-run wiring configuration to the ECU
- Up to 10 ECDs can be connected to a single SCU unit, with maximum architecture of 10,000 ECDs per system

### Specifications

#### Power Requirements:

- 9-14 VDC, supplied by a 9VDC class II plug-in transformer; Current consumption is 50mA nominal, and 100m maximum

#### Circuit Protection:

- Input power is protected from reverse polarity, over-voltage and transient surges

#### ECD Device Communications:

- A twisted pair, home run, RS-485 polling scheme is used to communicate from the ECD to the ECU

#### Cover Tamper Switch:

- On-board integrated tamper switch

#### Operating Temperature:

- 14° to 104°F (-10° to 40°C) less than 90% non-condensing humidity

#### Dimensions:

- 4.25" X 7.35" @ < 1lb
- 10.8 x 18.7cm @ < 0.45Kg

#### Certification / Listing:

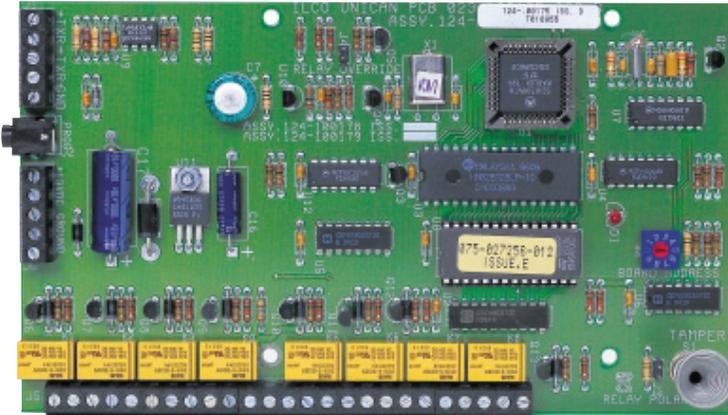
- UL 294

Model #	Picture	Description
149-101179		Elevator Control Device (ECD)
060-101025		Standard Back Box

Model #	Picture	Description
041-100992		Back Box with Lock Cover

See page 18 for enclosure specifications

# Relay Control Device (RCD)



## Application

- The RCD (Relay Control Device) expands the control capabilities of Millennium. The RCD is an add-on board that can control up to 8 additional programmable relays, for any product that requires voltage switching. It operates and logs history transactions into the memory buffer even if communications with the SCU have been interrupted.

## Features

- Each RCD has 8 individually isolated single pole, Form C relay outputs, which can be programmed for activation by a variety of triggering sources

- The RCD communicates using various types of supervised wiring methods, including Daisy Chaining, T-Tapping, Home Running, Star Configuration, and High Security Loop Back
- Up to 10 RCDs can be connected to a single SCU, with a maximum architecture of 80,000 relays per system

## Specifications

### Power Requirements:

- 9-14 VDC, supplied by the Kaba PS1 power supply; Current consumption is 50mA nominal, and 200mA maximum

### Circuit Protection:

- Input power is protected from reverse polarity, over-voltage and transient surges

### RCD Device Communications:

- A Twisted Pair, RS-485 polling scheme is used to communicate with the other Millennium Devices

### Programmable Relays:

- Each RCD employs 8 programmable

single pole, Form C relays that are rated for 2 Amps at 24 VDC

### All Events History Buffer:

- 2000 event, stored in RAM memory with a minimum of 24 hours backup

### Priority Event Buffer:

- 100 software selectable priority events (alarms, com fail, etc.)
- These events are stored on-board if the RCD is off-line with the host computer. Stored events are sent to the host computer once communications are re-established

