

Passport Plus® Universal Track 2 Reader



Access Control Options

The Passport Plus Universal Track 2 (UT2) Reader can

be used with monthly access or proprietary debit cards in a parking operation. Based on magnetic stripe technology, the system reads both standard cards for monthly parkers, or rechargeable cards or tickets that can be assigned with a wide range of values, including time, number of uses, or dollar amount.

Ticket Options

Used for contract parking, monthly cards can be used for unlimited access before their expiration date. The predetermined time periods assigned to the card are usually by month, quarter or year, after which the ticket is automatically voided. Monthly cards are the ideal choice for any parking facility with repeat customers or car pool accounts.

Prepay (decrementing) tickets allow the cashier to produce a ticket to be sold to your patrons for a predetermined amount of time. Each time the ticket is used, the rate charged – in either time, dollar amount, or number of uses – will decrement (subtract) from the ticket's value until the pre-programmed amount is exhausted. The system allows for these tickets to be recharged with a new amount.

Flexible System

The Universal Track 2 Reader offers parking operators a flexible card access system for their operation. Access cards may be created with a Federal APD PowerPad Fee Computer with a variety of payment plans on standard SST paper tickets (for one-shot use), or plastic tickets (other credit card sized

magnetic stripe cards can also be used with the system). Parking facilities with exit cashiering configurations may offer Federal APD ValueCard System functionality without the addition of SST Exit Verifiers on-site. Standard Passport Plus Readers, 100k Readers, and ValuePass Readers may be upgraded to the Universal Track 2 Reader.

Meets ISO Standards

Magnetic stripe technology uses electro-magnetic fields to record or encode information on a piece of magnetic tape (similar to an audio tape) attached to the access card. The International Standards Organization (ISO) defines the physical standards and the application standards of the technology. The Universal Track 2 Reader uses track 2 (which was developed by the American Bankers Association) to encode access cards with a custom format for reliability and security.

Intelligent Processing

Magnetic heads in the UT2 Reader read the fields from the access card and converts the data into a Wiegand formatted read head controlled by a Passport Plus Logic Module. The intelligent Passport Plus Logic Module features an advanced distributed processing architecture which allows it to function as a communicating, on-line reader, or as an independent off-line device.

Features:

- Reads both standard cards for monthly parking or rechargeable cards and tickets.
- Set the access-criteria by:
 - Time-period used
 - Number of uses
 - A dollar amount
- Cards allow unlimited access until expiration dates.
- Variable time-periods for card include:
 - Monthly use
 - Quarterly use
 - Annual use
- Tickets can be recharged and produced by cashiers.
- Functions on-line or off-line using the Passport Plus Logic Module.
- Features track 2, a custom formatted code developed by the American Banker's Association, for reliability and security.
- UT2R upgrades available for:
 - Standard Passport Plus Readers
 - 100K Readers
 - ValuePass Readers



Unmanned Exit Cashiering



FEDERAL APD

Federal Signal Corporation

Universal Track 2 Reader Specifications

1. Purpose

The Federal APD Passport Plus Universal Track 2 Reader shall be an access control device that uses magnetic stripe technology to read ValueCards and provides a vend signal when a valid access card is presented to the read head. The vend signal shall allow a door lock, barrier gate, or other control device to allow access.

2. Features/Functions

- a. The Universal Track 2 Reader shall be capable of online communication with Federal APD's SCAN Facility Management system (100K version), or ScanNet Central Management System.
- b. The Universal Track 2 Reader shall be capable of reading Federal APD proprietary format from a ValueCard. The Universal Track 2 Reader shall be capable of reading the facility number, ID number, group number, and issue level. Anti-passback shall be supported online through the port controller, and not on the ValueCard for an entrance or exit reader. Debiting and crediting of ValueCard values shall be supported via SCAN/ScanNet and not on the ValueCard.
- c. The Universal Track 2 Reader shall provide 8,191 unique identification numbers.
- d. The Universal Track 2 can also be used in conjunction with the following options (reader features and capabilities may differ from these specifications when these options are used): (1) Passport Plus Card Reader Series 8; (2) Passport Plus Card Reader Series 16; (3) Passport Plus Card Reader Series 24; (4) ValuePass (available with ScanNet only, not available with SCAN)
- e. The Universal Track 2 Reader shall store and accept six different facility codes.
- f. All programming shall be accomplished through the use of SCAN/ScanNet. The following features shall be programmable: (1) Time Zones; (2) Groups; (3) Holidays; (4) ID Status; (5) Issue Levels; (6) Privilege IDs; (7) Vends; (8) Inputs.
- g. The Universal Track 2 Reader shall be capable of performing the following security checks without the assistance of a host computer or central processor (except with the ValuePass option): (1) Alien Card Check; (2) Valid ID Number; (3) Valid Group Number; (4) Valid Issue Number; (5) Valid Time Zone; (6) Timed Passback Status; (7) Valid Facility Code.

