



# EMPOWER YOUR CUSTOMERS AND YOUR ASSOCIATES WITH THE POWER OF **CONTACTLESS NEAR FIELD COMMUNICATIONS (NFC)**

## MOTOROLA MC75A HF




### **IMPROVE CUSTOMER SERVICE, BUSINESS EFFICIENCY AND TASK ACCURACY IN TICKETING, IDENTITY AND ACCESS MANAGEMENT APPLICATIONS WITH NFC**

The Near Field Communications (NFC) contactless transaction and payment revolution is here. Businesses and government agencies alike can benefit from the true touch-and-go transaction simplicity that this 13.56 MHz RFID technology enables. How can you take advantage of this next generation of convenient, efficient and secure payment technology? With the Motorola MC75A HF mobile computer. This lightweight yet rugged handheld device makes it easy to deploy a world of new HF mobile applications that benefit customers as well as workers.

In the fraction of a second, workers can use the MC75A HF to securely process a ticket or transit card for a commuter bus, train or concert — or read NFC-enabled cards, tickets, tokens or tags on passports, employee badges and other business assets.

The NFC-based business processes improve service levels, while rapid and automatic transaction and payment processing keeps lines and wait times down. And many processes inside enterprises and government agencies can be performed faster and more accurately, improving employee productivity and eliminating costly errors that could compromise workplace and citizen security and safety.



# WITH **HF** RFID TECHNOLOGY IN HAND, WORKERS CAN ACCURATELY IDENTIFY TRAVELERS CROSSING THE BORDER FASTER THAN EVER BEFORE, **ELIMINATING LONG LINES AND WAIT TIMES.**

## **NFC APPLICATIONS**

### **NFC transactions**

Regardless of whether patrons are holding a ticket to board a bus or enter a sporting event or amusement park, or preparing to buy an item with a loyalty card, you can complete the transaction in a split second with NFC HF RFID technology.

Not only has the NFC transaction arrived — it's here to stay. Juniper Research forecasts a dramatic expansion in the NFC payment market, with NFC transaction values anticipated to increase 500 percent annually between 2011 and 2013. In 2013, the annual value of NFC-based transactions is predicted to reach \$75 billion, with a majority of the money spent on tickets, refreshments and food.<sup>1</sup>

Secure transactions for ticketing or payment are handled via the ISO14443 standard protocol. These debit-based, closed loop payment protocols are adopted when a company or government entity can control a service and fee infrastructure — unlike the open loop credit protocols offered by major credit companies. The different variants of this protocol — which include MIFARE™, Calypso® and FeliCa® — may require a Secure Access Module (SAM) to provide the keys to the payment network for secure and encrypted communications between readers and NFC-enabled assets.

Since the MC75A HF has two SAM slots, this one device can support simultaneous multiple transaction types, offering maximum flexibility and a faster return on investment. NFC payments are today's preferred,

most accepted and most secure forms of modern payment. Its short read range, mutual authentication schemes, per-transaction encryption and authentication mechanisms and hard-to-duplicate features are proven to be safer and more secure than cash and magnetic stripe technology.

### **How does it work?**

Contactless ticketing works similarly to the way a checking account and ATM card work. Customers can create an account with the issuing agency and load that account with the desired amount of funds. An HF RFID-enabled plastic card is issued to the customer, who then taps the card on the MC75A HF mobile computer to utilize the available funds in the account. In the future, customers with an NFC-enabled mobile phone won't even need to carry a physical card. The NFC chip inside mobile phones will hold the same information as today's physical plastic cards, helping make the concept of the e-wallet a reality. Now, instead of a physical plastic card, patrons can simply tap their NFC-enabled mobile phone on the MC75A HF to complete a transaction.

The result? The electronic ticket information is automatically read and verified, allowing workers to process every ticket in under a second. For the customer, this means no more lost or stolen tickets, or managing paper tickets or monthly passes that might be accidentally left at home on the kitchen counter. Transit associates no longer need to collect and examine physical tickets to make sure they are valid. And since associates can now process more transactions in less time, long queues and wait times at entry points are eliminated.

1 — <http://www.rfidjournal.com/article/view/7020>

In addition to ticketing, customers can also use an HF RFID-enabled gift, loyalty or other pre-paid card to make purchases on a closed loop transaction system where you control the fee structure and no involvement is required from credit card companies. For example, on a cruise or in a resort, guests can simply tap an HF RFID-enabled room key on the MC75A HF to charge purchases to the room — from a boutique apparel store to the spa and coffee shop. The high cost of creating and maintaining a paper trail is eliminated — guests no longer need to sign physical receipts that must be processed, entered into the hotel computer and physically filed. And additional security factors can be added to the new electronic HF transaction process. For example, when a card comes in contact with the MC75A HF, the guest room number can be automatically displayed on the mobile computer screen. Hotel associates can then ask the purchaser to verify the room number before completing the purchase, eliminating disputed charges.

### Identify Verification, Security Screening and Access Control

When RFID is utilized to validate identity, authentication and verification can take place almost instantly, with zero error. Since the process is automated, identity is established quickly — and there is no room for the human mistakes that can occur when documents are manually examined to determine identity.