### Cover Tamper Switch:

- On-board integrated tamper switch

### Operating Temperature:

- 14° to 104°F (-10° to 40°C) less than 90% non-condensing humidity

### Dimensions:

- 4.24" x 7.35" @ < 1lb
- 10.8 x 18.7cm @ < 0.45kg

### Certification / Listing:

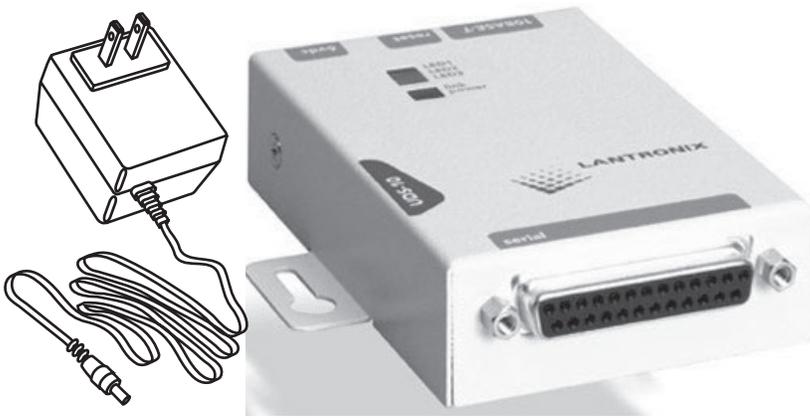
- UL 294

Model #	Picture	Description
149-100993		Relay Control Device (RCD)
060-101025		Standard Back Box

Model #	Picture	Description
041-100992		Back Box with Lock Cover

See page 18 for enclosure specifications

# Millenium Site Ethernet Interface (SEI)



## Application

- The SEI (Site Ethernet Interface) is designed to provide communications between the Millenium PC and the Site Control Unit(s) by means of Ethernet Networks utilizing a TCP/IP protocol.

## Specifications

### Power Requirements

- 12-15 VDC, supplied by either a central power supply or an auxiliary power supply, 700 mA maximum.

### IP Address Setting

- Software through RS-232 port, or through TelNet

### Data Backup

- Non volatile memory

### Network Interface

- 10 base T
- Static IP

### SCU Interface

- RS-232-C

### Communications Protocol (Network)

- TCP/IP

### Communications Protocol (SCU interface)

- Proprietary

### Operating Environment

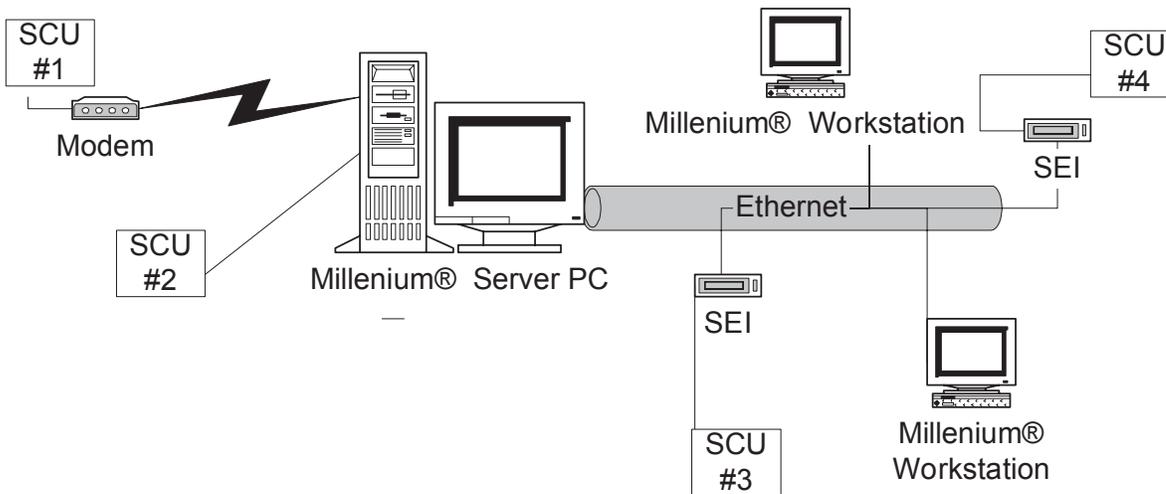
- 32° to 104°F (0° to 40°C) less than 90% non-condensing humidity

### Dimensions

- 7" X 6" X 11/4" @ 21lbs
- 17.8 X 15.2 X 3.2cm @ .79kg

### Minimum Requirements

- Millenium Windows® version 1.5 and up



Installation diagram showing the Millenium Server/ Workstation configuration and mixed communication modes.