- h. The Universal Track 2 Reader maintains all programming information and decision criterion in internal memory with a Super capacitor memory backup and message buffer for up to one week.
- i. The Universal Track 2 Reader shall be capable of storing from 190 to 600 card transactions and status messages while offline, depending on the configuration set up for the reader. An optional 590-1600 transaction buffer shall also be available.
- j. The Universal Track 2 Reader, when operating in a non-communicating system, shall also be capable of interfacing with the optional Printer Port Controller.
- k. The Printer Port Controller shall do the following: (1) Control hard and passive anti-passback through DIP switch settings; (2) Provide an auto resynchronization capability that shall activate at 5 a.m. each day; (3) Allow the user to print programming from the Hand Held Computer; (4) Print transaction messages in real time on the printer.

3. Dimensions.

- a. The Universal Track 2 read head shall be 1.75 inches W x 1.5 inches H x 6.3 inches D (44.45 mm W x 38.1 mm H x 160.02 mm D).
- b. The Passport Plus Logic Module shall be 5.8 inches W x 1.125 inches H x 4 inch D (147 mm W x 29 mm H x 102 mm D).
- c. The Passport Plus Power Supply shall be 5.6 inches W x 2.4 inches H x 5 inch D (142 mm W x 61 mm H x 127 mm D).
- d. The Passport Plus gooseneck stand (optional) shall consist of a 2 inch square (51 mm) tubing with a height of 35 inches (889 mm) from base to center of the gooseneck stand enclosure mounting plate.

4. Electrical.

- e. The Universal Track 2 magnetic stripe read head shall operate at +5 VDC +/- 10%.
- f. The Passport Plus Logic Module shall operate on 1 Ampere at 5 and 12 VDC (input).
- g. The Passport Plus Power Supply shall operate on 1 Ampere at 110 VAC input and output of 12 VDC at 2.5 Ampere.

5. Construction.

- a. The Universal Track 2 Reader shall consist of the following: (1) A read head; (2) A logic module; (3) A power supply; (4) Interconnections between units are via plug-in cables; (5) The unit may optionally be mounted on a gooseneck stand.

- b. The Universal Track 2 Reader shall provide the following: (1) Incorporate a microprocessor, on-board memory, communication port, crystal controlled time clock/clock/calendar, and status indicators on modular printed circuit boards; (2) Use CMOS circuitry for minimum power consumption and maximum noise immunity; (3) Contain all software and hardware necessary to attach a communication cable for communicating operations; (4) Provide built-in diagnostic software and circuit indicators to facilitate maintenance and troubleshooting.
- c. The read head shall meet the following standards: (1) Wiegand-formatted, supplied by the card reader manufacturer; (2) Compatible with the Federal APD Passport Plus Logic Module; (3) Maximum read head to logic module distance of 500 feet (152.4 meters); (4) Magnetic stripe technology; (5) Capable of reading ABA Track 2 ANSI/ISO formatted cards; (6) Data outputs shall be binary pair (0,1) data lines, with standard TTL outputs; (7) Encoding type and density shall be Aiken Biphase (F/2F) at 75 BPI; (8) Track location shall be ISO track #2; (9) Data buffer shall be not required or capable of buffering at least 200 bits (40 numeric BCD digits); (10) Read direction shall be either direction or clearly marked as to the proper direction; (11) Coercivity shall be low (300); (12) The read head shall meet the requirements for outdoor use; (13) Have a single lamp green LED, which shall indicate whether the read head is getting adequate power.
- d. The Universal Track 2 firmware shall meet the following requirements: (1) Recognize the ABA configuration sent by SCAN/ScanNet; (2) Receive data at a rate of 1msec. per bit; (3) Determine when all the data has been received; (4) Determine if the data was received in the forward or reverse direction; (5) Perform a parity check on the data to ensure that it is good; (6) Parse the data and store it in the correct variables that already exist in the firmware; (7) Facility number, ID number, and group number shall be extracted from the data read and stored in the appropriate memory locations.



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