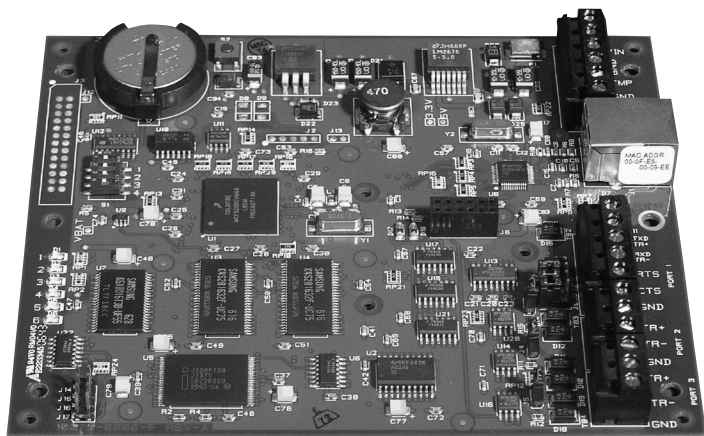


The IP Controller is a new intelligent controller for IDenticard<sup>®</sup> PremiSys<sup>™</sup> access control. With an onboard Ethernet port and increased memory, the IP Controller is an access-control solution for any size application, especially installations requiring many cardholders and generating large amounts of activity. Once the system databases are loaded into the controller memory, the IP Controller can perform interface and management functions without dependence on a host computer.

**Communications with the host PC** are selectable at the time of installation: TCP/IP via an onboard Ethernet port, serial RS-232 or RS-485. **Communications with other system boards** such as Input, Output and Reader Boards are two-wire RS-485. The IP Controller can connect to a maximum of 64 Reader, Input and Output Boards in any combination using two-wire RS-485 (4,000 feet / 1219 m maximum cable length per run). Standard communication speed is 38,400 baud; however, baud rates are selectable and range from 2,400 to 115,200, depending on system, network, computer and other hardware characteristics.



## Features

- **The IP Controller connects to the PremiSys system components listed below.** A mix of up to 64 of these hardware components, connected using two ports via two-wire RS-485, is possible. A maximum of 32 I/O boards can be connected per port:
  - ~ The Input Board, which provides 16 supervisable inputs
  - ~ The Output Board, which provides 16 Form C, SPDT output relays
  - ~ The two multiplexer MUX Boards, which can split one data port on the controller into four or eight channels for communication to other I/O boards
  - ~ The One- or Two-Reader Boards which are used with all readers in the PremiSys system. A maximum of 64 reader ports can be utilized.
- **The IP Controller itself includes the following components and features:**
  - ~ A primary port featuring onboard Ethernet
  - ~ An alternate port for RS-232, RS-485 or a second Ethernet connection via a Network Card, allowing redundancy to the host in the event that the primary host-communications link is lost
  - ~ 16 MB non-volatile flash memory for card and system information and 1 MB SRAM for transactions and new card information
  - ~ 32 MB SDRAM for system firmware and database storage for the application
  - ~ LEDs to indicate controller status
  - ~ A DIP switch for Web browser communication to the controller, for the purpose of configuring the communication parameters
  - ~ 3-volt lithium coin cell that provides RAM and clock backup
- **The IP Controller is to be housed in a wall-mounted enclosure** that can contain other PremiSys components as well. The IP Controller can be wired to alert system operators if the enclosure is tampered with. An optional lock for the enclosure door and an adapter plate for mounting in the enclosure are available.
- **The IP Controller is rated for Class 2 low-voltage applications.** IDenticard<sup>®</sup>-approved 12 VDC power supplies are available. A relay on this power supply can be wired to provide a power-loss alert. Optional backup power can be provided by a 12-volt battery connected to the power supply.
- **Firmware for the IP Controller is FLASH upgradeable.**

# PremiSys<sup>™</sup> IP Controller

PREM-CTRLIP

# PremiSys™ IP Controller

## Options and Accessories

### Network Card | PREM-CRDNET

This card is plugged into the controller to permit a second connection to the host over the Ethernet. This physical connection is via an RJ-45 (10/100Base-T) connector provided on the card. This card is programmed using a separate software utility.

### One-Reader Board | PREM-BRD1RDR

This board can connect to one reader and provides two input points and two relays. The One-Reader Board's reader port supports connection to ABA and Wiegand format readers in a wide variety of reader types, including smart card and biometric readers, as well as keypads.