Model #	Picture	Description
051-507972		Site Ethernet Interface (SEI) 120V
051-509428		Site Ethernet Interface (SEI) 220V

## Trunk Interface Unit (TIU)



### Application

The TIU (Trunk Interface Unit) is an RS-232 to RS-485 data protocol converter. It is used when the Site Control Unit (SCU) is located more than 50 ft from the computer or when multiple SCUs are daisy-chained in the same building.

### System Features

- Converts RS-232 protocol to RS-485 protocol for longer communication cabling distances
- Front panel diagnostic lights for instant verification of communication status between the computer and the SCU

### Specifications

#### Power Requirements

- 9-14 VDC, supplied by 9 VDC class II plug in transformer; Current consumption is 50mA nominal, 100mA maximum

#### Connection to the PC

- 15" cable with a DB-9F connector

#### Connection to the SCU

- RS-485, 5 conductor, shielded cable

#### Communications Distance

- Up to 5000 ft from the computer to the last SCU on the trunk

#### Operating Temperature

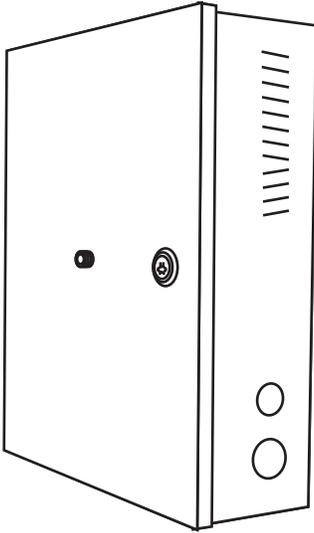
- 14° to 104°F (-10° to 40°C) less than 90% non-condensing humidity

#### Dimensions

- 3.60" x 5.20" x 1.30" at 2lbs.
- 9.1 x 13.2 x 3.3 cm at 0.90Kg

Model #	Picture	Description
135-101186-001		120V TIU Hardware package, without Marlok key reader. Includes: TIU (120V), wall transformer & manuals. For magnetic stripe card, biometrics and touchkey access.
135-101186-002		240V TIU Hardware package, without Marlok key reader. Includes: TIU (240V), wall transformer & manuals. For magnetic stripe card, biometrics and touchkey access.
135-100957-001		120V TIU Hardware package, with Marlok Wedge key reader. Includes: TIU (120V), wall transformer & manuals. For Marlok key access.
135-100957-002		240V TIU Hardware package, with Marlok Wedge key reader. Includes: TIU (240V), wall transformer & manuals. For Marlok key access.
051-507968		TIU Pack 120V Replacement TIU and wall transformer
051-507967		TIU Pack 240V Replacement TIU and wall transformer
003-101394		120V to 9VDC wall transformer 500 mA for TIU
003-101395		240V to 9VDC wall transformer 500 mA for TIU

