

Overview

The ACUXL16 Networked Intelligent Controller features state-of-the-art technology, and provides both the flexibility and reliability needed to meet today's complex access control and alarm monitoring requirements. Using a sophisticated, high speed embedded 32-bit, 90 MHz microprocessor and high-capacity 16 MB memory, the ACUXL16 controls up to 16 readers. Each ACUXL16 supports large card populations of up to 250,000 and has the ability to communicate over LAN, fiber, dial-up or RS-485 networks.

The ACUXL16 interfaces with all GE Security Diamond II and Sapphire Pro servers, and offers the widest range of features and flexibility, with a design focus on reliability, durability, and ease of installation and maintenance.

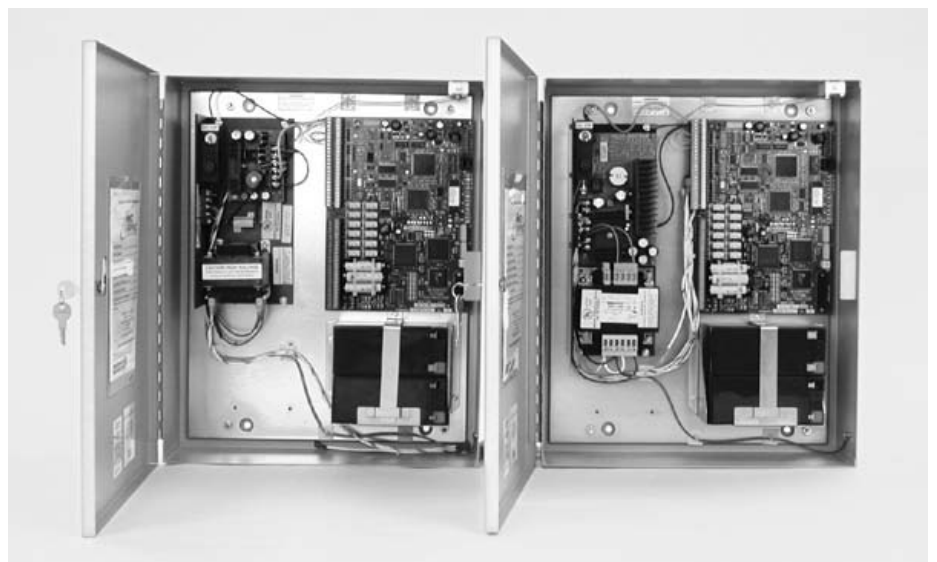
The ACUXL16 panel incorporates two external device ports, each capable of controlling eight readers/interfaces, which are multiplexed using an RS-485 interface. Input and output capacity can be expanded — see the ACU Remote Modules datasheet for details. Each panel includes a parallel printer port to provide local, real-time printing of transactions.

Standard Features

- Supports up to 16 readers and associated interfaces through two RS-485 communication ports.
- Supports magnetic stripe, Wiegand, barium ferrite, barcode, proximity, biometric and smart card technologies. Each reader is user-configurable (card only, card & keypad, or keypad only). Variable card formats, multiple site codes and company codes are supported.
- Alarm Monitoring: The ACUXL16 includes 12 fully supervised six-state alarm inputs which provide false alarm filtering and utilize digital signal processing. Any combination of up to eight remote interface modules can be connected in place of reader interfaces for additional capacity, including Relay Output Modules (described below), and Alarm Input Modules (RIM) which provide 16 additional six-state supervised alarm inputs with tri-color LED status indicators (each).
- Each alarm input allows detection/reporting of circuit trouble conditions: loop resistance too low (short circuit), loop resistance too high (open circuit), loop voltage out of range (circuit fault), and a portion of loop grounded (ground fault).
- The ACUXL16 includes 12 SPDT relay outputs that are configurable for control of locking devices, activation of local annunciators and other output applications. Each SPDT relay is rated at 2.0 A, 30 VDC, and includes an LED status indicator. Any combination of up to eight remote interface modules can be connected in place of reader interfaces for additional capacity, including Alarm Input Modules (described above), and Relay Output Modules (RRM) which provide 16 additional output relays (each).

