

Dual High Frequency Technology Cards

iCLASS®/MIFARE® Classic • iCLASS®/MIFARE® DESFire® EV1 • MIFARE® Classic/MIFARE® DESFire® EV1

- ▶ **Ideal Migration Solution** – Mutual use of 13.56 MHz read/write iCLASS®, MIFARE® Classic and MIFARE® DESFire® EV1 contactless smart card technologies
- ▶ **Wide Variety of Applications** – Physical access control, biometrics, secure computer/network authentication, time and attendance, vending and more
- ▶ **ISO Standard Thickness** – Use with all direct imaging and thermal transfer printers



ACCESS flexibility.

For customers looking to support multiple technologies with a single card or motivated to migrate from existing card technology to a more secure solution, dual high frequency Genuine HID™ card products deliver an ideal solution and migration path. These affordable and durable card products enable more flexibility than ever before through the mutual use of 13.56 MHz read/write iCLASS, MIFARE Classic or MIFARE DESFire EV1 contactless smart card technologies for credential-based applications.

In addition to the two high frequency technology options, all cards are available with HID Prox or magnetic stripe technology to provide the widest range of backwards compatibility with existing systems. HID Global can also embed a wide range of commercially available contact chips, or customers can select HID's off-the-shelf Crescendo® multi-technology smart card, providing strong authentication options with logical access systems.

As with all Genuine HID card products, dual high frequency cards are part of the broadest product line of trusted, fully interoperable secure identity solutions in the market and come with guaranteed compatibility with HID Global reader lines and a lifetime warranty.

iCLASS®

- ▶ 13.56 MHz read/write contactless smart card provides high speed, reliable communications with high data integrity, ensuring high security with mutual authentication, encrypted data transfer and 64-bit diversified keys for read/write capabilities
- ▶ Card data is protected by triple DES encryption
- ▶ Meets ISO 15693 and 14443B standards for contactless communications
- ▶ 32 kbit standard (2 kbit available with 1 Kbyte MIFARE only)

MIFARE® Classic

- ▶ MIFARE Classic offers fast and convenient transactions and is used worldwide for access control, cashless vending and public transportation applications
- ▶ MIFARE Application Directory (MAD) allows flexible programming of additional applications to the MIFARE Classic card
- ▶ MIFARE Classic technology uses a mutual authentication and data encryption with a 32 bit serial number
- ▶ 4 Kbyte standard (1 Kbyte available with 2 kbit iCLASS only)

MIFARE® DESFire® EV1

- ▶ MIFARE DESFire EV1 is based on open global standards for security, and is interoperable with existing MIFARE DESFire infrastructures*
- ▶ Transaction times are less than 100 milliseconds for a typical secure ticketing transaction
- ▶ MIFARE DESFire EV1 is fully compliant with ISO 14443A 1-4, and has been awarded CC EAL 4+ for card security
- ▶ 8 Kbytes of dynamic memory is arranged in easy-to-define application folders and data files

* MIFARE DESFire EV1 is not compatible with the PIV read application used with a DESFire 0.6 card

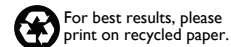
Specifications

	Two HF Technologies (iCLASS, MIFARE Classic, or MIFARE DESFire EV1)	Two HF Technologies (iCLASS, MIFARE Classic, or MIFARE DESFire EV1) - Embeddable	Two HF Technologies (iCLASS, MIFARE Classic, or MIFARE DESFire EV1) with Prox	Two HF Technologies (iCLASS, MIFARE Classic, or MIFARE DESFire EV1) with Prox - Embeddable
Base Part Number*	PVC - 232 PET/PVC - 242	PET/PVC - 243	PVC - 252 PET/PVC - 262	PET/PVC - 263
Typical Maximum Read Range	iCLASS 2kb/32kb: 2 - 3" MIFARE Classic 1KB/4KB: 1 - 3" MIFARE DESFire EV1 8KB: 1 - 2" HID Proximity: 2 - 5"			
Dimensions	2.127" x 3.375" x 0.033" max (5.40 x 8.57 x 0.084 cm)			
Construction	100% PVC (232) 60% PET/40% PVC (242)	60% PET/40% PVC	100% PVC (232) 60% PET/40% PVC (242)	60% PET/40% PVC
Operating Temperature	-40° to 158° F (-40° to 70° C)			
Weight	0.24 oz (6.8g)	0.28 oz (7.9g)	0.24 oz (6.8g)	0.28 oz (7.9g)
Memory Size/ Application Areas	iCLASS: 2 kbits with 2 application areas or 32 kbits with (16k/2 and 16k/1) or (16k/16 and 16k/1) MIFARE Classic: 1 Kbyte (8k bits) arranged in 12 sectors or 4 Kbytes (32k bits) arranged in 40 sectors MIFARE DESFire EV1: 8 Kbytes arranged in up to 28 applications, with up to 32 files per application			
Write Endurance	Min 100,000 cycles			
Data Retention	Min 10 years			
HID Proximity	No	No	Yes	Yes
Contact Smart Chip Embeddable	No	Yes	No	Yes
Magnetic Stripe	Optional			
Printable	Yes (white/white card)			
Standard HID Artwork	Optional			
Slot Punch	Not Available (Dual HF cards do not allow a slot punch)			
Visual Security Options	Optional			
Additional Security Options	Corporate 1000, iCLASS Elite (iCLASS only)			
Warranty	Lifetime	Lifetime (Card body only)	Lifetime	Lifetime (Card body only)

* See 13.56 MHz HTOG for available combinations. Not all combinations listed are available.

© 2010 HID Global. All rights reserved. HID, the HID logo, and iCLASS are trademarks or registered trademarks of HID Global in the U.S. and/or other countries. All other trademarks, service marks, and product or service names are trademarks or registered trademarks of their respective owners.

mkt_28sep2010_dualhf_cards_ds_en



ACCESS flexibility.

hidglobal.com

Corporate North America
15370 Barranca Pkwy
Irvine, CA 92618
U.S.A.
Tel: 1 800 237 7769
Tel: +1 949 732 2000
Fax: +1 949 732 2360

Asia Pacific
19/F 625 King's Road
North Point
Island East
Hong Kong
Tel: +852 3160 9800
Fax: +852 3160 4809

Latin America
Circunvalación Ote. #201 B
Despacho 2
Col. Jardines del Moral
Leon 37160, Gto.
Mexico
Tel: +52 477 779 1492
Fax: +52 477 779 1493

Europe, Middle East & Africa
Haverhill Business Park
Phoenix Road
Haverhill, Suffolk
CB9 7AE
England
Tel: +44 1440 714 850
Fax: +44 1440 714 840