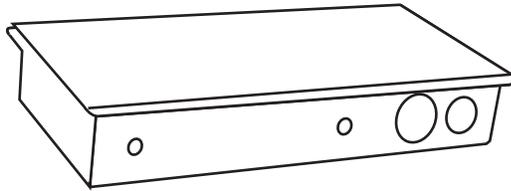
## Control Unit Enclosures



#062-510235

### **Control Panel Enclosure**

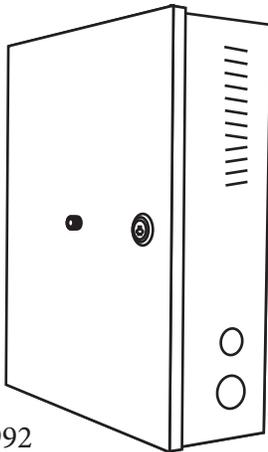
- The Control Panel is built of heavy 14-gauge steel, and includes a back plate ready to receive combinations of 3 Millennium circuit boards. The easy to remove back plate allows for quick assembly, wiring and testing at the dealer's facilities prior to installation. The control panel can then be wall mounted without removing the back plate.
- The back plate consists of galvanized steel including 12 stainless steel stand-offs positioned to seat up to three Millennium control boards. Any combination of three DCDs, SCUs, or RCDs can be quickly snapped on.
- The beige painted control box includes a cam lock, 2 keys, a full length piano hinge, ventilation holes and 6 knock-outs.
- 14.2" x 12.2" X 4.1" - 36.2 x 31.1 x 10.5 cm



#060-101025

### **Back Box Package**

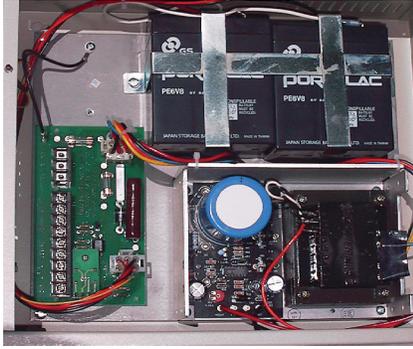
- Screw Mounted Cover
- Mounts the DCU
- 11 1/2" X 5 1/4" X 1 3/4" (292 mm X 133 mm X 44 mm)
- Includes metal Stand-off



041-100992

### **Surface Box**

- Camlock Mounted Cover
- Mounts the FCU or DCU
- 10 3/4" X 10 3/4" X 2 3/4" (273 mm X 273 mm X 70 mm)
- Includes metal Stand-off



# Power Supplies

## Application

- The PS1 power supply is a robust filtered DC power source for the Millennium controller boards. Its secondary board generates the necessary biasing voltages for the RS-485 communications, which link the controller boards to the Site Control Unit.
- Includes batteries, enclosure, and key lock

## Specifications

### Input Power Requirements

- Requires 120 VAC or 220 VAC input on a 5 Amp unswitched dedicated circuit

### Output Power

- Delivers a regulated and filtered 13.8 VDC output at 5 Amps

### Battery Backup

- Uses two 6 Volt, 8 Amp lead acid type batteries

### Fuse Protection

- The AC input is protected by a 2 Amp low blow fuse

- A 5 Amp slow blow fuse is used to protect the batteries

### Protection

- The DC output is current limited against possible short circuits
- AC failure monitoring
- Form A output for monitoring the status of the AC input

### Cover Tamper Switch

- Form A output to monitor the status of the enclosure door

### Approvals and Listings

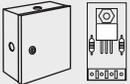
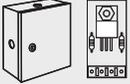
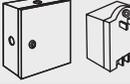
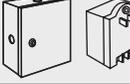
- UL 294, CSA 1950