### Two-Reader Board | PREM-BRD2RDR

This board can connect to two readers and provides eight input points and six relays. The Two-Reader Board's reader ports support connection to ABA and Wiegand format readers in a wide variety of reader types, including smart card and biometric readers, as well as keypads.

### Input Board | PREM-BRDIN

One Input Board provides 16 supervised input points and two relays.

### Output Board | PREM-BRDOUT

One Output Board provides 16 output relays. Relays typically are used for door and elevator control as well as for general facility control.

### Four-Channel MUX Board | PREM-BRD4MUX

### Eight-Channel MUX Board | PREM-BRD8MUX

The MUX Boards are multiplexers that expand a single communications channel on a controller into multiple data channels for connection to I/O boards in the system. Common uses are for star-topology wiring arrangements or home-run wiring.

### Large Enclosure | PREM-ENCLG

The Large Enclosure has eight positions available for a controller and/or other boards and/or power supply.

### Small Enclosure | PREM-ENCSM

The Small Enclosure can hold one controller, board or power supply.

### PremiSys™ Altronix® Ten-Amp P/S w/Eight Isolated Outputs

### Power Supply | PREM-PS10SLT

This power supply/controller module is rated at 12 VDC and 10 amps supervised (AC & battery). It accepts 115VAC 60Hz 1.9 amp input voltage, has eight power-limited outputs and is UL Listed for Access Control System Units (UL 294.) This power supply features eight independently controlled fail-safe and/or fail-secure power outputs.

### PremiSys Adapter Plate | PREM-ADAPTPLT

This mounting plate can be used to install one PREM-CTLRIP or two PREM-BRD1RDR in either of the PremiSys Enclosures.

## Specifications

### Controller Certifications

UL: UL 294 recognized: Access Control System Units – component  
CE Compliant, FCC Part 15 Class A, NIST Certified Encryption

### Dimensions and Weight

Controller Width	5.0 inches (127 mm)
Controller Height	6.0 inches (152 mm)
Controller Depth	1.0 inch (25 mm)
Controller Weight	4.1 ounces (115 g) (nominal)

### Environmental Specifications

Temperature	32°F to 158°F (0°C to 70°C) operating -67°F to 185°F (-55°C to 85°C) storage
Relative Humidity	0 to 95% RH noncondensing

### Power Specifications

**CAUTION! The processor in this component is intended for use only in a Class 2, low-voltage circuit!**

IP Controller Input Voltage	12 – 24 VDC ± 10%, 300mA maximum 12 VDC @ 240mA (325mA with Network Card) nominal 24 VDC @ 135mA (175mA with Network Card) nominal
Memory and Clock Backup	Lithium coin cell, 3.0 V, type BR2325, BR2330, CR2330

### Wiring Specifications

Power to IP Controller	Twisted pair, 18 AWG (0.823 mm <sup>2</sup> )
Primary – Ethernet to Host	Ethernet: Category 5 cable
Port 1 (alternate) RS-232 or RS-485 to Host or Ethernet to Host via separate Network Card	RS-232: Twisted pairs, 22 AWG (0.325 mm <sup>2</sup> ), with overall shield; Maximum cable length: 25 feet (7.6 meters) RS-485: Twisted pairs, 22 AWG (0.325 mm <sup>2</sup> ), with shield, 120 ohms maximum; Maximum cable length: 4000 feet (1219 meters) of wire, total copper, including drops Ethernet: Category 5 cable via separate Network Card
Ports 2 & 3	Twisted pairs, 22 AWG (0.325 mm <sup>2</sup> ), with shield; Maximum cable length: 4000 feet (1219 meters) of wire, total copper, including drops
Alarm Inputs	Twisted pair, 30 ohms maximum

### Communications Specifications

Primary Port	Ethernet, 10/100Base-T interface up to 115,200 bps
Port 1 (alternate port)	RS-232: 9600; 19,200; 38,400 or 115,200 bps, or Ethernet: via separate Network Card, or Two-wire RS-485: 9600; 19,200 or 38,400 bps
Ports 2 & 3	Two-wire RS-485: 2400 to 38,400 bps

### Access Control Specifications

Inputs - Dedicate	Two unsupervised, dedicated alarm inputs for enclosure tamper and power loss
SRAM Capacity	1 MB battery-backed
SDRAM Capacity	32 MB
Flash Memory Capacity	16 MB

### Indicators

Visible	6 red, single-color LEDs 2 LEDs for Ethernet connection, one green, one yellow.
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