



## How Upgrading to RFID Door Locks Delivers Guest Satisfaction and Efficiency to Hotel Operators

Upgrading to RFID  
is the path to  
mobile access

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## Executive summary

When RFID (radio frequency identification) door lock systems were introduced to hospitality more than 10 years ago they were applauded by operators and guests for their superior reliability. At that time, magstripe door locks and keycards were widely used as a replacement for metal keys. But magstripe keycard systems were a frequent source of guest dissatisfaction. Guests had to carefully insert and withdraw their magstripe keys into the lock reader or their door would not open. Magstripe keycards could also be disabled by coming into contact with mobile phones which have a small magnet in their speaker. Because of this, front desk staff had to constantly re-code erased keycards when guests were locked out of their room. When RFID technology was introduced it was rapidly adopted because RFID keycards were easy for guests to use, not subject to erasure, and provided a smooth upgrade path to emerging mobile access technology.

Today, RFID door locks are the industry standard. They are in wide use in all property types from destination resorts to conference centers, corporate hotels, luxury and mid-market properties. In many cases major brands mandate mobile-ready RFID locks as the franchise standard, with mobile access capability tied to the brand's marketing programs. Because of their ease of use and reliability, properties that installed RFID door locks report increased guest satisfaction scores and fewer guest complaint penalties from franchisors. An added benefit to RFID locks are their sealed units that don't require periodic cleaning as do magstripe locks. RFID's strengthened security also reduces property liability.

This eBook provides a summary of the hoteliers' experience and improved performance with RFID door lock systems.





## The RFID advantage

RFID locks work by a hotel guest passing a keycard with a secure RFID chip over an RFID sensor on the lock. Technology in the lock mechanism receives the chip's unique code and determines whether the code is on an approved "pass" list. If so, the lock disengages to allow access. The lock also records the key's unique identification code and time-stamps the entry event. Unlike magstripe, RFID locks are "contactless." The RFID key never enters the lock mechanism and the lock reader is sealed to reduce maintenance.

Magstripe locks are still commonplace in many hotels worldwide, but this is changing. Nearly all new-build hotels implement RFID locks and as magstripe locks reach the end of their useful life, properties retrofit with RFID locks. Many operators cite key erasures as a major source of guest complaints due to contact with cell phones. RFID lock systems overcome guest key erasure difficulty and are valued by guests because the keys are not affected by cell phones.

Another advantage of RFID locks and keys is their detailed audit capability. RFID locks automatically log door entries and note ownership of each key used. They also log and, if networked, transmit lock diagnostic data from a particular room. Further, unlike most magstripe units, RFID keys keep a history of where they were used. This feature reduces property liability and supports investigations to assess how and where employees use their keys.





### **Bluetooth Mobile Access Solutions**

An added benefit to RFID adoption is that the latest RFID technology easily upgrades to mobile access BLE (Bluetooth low energy) lock use. Many major brands have mandated that franchisees must implement BLE locks to comply with chain marketing and guest service programs. This makes upgrading to the right RFID lock platform essential for some operators.

### **Reliability**

"We standardized our properties on RFID guestroom access because the locks are reliable," said the director of operations for a well-known property management company which installed BLE-ready RFID locks at 21 hotels.

"We will implement mobile-ready RFID locks at approximately 30 more hotels in the future. This includes many properties with magstripe locks that we will retrofit with RFID BLE-ready units."

RFID locking systems are the preferred option for hoteliers as RFID key prices continue to drop. The price differential between RFID and magstripe locks (depending on design and aesthetic options) is negligible but the benefits of RFID are increasingly tangible. Not only do operators report they are easier for guests to use and more reliable than magstripe systems, they appeal to properties with exterior facing rooms whose open magstripe systems are quickly corroded by moisture in the air and solid contaminants. Overall, RFID systems deliver strong performance in the most important areas of hotel operations: reliability, ease of use, security, and lower maintenance.







### Long Lasting Keys

Hoteliers initially question if the cost of RFID keys is worth the investment, especially since many guests treat hotel keys as throwaway items. This has proven not to be the case with RFID keys. Many operators have instituted RFID key return programs to support key reuse. Most operators cited in this eBook developed programs that boosted their key return rates. These programs are effective because RFID keycards have a much longer reusable service life than magstripe credentials.