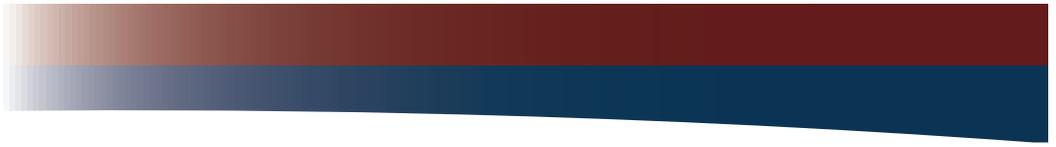
### Operating Temperature

- 14° to 104°F (-10° to 40°C) less than 90% non-condensing humidity

### Dimensions (PS1-100212-001) (PS1-1002213-001)

- 14.25" x 12.25" X 4.125" @ 27lbs
- 36.2 cm x 31.1 cm x 10.5 cm @ 12.2 kg

Model #	Picture	Description
PS1-100212-001		Power Supply and 8AH Batteries, 120V/60Hz 5A/12V, line conditioner and batteries included. UL Listed (294), CSA Listed (1950)
PS1-100213-001		Power Supply and 8AH Batteries, 240V/50Hz 5A/12V, line conditioner and batteries included. CSA Listed (1950)
PS2-510068		Power Supply and Charger 120V/60Hz 12V, 2.5 Amp Key Lockable Cabinet (Without line conditioner) Includes wall transformer
EPS-1		Power Supply and 4AH Battery, 120V/60Hz 1A/12V. (Without line conditioner)
WPT-1		Wire-In Transformer 120 Volts - 1A/12V Option to EPS-1. May be required by some cities
124-033067		Line Conditioner PCB for PS1
132-024003		Battery, 6V 8AH gelled lead acid for PS1 (2 required per power supply)
132-100780		Battery, 12V 4AH for EPS-1 (One required per power supply).



# Millennium Kits

## Millenium Badging Kit



### Application

The Millennium Badge Module allows you to create and supply your own photo ID badges. It consists of several options to fit your needs: a software-controlled digital camera, a high-end imaging capture card, and powerful Windows®-based software. Badges can include a bar code, digital signature or magnetic stripe encoding compatible with our on-line and stand alone electronic access control systems.



## MILLENNIUM BADGING

### System Features

- Supports printing to proximity, Wiegand card formats and encoding of magnetic stripes
- Millennium 2.1 / Expert or Enterprise software application
- Windows 98SE and above
- Easy to use graphical user interface
- User-friendly card layout
- Drag and drop placement of graphic elements
- Multi workstation support; security guards at any station can match the user photo from the database with the person that requested access
- Supports signature pads and magnetic stripe encoding Password Protection
- Assigns each operator a security level to protect confidential end-user information
- Includes static and variable text
- Automatically maintains history of badge issue date, along with reasons for issue and operator
- Zoom, or Auto-center portrait with keyboard or mouse
- Color, brightness, contrast and white balance remotely adjusted

### Attributes

#### Automatic Portrait Background:

- Change color or texture behind the portrait without retaking it

#### Adobe and TrueType Font Support:

- Use any Windows® font, including Adobe Type 1
- Adobe fonts require Adobe Type Manager

#### JPEG Compression:

- Portrait storage size is approximately 10KB per image
- Imports and exports TIFF, PCX, BMP and other image file formats

#### Ghost Image / Electronic Overlay:

- Turn any graphic image into an electronic overlay to cover part of the portrait and data

- Print a duplicate, semi-transparent copy of the portrait on the badge for added security

#### Connectivity to Standard Databases

- ODBC compliant import / export utility

#### Reporting:

- Sort and select on any database field

#### Network Support

- Multi workstation support; security guards at any station can match the user photo from the database with the person that requested access
- Supports signature pads and magnetic stripe encoding

#### Password Protection

- Assigns each operator a security level to protect confidential end-user information

#### Badge Creation History

- Automatically maintains history of badge issue date, along with reasons for issue and operator

#### Remote Camera Control

- Zoom, or Auto-center portrait with keyboard or mouse
- Color, brightness, contrast and white balance remotely adjusted

## Millenium Badging Kit (continued)

### Attributes

#### Multiple Video Inputs

- Supported video inputs and formats include composite NTSC and PAL, S-VHS & RGB for worldwide applications
- Built-in TWAIN interface (for portable digital cameras and scanners)

#### Printer

- Multiple printer support
- Use any Windows-compatible ID card printer

#### Printing

- Unattended batch printing or badges by name, ID number, type or report
- Print reports which include photo ID on any Windows compatible printer
- Double sized badge printing (with compatible printer)
- Print Windows bar code fonts
- Produce copy-proof overlays for placement over bar codes

