

# Dual RF Cards

## UHF AND HF MIFARE TECHNOLOGY COMBINED INTO ONE POWERFUL CARD

Get the best of both worlds with Zebra's dual RF technology card. This single card combines the benefits of HF Mifare and UHF Gen 2 passive RFID technology. This card is both flexible and powerful - flexible because the HF and UHF technologies can be used independently for separate applications or powerful when the HF and UHF are combined for full coverage of mixed technology applications. Mifare technology is fully compliant with ISO/IEC 14443 Type A, and can be used for a variety of applications including transactions and access control. The UHF technology supports all types of long read-range applications and is ideally suited for people location and asset tracking.

RFID cards contain an antenna that receives and transmits the RFID signal. Zebra's unique antenna inlay design combines high frequency and ultrahigh frequency antennas, with no batteries required. It can be slot punched to hang in either portrait or landscape format and personalized with any Zebra card printer.



### Print and Encode Zebra's Dual-RF Card with the Zebra ZXP Series 7, ZXP Series 9 or ZXP Series 3 Printer

The ZXP Series 3, 7 and 9 Printers all offer high-quality, dual sided card printing, and optional MiFare HF encoders allow you to encode the MiFare chip. The ZXP 7 series card printer also has an optional UHF encoder available as well.



### UHF RFID

Zebra's patented ultrahigh frequency (UHF) antenna delivers exceptional read range. Because it can be read from afar even through badge holders, handbags, pockets and backpacks, you can use the RFID card to streamline and ease congestion in your identification, access control and asset management processes. Plus, keep track of people to increase personal safety and facility security, capture guest/visitor data, and enhance the customer experience by enabling guests to instantly share information with their social media contacts.

This card features the NXP Ucode 7 chip to deliver unique privacy, performance and memory benefits, while containing an unalterable serial number to prevent counterfeiting.

### MIFARE HF RFID

MIFARE is a leading industry standard for contactless high frequency smart cards, compatible for printing and programming in select Zebra card printers. MIFARE cards provide added security such as the ability for users to program and lock key information stored in the cards' memory banks, sealing a user's valuable or confidential information.

- This contactless card features a unique chip identification number and a 10cm read/write distance.
- Transaction speeds handled in milliseconds, means cardholders are not forced to stop at card readers for their card to be read, thus high-speed throughput at doors, gates, boarding areas, etc.

For more information about Dual RF Cards, visit [www.zebra.com/cards](http://www.zebra.com/cards) or access our global contact directory at [www.zebra.com/contact](http://www.zebra.com/contact)

## Dual RF Card Specifications:

### CARD FEATURES

- ISO/IEC 7810-2002 compliant
- Zebra's unique antenna inlay design
- Passive operation (no battery required)
- High frequency + Ultra high frequency technology
- Multi-application card available with and without magnetic stripe

### PHYSICAL CARD CONSTRUCTIONS

<b>Finish</b>	Glossy finish and dye-sub printable surface
<b>Body</b>	PVC
<b>Overlay</b>	Clear-PVC
<b>Nominal Height</b>	2.125"/53.98 mm
<b>Nominal Width</b>	3.370"/85.60 mm
<b>Nominal Thickness</b>	30 mil ± 3 mil
<b>Over-laminates</b>	Receptor for dye-diffusion thermal transfer printing

### RFID SPECIFICATIONS

#### UHF:

- Protocol: EPC global Gen 2 and ISO 18000-6
- Worldwide operation in the UHF RFID frequency bands (860 – 960 MHz)
- Chip: NXP Ucode 7
- Up to 128-bit of EPC memory
- Supports pre-serialization for 96-bit EPC
- 96-bit Tag Identifier (TID) factory locked
- 48-bit unique serial number factory-encoded into TID
- No User Memory
- 32-bit kill password to permanently disable the tag
- 32-bit access password

### HF MIFARE SPECIFICATIONS

<b>1Kb EEPROM memory</b>	<ul style="list-style-type: none"> <li>– Organized in 16 sectors with 4 blocks of 16 bytes each</li> <li>– Unique chip identification number</li> </ul>
<b>Contactless MIFARE interface</b>	<ul style="list-style-type: none"> <li>– 10 cm read/write distance (influenced by reader antenna configuration)</li> <li>– Complies with ISO/IEC 14443 parts 2-3</li> <li>– 13.56 MHz operating frequency</li> <li>– Data rate transfer 106kbps</li> <li>– Short transaction times: &lt;100 ms</li> </ul>
<b>Electrical characteristics</b>	<ul style="list-style-type: none"> <li>– 10-year data retention</li> <li>– Ambient temperature -25 to +70°C</li> </ul>

### TARGET APPLICATIONS:

- Customer Loyalty
- Asset Tracking & Management
- Inventory management
- Gaming
- Access Control
- Event Management & Ticketing
- Cruise Lines and Resorts

Specifications subject to change without notice.

\*Read range may vary depending on environment and application.



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