pivCLASS RK40, RPK40
Readers for FIPS 201

For the following security areas per NIST SP 800-116:

| "UnControlled" Areas | "Controlled" Areas | "Limited" Areas | "Exclusion" Areas |

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

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

- **Reconfigurable in field** – can be upgraded in the field to achieve higher assurance levels with the addition of a contact or contact plus biometric "sidecar"

- **Transitional reader** – supports reading PIV, PIV-I, CAC, CIV, TWIC, FRAC, iCLASS® and HID Prox® cards for easy, phased transitions from legacy technology to new PKI-enabled smart cards

- **Contactless reader with keypad for "Uncontrolled" security areas** – enables "PIN to PACS" approach using both legacy and FIPS-201 cards

ADDITIONAL PRODUCT FEATURES:

- The RK40 and RPK40 utilize the pivCLASS Authentication Module (PAM) to perform cryptographic operations required to pass FICAM's E-PACS testing.

- Security critical operations are performed within the secure perimeter, rather than on the attack side of the door, increasing security and reader affordability.

- Maximum flexibility is achieved through in-field sidecar expansion to add a contact interface, an LCD to display messages to the cardholder and a biometric sensor.

- Supports a phased approach to FICAM compliance. Can be used as a standalone reader to read legacy and FIPS 201 type smart cards. PAMs can be added later to achieve FICAM compliance by providing strong multi-factor authentication.

- Ideal for "Uncontrolled" areas where access control is desired but strong authentication FICAM compliance is not required.

pivCLASS Government Solutions enable facilities to upgrade their existing physical access control systems (PACS) to achieve FIPS 201/FICAM compliance without the need to rip-and-replace their existing system. The RK40 and RPK40 are designed to support multiple use cases leading to full FICAM compliance.

Transitional reader – in this approach the reader can be used standalone to read legacy iCLASS and HID prox cards as well as FIPS 201 type cards and pass the card identifier directly to the panel. The key pad can be used to send a user entered PIN directly to the PACS panel. When used with the pivCLASS Registration Engine and Certification Manager software this approach provides a solution for a smooth transition to full FICAM compliance as well as a cost effective solution for "Uncontrolled" doors where access control is desired but FICAM compliance is not required.

FICAM compliant reader – to be FICAM compliant requires the addition of the pivCLASS Authentication Module (PAM) to provide single factor strong authentication.

This configuration supports the CHUID + VIS and card authentication key (CAK) authentication modes as described in NIST Special Publication 800-116.

Two-factor strong authentication can be achieved by adding the pivCLASS contact reader sidecar. This sidecar provides a contact card reading slot and an LCD that displays messages and instructions to the card holder. This configuration supports the CHUID + VIS, CAK authentication modes over both the contactless and contact reader interfaces. It also supports the PKI + PIN authentication mode on the contact interface with match-on-card of the PIN.

Three-factor strong authentication can be achieved by adding the HID pivCLASS contact plus biometric reader sidecar. In addition to a contact card reading slot this sidecar also provides a biometric sensor. This configuration supports CHUID + VIS and CAK over both the contactless and contact reader interfaces. The PKI + PIN with match-on-card of the PIN and the PKI + PIN + BIO authentication modes use the contact interface.

SPECIFICATIONS

	RK40-H	RPK40-H
Full duplex Base Part Number	921NHR	921PHR
Half duplex Base Part Number	921NHP	921PHP
13.56 MHz Card Compatibility	PKI-Based FIPS-201 Credentials including PIV, PIV-I, CIV, CAC, TWIC and FRAQ, Secure Identity Object (SIO) on iCLASS Seos, iCLASS SE /SR, MIFARE DESFire EV1 and MIFARE Classic, standard iCLASS Access Control Application, ISO14443A (MIFARE) CSN	
125 kHz Card Compatibility	N/A	HID Prox, AWID, EM4102 Prox
System Requirements	These readers require HID pivCLASS Authentication Module (M2000) to support FICAM compliance	
Typical Contactless Read Range[1]	FIPS 201 type cards can be read using either the contact or contactless card interface	
	Contactless Interface PIV, PIV-I, CIV, CAC, TWIC and FRAQ	
FIPS-201	2.0" (5 cm)	1.2" (3 cm)
	13.56 MHz Single Technology ID-1 Cards – SIO Data Model	
iCLASS Seos	2.0" (5 cm)	1.6" (4 cm)
iCLASS	5.5" (14 cm)	4.7" (12 cm)
MIFARE DESFire EV1	2.0" (5 cm)	1.6" (4cm)
MIFARE Classic	5.1" (13 cm)	4.3" (11 cm)
	125 kHz Single Technology ID-1 Cards	
HID Prox / AWID	N/A	2.8" (7 cm)
EM4102 Prox	N/A	3.1" (8 cm)
Mounting	Wall Switch Size; designed to mount on single gang switch box	
Color	Black	
Keypad	Yes (4x3)	
Dimensions	3.3" x 4.8" x 1.1" (8.5 cm x 12.2 cm x 2.8 cm)	
Product Weight (Pigtail)	9.0oz (256g)	9.1oz (258g)
Product Weight (Terminal Strip)	7.9oz (226g)	8.0oz (228g)
Operating Voltage Range	+12VDC	
Current Draw - Standby Average	85mA	95mA
Current Draw - Maximum Average[2]	125mA	125mA
Current Draw - Peak[3]	220mA	220mA
Operating Temperature	-30º to 150º F (-35º to 65º C)	
Operating Humidity	5% to 95% relative humidity non-condensing	
Storage Temperature	-67º to 185º F (-55º to 85º 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	
Cable Distance[4]	RS485 for communication (500ft (152m), 22AWG), (300ft (91m), 24AWG); two wires for power (500ft (152m), 22AWG)	
Wiring Connection	Pigtail or Terminal Strip	
Certifications	FICAM tested[5], UL294 (US & Canada), FCC Certification (US), RoHS2	
Housing Material	UL94 Polycarbonate	
UL Ref Number	RK40E	RPK40E
Warranty	Warranted against defects in materials and workmanship for life. (See complete warranty policy for details.)	

1 Read range listed is statistical mean rounded to nearest whole centimeter. HID Global testing occurs in open air. Some environmental conditions, including metallic mounting surface, can significantly degrade read range and performance; plastic or ferrite spacers are recommended to improve performance on metallic mounting surfaces. Read ranges for FIPS 201 type cards will vary depending upon the card manufacturer.
2 Maximum Average - RMS current draw during continuous PIV card reads
3 Peak - highest instantaneous current draw during RF communication
4 For cable lengths when used in Wiegand mode see "pivCLASS Reader Installation Guide" PLT-01134 A.1
5 FICAM tested as part of complete physical access control systems