#### Reporting

- Sort and select on any database field

#### Minimum PC requirement

- Pentium® PC with 2 serial ports
- SVGA 15 inch monitor
- Mouse & keyboard
- 800 X 600 VGA screen resolution

#### Components

- Millenium Badge Module application
- Security key

#### Optional components

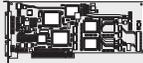
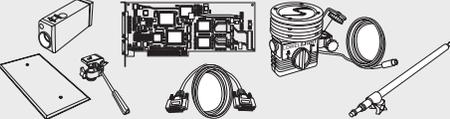
- Signature pad
- Flash Point high resolution SVGA capture card
- CCD high resolution camera, with remote control and zoom
- Portrait lighting kit with desktop base
- System cables
- Factory-preset PC



- Modular packages available for your specific needs

#### Supplies

- Most types of PVC cards

Model #	Picture	Description
135-509233		Millenium Badge software only add-on module On CD-ROM. Requires Millenium version 2.1 / Expert, Millenium Enterprise. Includes: Quick Start Guide and security key.
1600-30-1260		<b>Hardware Kit #1</b> Includes: Pentium processor, 15" color monitor, keyboard and mouse. PC specification subject to change. Ask you dealer for information. Image Capture card - PCI, portrait light kit, light and camera stand, and digital camera.
1600-30-1270		<b>Hardware Kit #2</b> Includes: Image Capture card - PCI with cable (to VHS camera). Used in combination with Millenium badge software and portable digital camera or video camera. This kit can be used worldwide where the PAL, NTSC or SCCAM video standards apply.
1600-30-1280		<b>Hardware Kit #3</b> Includes: Light and camera stand, Image Capture card - PCI, computer. This kit can be used worldwide regardless of the TV standard and voltage.
1600-30-1280		Badging Camera with Light Kit and Stand

## Millenium Badging Kit (continued)

Model #	Picture	Description
M9005-724		Magocard Rio single side color card printer
M9005-725		Magocard RioM single side with mag encoding
M9005-726		Magocard RioMS single side with mag + chip encoding
M9005-727		Magocard RioS single side with chip only
M9005-751		Magocard Rio LC1/D 5 panel color dye film YMCKO-350 images
N9005-761Med		Magocard Rio Cleaning Kit (medium 10 cards/ 2 pens/ 3 cleaning rollers)
M9005-772		Magic Rio/Tango 5 tacky rollers - cleaning system
M9005-946		Magocard Rio Clean Cards (bulk - 10 per package)
M9006-381		Alto M single side entry level hand feed printer with Magnetic encoder
PF3		Alto 500 shot black resin cassette dye film
PCF6		Alto 100 PVC cards in dispensers plus 100 shot PF2 cassette YMCKO
PCX-PF2		Alto 2 qty. reader-to-fill 50-card capacity dispensers for loading technology cards plus 100 shot PF2 cassette YMCKO
PCX		Alto empty card dispenser
PC1		Alto 50 PVC blank cards in dispenser
CK1		Alto cleaning kit (5-T cards, 1 pen)
120-509157		Signature Pad, Pressure Sensitive Touch Pad 1024 x 1024, 418 x 789 DPI

# Synergistics Software

# Synergistics Citadel



## Application

Citadel is a modern, affordable multi-site access control system designed to control a single building or a virtually unlimited number of buildings using either direct connection over wire or fiber, or remote connection over dial up telephone lines. Data entry is supported at the host computer which may be shared with other programs while Citadel is running in background. Access control and alarm monitoring are performed at each controller from distributed databases where all transactions are logged temporarily for scheduled host uploading and input point alarms are reported in real time to the host computer.