Networked Intelligent Controller

ACUXL16



- Supports RIMs and RRM's for a maximum of 172 fully configurable supervised six-state inputs or 156 fully configurable Form-C outputs.
- Provides local and global alarm masking capabilities initiated from readers, keypads or operators.
- Full UPS battery backup included for controller, readers, REX devices, modems and door locks standard. Optional batteries required, see ordering information.
- Power Fault Detection: Internal for the detection and reporting to the server of power fault conditions: loss of AC power and battery voltage low when utilizing the UPS capability.
- Configurable local and global alarm-to-relay linking and local annunciation with conditional relay activation.
- Multi-drop up to 16 ACU panels per server serial port, or up to 15 ACU panels down-line from an ACU panel connected to the server via LAN or dial-up.
- Optional on-board DES encrypted communication to the server.
- On-board LAN communication using TCP/IP giving a download of up to 3,000 cards per second.
- Dual RS-485 communication port for redundant communication paths to the server.
- Optional high integrity dial-up communication using high speed dial-up modems.

Local Database

The ACU's local database is downloaded from the server to provide local access control processing even in the unlikely event that communication with the server is lost. The local database supports storage of up to 250,000 card records, including associated PIN, time schedule and door authorization parameters. When a cardholder presents a card to a reader, the ACU retrieves the card record from its local database to determine if the individual is authorized for entry at the associated door, and during that day and time. The ACU then activates the appropriate lock control relay if access is authorized. When the transaction is complete the access event is transmitted to the server for storage on disk. If communication is lost between the ACU unit and the server, the event is stored locally until communication is restored — after which all locally stored events will be uploaded to the server for storage on disk. A minimum of 10,000 event transactions can be stored in local memory. The actual number of transaction events that may be stored is dynamically allocated within the 16 MB of available memory, depending on the number of cardholders in the panel. The method of storing and uploading events also applies to alarms and other events.

Alarm Monitoring

All ACUs are provided with 12 supervised alarm inputs plus cabinet tamper detection, power fault and low battery alarms. The ACUs also contain 12 auxiliary output relays which can be locally or globally linked to single or multiple alarm inputs with conditional activation. Relay linking and activation parameters, as well as reader, remote control and time commands, are also downloaded from the server and stored in local memory, thus allowing local time command processing to continue in the unlikely event that communication to the server is lost.

