HID®

PHYSICAL ACCESS SOLUTIONS

pivCLASS® Contactless Readers

Meet NIST assurance-level requirements for these areas:

| "Unrestricted" Areas | "Controlled" Areas | "Limited" Areas | "Exclusion" Areas |

CONTACTLESS READERS FOR "CONTROLLED" AREAS ENABLE HIGH SECURITY, INTEROPERABILITY AND COMPLIANCE

- **Part of an integrated solution from a single, trusted provider** – Enable FIPS 201 compliance per NIST SP 800-116 guidelines and the TWIC Reader Specification.

- **Contactless reader solutions for "Controlled" security areas** – Meet NIST's "Controlled" security area assurance-level requirements with a single-factor authentication.

- **Support multiple card types** – Work with PIV, PIV-I, CAC, CIV (a.k.a., PIV-C), TWIC, FRAC, iCLASS® and HID Prox® cards for easy, phased transitions from legacy technology to new PKI-enabled smart cards.

ADDITIONAL PRODUCT FEATURES:

- Architected for maximum security and affordability, these readers utilize the pivCLASS Authentication Module to provide cryptographic functionality and to pass Wiegand-formatted data to the PACS controller. Locating the critical security operations within the secure perimeter, rather than on the attack side of the door, increases security and reader affordability.

- Available for either half-duplex or full-duplex communication.

- Up to two pivCLASS readers can connect to a pivCLASS Authentication Module via full duplex RS-485 communication to the reader, typically enabling facilities to reuse much of their existing wiring.

- Available in mini-mullion and wall switch form factors to mount and cover single-gang switch boxes.

- Available with either a pigtail or terminal strip wiring termination.

- Each of these readers can also be ordered with 125 kHz proximity support.

HID Global's pivCLASS Government Solutions portfolio enables facilities to upgrade their existing physical access control system (PACS) to achieve FIPS 201 compliance.

The pivCLASS contactless readers (R10 and R40) and their proximity-enabled versions deliver the "Controlled" assurance level defined in the National Institute of Standards and Technology (NIST) SP 800-116 guidelines when used with the pivCLASS Authentication Module (PAM) to perform a single-factor authentication check.

CHUID + VIS Authentication – The pivCLASS system tests the signature on the PIV Card Holder Unique IDentifier (CHUID) data object. The CHUID signature check ensures the card is authentic (came from a valid issuer) and has integrity (has not been altered).

Because the CHUID is a "free read" and will be transmitted unencrypted to any reader, it could be possible for perpetrators to capture a PIV card's CHUID and create a counterfeit card. However, the required visual check (VIS) of the card secures against this threat by making it possible to identify cards that have been counterfeited or altered.*

CAK Authentication – The full duplex version of these pivCLASS readers work with the PAM to perform a PKI challenge-response test in addition to a signature check to validate the card authentication key (CAK). The challenge-response test ensures the public key in the card authentication certificate is bound to the private key on the card. This CAK authentication secures against cards that have been counterfeited, altered, copied or cloned. The half duplex version of these readers supports the OSDP protocol to half duplex authentication modules.

These pivCLASS readers are guaranteed to meet the stringent specifications for operation, reliability and interoperability with other Genuine HID™ products.

* Per SP 800-116, to achieve "Controlled" assurance, the CHUID read must be combined with a visual check (VIS) of the identification card.