HF-enabled identification applications include:

- **Passports.** Approximately 50 percent of all the new passports in the world are issued with an integrated HF RFID chip. And in the U.S., 100 percent of all new passports issued are RFID-enabled. As a result, workers can process the tens of thousands of people crossing international borders faster than ever before. Long lines and wait times are eliminated. And the ability to identify and prevent unauthorized persons from entering a country helps better protect citizens everywhere.
- **Identification/Loyalty/Access cards.** When HF RFID is embedded in employee badges as well as government issued identity cards such as Common Access Cards (CACs), Personal Identity Verification (PIV) cards, Transportation Worker Identification Credential (TWIC) cards and driver's licenses, you have complete identification control as well as an audit trail of who enters and exits a specific area — from your building to a parking lot or facility.

### Asset Control and Tracking

When HF RFID tags are placed on your assets, workers can capture asset information without paper and pen, reducing cycle times and eliminating the errors that occur when handwritten information must be later transcribed into a computer system. In addition, the asset information is captured and transmitted to your systems in real time, eliminating delays that can inject inefficiencies into your everyday processes.

Examples of asset tracking applications include:

- **Vending machine management.** Workers can tap the MC75A HF on the vending machine to capture its asset number automatically. Field technicians can reference the maintenance records that are kept on the tag, allowing supervisors to ensure that all required stops were made and all machines were restocked.
- **Library checkout.** When HF RFID tags are embedded in library books, brick-and-mortar and mobile libraries can automate the check-in and checkout process. With very little effort, you can see the disposition of every book — whether it is inside the library, whether a patron has checked the book out, which patron has the book and when the book is due. And since the MC75A HF is a lightweight handheld device that is not only portable, but also works over the cellular network, this single device can be used in both traveling mobile libraries as well as permanent library buildings.
- **Equipment maintenance and inspections.** Out in the field, engineers can simply tap the MC75A HF on equipment or other assets to obtain the asset number, the asset description and other identifying information. As a result, maintenance and inspections are always performed on the right asset. And the information collected on the job site is always posted into the right asset record.
- **Specimen, medication and blood donor tracking.** Nurses and other healthcare workers can scan their HF RFID-enabled badge and the HF RFID-tagged medication or specimen to ensure that the right patient is about to receive the right medication — and the right specimen is about to be collected the right way from the right patient, so the right patient receives the right test results. In addition, HF RFID can help prevent one of the most dangerous medical errors — the administration of the wrong blood

# WITH THE **MC75A HF**, LIBRARIES CAN CHECK BOOKS IN AND OUT IN SECONDS.



to the wrong patient. HF RFID technology allows donors to be assigned a unique number the moment they walk into the blood bank. An HF RFID label is then coupled with the donor's blood bag. When healthcare workers use the MC75A HF to capture the information on that label as the blood moves through the transfusion supply chain, it is visible and easily identifiable regardless of where it is located, right up to the moment it is administered to the patient.

- **Asset location verification.** With the MC75A HF, you not only know what assets you have, but also where they are located. A quick tap on the HF-RFID tagged asset captures the asset information, while the GPS information captures location information. The result is the collection of a highly detailed and very cost-effective inventory in a fraction of the time required for a standard inventory take.

## **SUMMARY**

Regardless of whether your workers are reading HF RFID information embedded in payment or loyalty cards as well as identification documents such as passports, or on HF RFID tags that have been placed on capital assets, you can count on the Motorola MC75A HF to perform day in and day out, in practically any environmental condition. The MC75A HF is built to handle rain, snow, heat and cold as well as the inevitable drops and bumps that come with daily use. Part of the highly successful MC75 Series, you get a well-proven device currently in use supporting applications all around the world. The fully featured device also functions as a mobile phone, mobile computer, bar code scanner, camera and GPS, so no matter what tools your mobile workers need to get the job done, they are always in hand. And since the MC75A HF is backward compatible with any existing MC70 or MC75 accessories you may own, you can cost-effectively enable NFC applications in your organization today.

To find out how you can leverage the power of contactless NFC applications in your organization, please visit [www.motorolasolutions.com/mc75ahf](http://www.motorolasolutions.com/mc75ahf) or access our global directory at [www.motorolasolutions.com/enterprise/contactus](http://www.motorolasolutions.com/enterprise/contactus)



When [HF RFID](#) tags are placed on assets, workers can simply tap the MC75A HF on the tag to instantly identify the asset and display the right work order and asset history on the screen of the MC75A HF. Paper and pen-based processes are eliminated, allowing workers to spend more time on task instead of on paperwork. And maintenance and inspections are always performed on the right asset.



The [MC75A HF](#) mobile computer helps track blood from the moment it is donated to the moment it is administered to a patient. The end-to-end real-time tracking allows recalled blood to be located and pulled from the transfusion supply chain immediately, while also helping prevent one of the most dangerous medical errors — the administration of the wrong blood to the wrong patient.

## SOLUTION BRIEF

MC75A HF — THE POWER OF CONTACTLESS NEAR FIELD COMMUNICATIONS (NFC)

# ABOUT MOTOROLA SOLUTIONS

Motorola Solutions helps businesses gain increased visibility and automation through wireless technologies like HF and UHF RFID. Motorola Solutions extends the value of your RFID solution with a portfolio that includes wireless infrastructure, advanced data capture, and mobile computing products. Our comprehensive offering simplifies deployment, lowers costs, and maximizes return on investment. Inspired by our vision of transforming the enterprise, Motorola Solutions is committed to helping you seamlessly connect to the people and information that drive your business. For more information about our company, our people and our innovations, please visit [www.motorolasolutions.com/enterprise](http://www.motorolasolutions.com/enterprise)

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