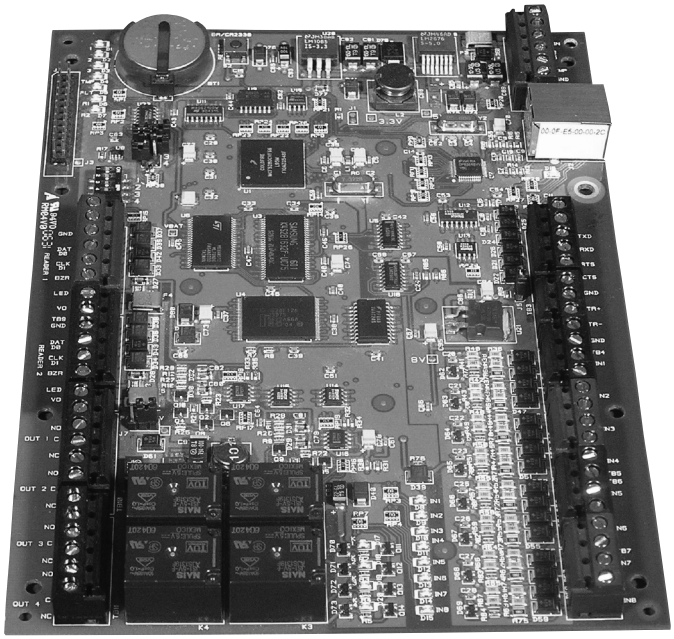
IDenticard® SYSTEMS

The Two-Reader Controller is a new intelligent controller for IDenticard® PremiSys™ access control. With an onboard Ethernet port, two reader ports and increased memory, the Two-Reader Controller is a cost-effective access-control solution for any size application, from single-controller installations to applications requiring scores of controllers. Once the system databases are loaded into the controller memory, the Two-Reader 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 or serial RS-232. **Communications with other system boards** such as Input, Output and Reader Boards are two-wire RS-485. The Two-Reader Controller can connect to a maximum of 32 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 Two-Reader Controller connects to the PremiSys system components listed below.** A mix of up to 32 of these hardware components, connected using one port via two-wire RS-485, is possible:
  - ~ The Input Board, which provides 16 supervisable inputs
  - ~ The Output Board, which provides 16 Form C, SPDT output relays
  - ~ 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, including the two on the controller.
- **The Two-Reader Controller includes the following components and features:**
  - ~ A primary port featuring onboard Ethernet
  - ~ An alternate port for RS-232 communications, allowing redundancy to the host in the event that the primary host-communications link is lost
  - ~ Two reader ports
  - ~ Four relays configurable for normally open or normally closed operation
  - ~ Eight general-purpose input points that can be supervised or not to serve as door-input points, request-to-exit points, etc.
  - ~ Two dedicated input points for monitoring power loss to the board and enclosure tampering
  - ~ 17 MB memory including 16 MB non-volatile flash memory for card and system information and 1 MB SRAM for transactions and new card information
  - ~ 16 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
  - ~ A 3-volt lithium coin cell that provides RAM and clock backup
- **The Two-Reader Controller is to be housed in a wall-mounted enclosure** that can contain other PremiSys components as well. The Two-Reader Controller can be wired to alert system operators if the enclosure is tampered with. An optional lock for the enclosure door is available.
- **The Two-Reader Controller is rated for Class 2 low-voltage applications.** IDenticard®-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 Two-Reader Controller is FLASH upgradeable.**

PremiSys™ Two-Reader Controller

PREM-CTLR2RDR

PremiSys™ Two-Reader Controller

Options and Accessories

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.

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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	8.0 inches (203 mm)
Controller Height	6.0 inches (152 mm)
Controller Depth	1.0 inch (25 mm)
Controller Weight	9 ounces (255 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!

Two-Reader Controller Input Voltage	12–24 VDC ± 10%, 500 mA maximum (reader current not included) 12 VDC @ 250 mA (plus reader current) nominal 24 VDC @ 150 mA (plus reader current) nominal
Relay Rating (each of four relays)	5 A at 30 VDC
Card Reader Power (each of two readers)	12 VDC (10.8-13.2 VDC) ± 10%, nominal or unregulated, current limited to 150mA for each reader OR 12 to 24Vdc±10% (pass-through voltage) current limited to 125 mA for each reader
RAM and Clock Backup	Lithium coin cell, 3.0 V, type BR2325, BR2330, CR2330

Wiring Specifications

Power to Two-Reader Controller	Twisted pair, 18 AWG (0.823 mm^2)
Primary – Ethernet to Host Port 1 (alternate) – RS-232 to Host or Ethernet to Host via separate Network Card	Ethernet: Category 5 cable RS-232: Twisted pairs, 22 AWG (0.325 mm^2), with overall shield; Maximum cable length: 25 feet (7.6 meters)
Port 2	Twisted pairs, 22 AWG (0.325 mm2), with shield; Maximum cable length: 4000 feet (1219 meters) of wire, total copper, including drops
Connection to Relay-Controlled Devices	Use wire and gauge as required by load
Connection to Input Point Devices	One twisted pair per input, 30 ohms maximum
Connection to Readers	Refer to the reader manufacturer specifications for cabling requirements; Maximum cable length: 500 feet (150 m), 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
Ports 2	Two-wire RS-485: 2400 to 38,400 bps

Access Control Specifications

Inputs – Dedicated	Two unsupervised, dedicated alarm inputs for enclosure tamper and power loss
Inputs – Assignable	Two supervised, end-of-line (EOL) resistors, 1K/2K ohm 1% ¼ watt standard
Relays	Two supervised, end-of-line (EOL) resistors, 1K/2K ohm 1% ¼ watt standard
Relay Contact Type	Form C
Relay Configuration	Single-pole double-throw (SPDT)
SRAM Capacity	1 MB battery-backed
SDRAM Capacity	16 MB
Flash Memory Capacity	16 MB

Indicators

Visible	19 red, single-color LEDs 2 LEDs for Ethernet connection, one green, one yellow.