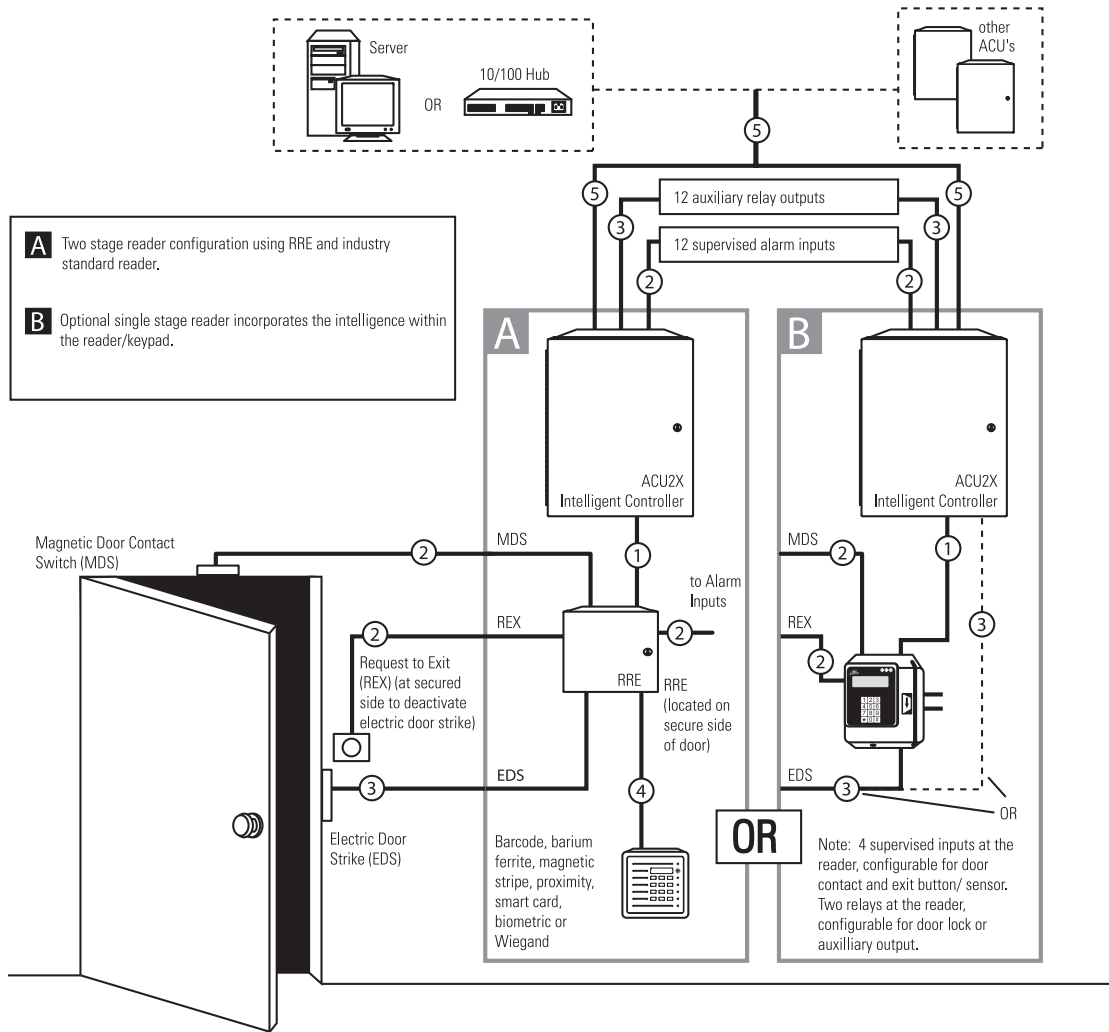
Communication Options

The ACUXL16 is equipped with an onboard LAN port for communication over a standard 10 Base-T network using TCP/UDP protocol. Network connection results in fast download speeds of up to 3,000 card records per second. Up to 15 ACU panels may be multi-dropped (via RS485) down-line from an ACU panel connected to the server through a LAN.

The ACUXL16 also supports direct multi-drop connection to the server via RS485 for environments where a LAN connection is not available. Up to 16 ACU panels may be multi-dropped from each server serial port.

ACUs are available with full dial-up control for connection over standard telephone lines to any GE Security Diamond II or Sapphire Pro system. Up to 15 ACU panels may be multi-dropped (via RS485) down-line from an ACU panel connected to the server through dial-up. The dial-up software is designed to allow the ACU to dial-up to eight pre-programmed telephone numbers through an optional modem to annunciate alarms and/or upload transaction history to a server. Optional modems are also added to the server when dial-up panels are used.

Configuration



Cable #	Description	Belden Cable Number (or equal)	Max. Distance
1	Communication (RS-485) Power (24 VDC)	#9842 or Alpha #6222C, 24 AWG, 2-pair, braid overall shield AND #9409 or Alpha #1897C, 18 AWG, 2-conductor/unshielded	4,000' (1,220 m) 4,000' (1,220 m)
2	Exit Request Button / Sensor Input	#9407-22 AWG, 2-conductor (unshielded)	1,000' (305 m)
3	Door Lock Control from Controller or RRE	#9409-18 AWG, 2-conductor (unshielded)	1,000' (305 m)
4	Standard Reader	Varies with type of reader/keypad. See manufacturers instructions.	varies
5	Controller to Host Communication or other ACU panels OR Controller to 10/100 Hub Communication	#9842 or Alpha #6222C, 24 AWG, 2-pair/braid overall shield #1583A-24 AWG, 4-pair (unshielded)	4,000' (1,220 m) 328' (100 m)

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F 32-2-721-86-13

Latin America
T 305-593-4301
F 305-593-4300

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Specifications

Dimensions	Height: 20.12" (51.1 cm) Width: 16.50" (41.9 cm) Depth: 5.00" (12.7 cm)
Weight (with batteries)	4 amp units: 44 lbs (20 kg) 8 amp units: 62 lbs (28.1 kg)
Weight (without batteries)	4 amp units: 32 lbs (14.5 kg) 8 amp units: 38 lbs (17.2 kg)
Environmental	Maximum: +65 C (+150 F) Minimum: 0 C (+32 F) Humidity: 0 to 95% relative
Power	120/240 VAC (cut current in half for 240 VAC), 50/60 Hz, DC standby battery backup
4 amp power supply	Maximum: 1.0 amps, 120 watts
8 amp power supply	Maximum: 2.0 amps, 240 watts
Options	Plug-in dial-up modem Gel-cell batteries for UPS