## System Features

- True distributed processing system
- 4,000 Cardholders per controller
- Single or block entry of cards
- Easy database backup and restore from within the software program
- Card issue levels for mag stripe cards
- System database stored in Microsoft Access
- Supports report generation
- User defined card format
- 32 card readers or keypads per site
- Supports all common card technologies
- Supports biometrics and keypads
- Supports multiple reader technologies per system
- Supports 208 input points per site
- Supports 32 programmable privilege groups per site
- Supports 64 programmable time schedules per site
- 32 Programmable holidays
- Supports virtually unlimited dial-up sites)
- Supports 2 direct wired sites from serial port configuration.
- Timed Door Control
- Antipassback
- Supports optional video image personnel identification badge design, printing and management

## Attributes

### Alarm Monitoring And I/O Specifications:

- Supports 5 input points per controller, (expandable to 13)
- Supports 5 relay output points per controller, (expandable to 13)
- Supports input to output point mapping
- Timed input point masking
- Time schedule uploading of site transaction log
- Real time and automatic uploading of alarms to host computer
- Input point status annunciation in active alarm Window
- Time delayed door ajar monitoring (door open too long)
- Monitors forced door and door ajar with a single input point
- Supports direct wire communication with local site.
- Supports direct modem communications with local site
- Supports telephone dial up communications with remote sites
- Host computer to site communications by any or all of the above methods of communications
- RS485 2 wire multi-drop communications between site controllers

### System Logging:

- Scheduled Transaction Logging
- Real Time Alarm Logging

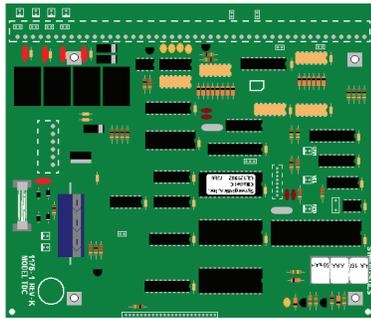
### Communications:

- RS232 Serial port communications between host computer and sites.

Model #	Picture	Description
CitadelSW 31-0001		Citadel System Software Package
31-0002		Citadel Firmware used for upgrades from Building Watch

# Synergistics Hardware

# Citadel DRC (Dual Reader Controller)



## Application

The Citadel DRC (Dual Reader Controller) is designed to control 2 access points. The DRC's 2 card reader input ports can accept input from most reader technologies, analog alarm devices, and analog request to exit devices. The DRC is equipped to control 4 output relays (2 door relays + 2 auxiliary relays). In the event of a computer or communication failure, it will continue to operate and log history transactions into the memory buffer. Expanding beyond 2 doors is simple and inexpensive with the Citadel system; up to 16 DRC panels can be linked together using a secondary RS-485 network.

## System Features

- Supports Wiegand protocols, configurable from 0-50 bits, and magnetic stripe technologies ABA/ISO Track 2 with configurable data bits.
- Each DRC can be configured to communicate directly to the host PC via a direct serial link (RS-232), dial-up modem, or through an IP network.
- 2 Readers
- 2 Door Relays
- 2 Auxiliary Relays
- 5 Input points (expands by 8 with optional IOE)
- Up to 16 DRC's can be linked together through a secondary twisted-pair RS-485 network eliminating the need for a Site Control Unit. In such a configuration one of the DRC's at the site is connected to the host PC and acts as the master DRC, while up to 15 additional slave DRC's are linked to the PC through that DRC via the secondary RS-485 network.
- 4,000 – 8,800 cards per controller
- Standard and user-defined card formats
- 1 Alarm output point (expands by 8 with optional IOE)
- Timed Door/Aux Relay Control
- Input and Output point mapping
- 4-digit PIN
- 32 privilege groups per site
- 64 time schedules + 32 holiday schedules per site
- Uses biometrics and keypads
- Transaction logging
- Real time alarm monitoring
- Anti-pass back
- Automatic transaction uploading

