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## Smart Card Technology

User-programmable, versatile, secure smart cards and smart tags

### Overview

The Alliance smart cards and smart tags operate with the AL-1623 programmer and the Alliance Manager software. Together, these products let the installer, service provider, and customer program and reprogram the cards and issue them to users.

### Innovative Proximity Readers

Alliance smart card readers connect directly to the RS-485 data bus of the control panel or intelligent 4-door controller and may be configured and addressed from an LCD keypad. Some security options (site code and 4-byte security code) must be programmed with Alliance Manager software and configuration cards.

### 4-Byte Security Code

Communications between each customer's smart card and the smart card programmer is protected with a unique 4 billion/4 byte combination security code. Once this code has been created, downloaded to the programmer, and programmed into the card, the card memory can't be read or even recognized at any other reader or programmer/software combination (AL-8100).

Communication between Alliance Manager software and the programmer may be password-protected to prevent the 4-byte security code from being uploaded from the programmer to another machine with Alliance software.

### Read/Write Encryption

Alliance smart card technology also features exclusive read/write encryption. When a card is presented at a reader, data is downloaded into the reader, encrypted, and rewritten back into the card.

### Pay-Per-Use Application

The readers may be configured to operate on standalone devices such as office equipment or vending machines. This function allows credits to be assigned on user cards and deducted by the readers, purely on a usage basis. Each card may have a maximum of 65,535 credits divided over four credit accounts. Each account may be accessed from up to four locations. Smart card readers determine the number of credits to deduct, and which account to debit, for each valid use.

### High Quality Cards and Tags

Both the smart chip and antenna are embedded inside the cards and tags. Printing is possible on the AL-1470 prox cards using any industry-standard printer. The AL-1472 cards feature a programmable magnetic stripe.



### Standard Features

- **Innovative proximity readers**
- **Smart cards are reprogrammable with AL-1623 smart card programmer**
- **High-security 4-byte security code and read/write encryption**
- **Pay-per-use embedded application**

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## Ordering Information

Part No.	Description
AL-1191	Alliance smart card reader with white snap-on cover and 8 ft. (2.44 m) cable
AL-1193	Heavy-duty Alliance smart card reader with 8 ft. (2.44 m) cable
AL-1116	Smart card reader/keypad combination with 4-line scrolling LCD
AL-1623	Smart card programmer with RS-232 lead and transformer
AL-1450	Smart proximity cards with clamshell design
AL-1470	Smart proximity cards, printable, 3.38 x 2.13 in. (86 x 54 mm)
AL-1472	Smart proximity cards with standard ABA three-track magnetic stripe, 3.38 x 2.13 in. (86 x 54 mm)
AL-1473	Smart tag
AL-1660	White snap-on covers for AL-1191 (10 pieces)
AL-1661	Red snap-on covers for AL-1191 (10 pieces)
AL-1662	Gray snap-on covers for AL-1191 (10 pieces)
AL-1663	Beige snap-on covers for AL-1191 (10 pieces)
AL-1664	Black snap-on covers for AL-1191 (10 pieces)
AL-1665	Light gray snap-on covers for AL-1191 (10 pieces)
AL-1668	White rectangular snap-on cover, 2.38 x 4.38 x 0.67 in.

## Specifications

### AL-1191/AL-1193 Smart Card Readers

#### Electrical

- Supply voltage: 9 to 14 VDC
- Current consumption in standby: 25 mA
- Current consumption during card read: 80 mA

#### Connections

- Programmable Open Collector output pulse from 1 msec to 25 sec
- Request-to-Exit input
- Connectivity through RS-485 data bus device or standard Wiegand for connection on the 4 reader inputs of the AL-1255

#### Physical

- Read range: 2 to 3 in. (51 to 76 mm)
- Optical pry-off tamper sensor included
- Maximum distance from panel: 5,000 ft. (1,524 m)
- Suitable for outdoor use (full epoxy-filled weatherproof construction)
- LEDs (red and blue) configurable as nightlight, lock status, or alarm area status
- Dimensions (AL-1191): 1.34 x 4.33 x 0.67 in. (34 x 110 x 17 mm)
- Dimensions (AL-1193): 1.65 x 5.87 x 0.59 in. (42 x 149 x 15 mm)

#### Environmental

- Operating temperature: -31 to 150°F (-35 to 66°C)

#### Regulatory

- FCC
- UL: UL294, UL365, UL609, UL1610, UL1635

### AL-1623 Smart Card Programmer

#### Electrical

- 9 VDC power pack included
- Current consumption: 75 mA (max.)

#### Connections

- Serial cable with RS-232 connectors included
- PC running Alliance Manager software is required

#### Environmental

- Operating temperature: 32 to 122°F (0 to 50°C)
- Humidity: 95% noncondensing

#### Regulatory

- FCC



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