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	R10-H	R40-H	RP10-H	RP40-H
Model Name	R10-H	R40-H	RP10-H	RP40-H
Base Part Number - FDX	900NHR	920NHR	900PHR	920PHR
Base Part Number - HDX	900NHP	920NHP	900PHP	920PHP
13.56 MHz Card Compatibility	PKI-Based FIPS-201 Credentials including PIV, PIV-I, CIV, CAC, TWIC and FRAC Secure Identity Object (SIO) on iCLASS SE, SE for MIFARE DESFire EV1 and SE for MIFARE Classic standard iCLASS Access Control Application ISO14443A (MIFARE) CSN			
125 kHz Card Compatibility	N/A		HID, AWID, EM4102	
Typical Contactless Read Range[1]	FIPS 201 type cards can be read using either the contact or contactless card interface			
	FIPS-201 Type Cards, Contactless Interface[2] PIV, PIV-I, CIV, CAC, TWIC and FRAC			
FIPS-201 type cards	1″ (2.5 cm)	1.5″ (3.8 cm)	1″ (2.5 cm)	1.5″ (3.8 cm)
	13.56 MHz iCLASS, DESFire and MIFARE Cards			
iCLASS SE®	2.5″ (6.4 cm)	4.5″ (11 cm)	2.5″ (6.4 cm)	4.5″ (11 cm)
DESFire® EV1 and HID SE™	1″ (2.5 cm)	2″ (5.1 cm)	1″ (2.5 cm)	2″ (5.1 cm)
MIFARE® Classic and HID SE®	2.3″ (4.0 cm)	4.5″ (11 cm)	2.3″ (4.0 cm)	4.5″ (11 cm)
	125 kHz Promimity Cards			
HID Prox / AWID	N/A	N/A	2″ (5.1 cm)	2.5″ (6.4 cm)
EM4102	N/A	N/A	3.5″ (8.9 cm)	4.0″ (10 cm)
Mounting	Mini-mullion size; physically HID Global's smallest pivCLASS readers; ideally suited for mullion-mounted door installations, U.S. single-gang J-box (with mud ring) or any flat surface	Wall switch size; designed to mount and cover single-gang switch boxes primarily used in the Americas; includes a slotted mounting plate for European and Asian back box spacing	Mini-mullion size; physically HID Global's smallest pivCLASS readers and are ideally suited for mullion-mounted door installations, U.S. single-gang J-box (with mud ring) or any flat surface	Wall switch size with keypad (illuminated, 4 x 3); designed to mount and cover single-gang switch boxes; primarily used in the Americas; includes a slotted mounting plate for European and Asian back box spacing
Color	Black			
Dimensions	1.9″ x 4.1″ x 0.9″ (4.8 x 10.3 x 2.3 cm)	3.3″ x 4.8″ x 1.0″ (8.4 x 12.2 x 2.4 cm)	1.9″ x 4.1″ x 0.9″ (4.8 x 10.3 x 2.3 cm)	3.3″ x 4.8″ x 1.0″ (8.4 x 12.2 x 2.4 cm)
Product Weight (Pigtail)	3.9 oz. (113 g)	7.7 oz. (220 g)	4.0 oz. (114 g)	7.8 oz. (222 g)
Product Weight (Terminal Strip)	2.9 oz. (84 g)	7.5 oz. (215 g)	3.0 oz. (85 g)	7.6 oz. (216 g)
Operating Voltage Range	+12VDC			
Current Draw - Normal Standby Current[3]	60 mA	65 mA	75 mA	85 mA
Current Draw - Maximum Average[4]	100 mA	110 mA	100 mA	110 mA
Current Draw - Peak[5]	200 mA		200 mA	
Operating Temperature	-30˚ to 150˚ F (-35˚ to 65˚ C)			
Operating Humidity	5% to 95% relative humidity non-condensing			
Storage Temperature	-67˚ to 185˚ F (-55˚ to 85˚ C)			
Environmental	Indoor / Outdoor; IP55, IP65 if installed with optional gasket (IP65GSKT)			
Transmit Frequency	13.56 MHz		13.56 MHz & 125 kHz	
Protocol	Full duplex supports HID pivCLASS Protocol, CoreStreet Reader Protocol Half duplex supports OSDP protocol			
Cable Distance[6]	RS485 for communication (500 ft [152m], 22AWG), (300 ft [91m], 24AWG); two wires for power (500 ft [152m], 22AWG)			
Wiring Connection	Pigtail or Terminal Strip			
Certifications	FICAM tested[7], UL294 (U.S. & Canada), FCC Certification (U.S.), RoHS2			
Housing Material	UL94 Polycarbonate			
% of recycled content (Pigtail)	10.5%	10.5%	10.5%	10.5%
% of recycled content (Terminal Strip)	11.0%	11.0%	10.5%	11.0%
UL Ref Number	R10E	R40E	RP10E	RP40E
Warranty	Limited Lifetime			

[1] Typical read range in air. Different types of metal will cause some degradation (typically up to 20%). Use spacers to space product off metal and improve read range if required. Read ranges for FIPS 201 type cards will vary depending on the card manufacturer.
[2] Measured using the SIO Data Model.
[3] Standby Average - RMS current draw without a card in the RF field.
[4] Maximum Average - RMS current draw during continuous PIV card reads.
[5] Peak - highest instantaneous current draw during RF communication.
[6] For cable lengths when used in Wiegand mode see "pivCLASS Reader Installation Guide" PLT-01134.
[7] FICAM tested as part of complete physical access control systems.

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