## Specifications

### Power Requirements:

- 12VAC 40VA

### PC to DRC Communications:

- IP network (Ethernet)
- Serial RS-232
- Dial up modem

### DRC to DRC Communications

- RS-485 Network

### Circuit protection

- Card Reader and other input ports are protected from over voltage and transient surges

### Programmable Relays

- Each DRC employs 2 programmable single-pole, dual throw relays that are rated for 10Amps at 250VAC

### All Events History Buffer

- 2000 transaction event stored in battery-backed RAM memory

### Alarm monitoring

- The Citadel DRC can monitor independent alarm inputs including door forced and other user definable input points in real time. When dial up comm. is used, DRC will initiate a call to the host in the event of an

alarm.

### Event Buffer

- Events stored on-board with host selectable upload frequency. Alarms sent to host immediately.

### Approvals and Listing

- UL294 Equivalent?

### Operating Temperature

- 14°F to 104°F (-10° to 40°C); < 90% non-condensing humidity.

### Dimensions and Weight

- 8.5" x 7.5" @ < 1lb

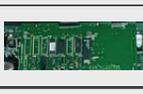
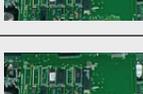
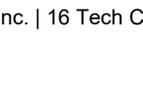
Model #	Picture	Description
DRC2032C 31-0005		Citadel Dual Reader controller (includes enclosure & power supply)
DRC2032CB 31-0012		Citadel Dual Reader controller and power supply with battery backup. Card readers not included. All listed card readers may be used with this product.
IO2000 31-1004		Citadel I/O expansion board with (8) inputs and (8) outputs

## WaPac CC1065 / QRC Controller



### System Features

- Wapac or Xtra software compatible
- Support for 20,000 Cards, Expandable to 80,000
- 1,000 Event Buffer
- Stand-Alone Distributed Processing
- 64 Time Schedules
- 64 Access Codes
- 64 Programmable Holiday Schedules
- 4 Card Readers Points
- 4 Door Input Points
- 4 Request to Exit Input Points
- 4 5A 30VDC Door Relays
- 4 5A 30VDC Auxiliary Relays
- 4 Auxiliary Inputs
- 1 Dedicated Alarm Output
- Cover Tamper Input
- Communications Status Indicator

Model #	Picture	Description
CC1065TAW 06-5005		WaPac Dial-up Communication Controller Assembly Provides dial up modem communications with host computer. Assembly includes enclosure/power supply, communications card for dial up and QRC Board. Includes support for (4) readers and (9) I/Os. Requires (2) modems, please see Part # 09-0010
CC1065NW 06-5009		WaPac Network Communication Controller Assembly Provides network communications with host computer. Assembly includes enclosure/power supply, Lantronics communications card for network communications and QRC board. Includes support for (4) readers and (9) I/O's
CC1065DAW 06-5013		WaPac Direct-Wired Communication Controller Assembly Provides direct wired communications with host computer. Assembly includes enclosure/power supply, Communications card for dial up communications and QRC board. Includes support for (4) readers and (9) I/Os.
PIO1060AREW 06-6002		Programmable (16) input point and (16) relay output controller for WaPac May be used for elevators and alarm points
PIO1060AW 06-6004		Programmable (16) input point controller for WaPac. No relays on panel
QRC1065W 41-0015		WaPac Quad reader controller. Includes support (4) readers and (9) I/Os Assembly includes enclosure/power supply
QRC1065WPB 06-4055		WaPac Quad reader controller. Includes support for (4) readers and (9) I/Os
CC1065NWPB 06-4068		WaPac network communications controller for TCP/IP, including Lantronics communication card
CC1065NWMPB 06-4069		WaPac network communications controller for TCP/IP, including Lantronics communication card and expanded memory
CC1065DAWMPB 06-4067		WaPac direct-wired communications controller with expanded memory
21-0062		WA-PAC DOS to WA-PAC PRO firmware UPGRADE / for multi-card format, or older firmware
MOD56		External 56K baud modem



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