A 100-room Hampton Inn & Suites in Mississippi reported an 85% returned key rate after it launched a housekeeper key-return incentive program. Incentives included a \$20 gift card for the best monthly key-return total. Similar programs educate housekeepers to return RFID keys from vacated rooms and be proactive by inviting departing guests to return keys to them. The property's general manager said, "Guests did not return their keys when we first installed our RFID system, so we used them up quickly. Now, I estimate guests return at least 85% of the keys with our incentive program. This is a real cost savings. I keep extra backup keys in my office, but I rarely have to pull out new keys."

A 400-room Hilton conference center in Texas reports similar success. "We provide convenient key-return drop boxes for departing guests," said the director of loss prevention for the Hilton conference center. "We also train our housekeepers to return keys and my officers retrieve them when they find them. We are getting more than 80% of our keys returned; this is a major savings. RFID keys are more durable than magstripe units and we re-use them many times. Initially they are more costly than magstripe keys, but they are long lasting keys."

A 1,600-room Forbes Four-Star, AAA Four Diamond convention property in Orlando also created an employee incentive key return program that saves \$5,000 in key costs monthly. The property's four housekeeping teams compete for the highest number of keys returned each week. The winning team gets a free lunch in the employee cafeteria. The hotel also offers a drop box for key collection at the exit of its gated guest parking deck.





## RFID: Reliability increases guest satisfaction

Guest satisfaction is critical to property profitability, particularly in highly competitive markets. Loyal guests drive revenue. Dissatisfied guests cost properties money in the form of complementary rooms, and in franchisor penalties if complaints and low satisfaction scores reach certain levels. Guests prefer RFID locks for their reliability, ease of use, and because they eliminate magstripe key demagnetization.

A large Embassy Suites in southern Texas was losing business due to numerous guest complaints from magstripe keycard erasures. Their retrofit with an RFID system virtually eliminated guest key complaints. "The RFID lock system reduced our guest key complaints by 90%. It also reduced the time our staff spent resolving key-related issues," the general manager said. "In addition, with magstripe keys we received 'intervention fee' fines from our franchisor for repeated low guest satisfaction scores related to key erasures. After replacing the magstripe locks with RFID, the key-related penalties stopped. This more than made up for any extra costs."

The general manager of the Mississippi Hampton Inn & Suites prefers the RFID locks hands-down to the magstripe units she had at a big-box flagged property she managed previously. "We are in a competitive market and RFID keys make our hotel more attractive to guests. Guest convenience and guest satisfaction are worth the extra key price," she said. "At my previous property, guest complaints due to magstripe key erasure were an ongoing source of corporate franchisor action because our guest satisfaction scores were negatively affected." The Orlando convention property has seen key assist issues disappear with the RFID lock system. "We reduced key assists by 75% with RFID over magstripe," said the property's director of rooms.

"This saves a significant amount of labor. Our security people frequently assisted guests and our front desk staff recoded dozens of erased magstripe keys daily. With RFID keys we only have to assist with rekeying when guests leave keys in their room. This has clearly improved our guest satisfaction."

A 365-room Best Western in Florida reported similar benefits. "The old magstripe keys were erased constantly," said the property's chief engineer. "We retrofitted with RFID and have no erasures at all. It saves a great deal of time at the desk and for my engineering staff. RFID locks are very much worth the price."



## RFID provides strengthened security

The 400-room Hilton conference center in Texas saw a clear ROI from the property's RFID lock use. "The RFID keys save our security team many man hours," said the director of loss prevention. "With RFID, my officers spend their time on security matters that increase guest safety instead of continually helping guests with key erasure and guestroom entry problems. There is a big difference between RFID and magstripe security. Comparing the security advantages of RFID over magstripe is like comparing a VW with a Cadillac."

The Embassy Suites in southern Texas appreciates the flexible security of its RFID units. "We frequently interrogate locks to answer security questions," said the general manager. "This is much more effective than with our older magstripe units. We have our system configured and keys programmed for greater control of staff access and more effective security than with our older magstripe locks."

The Hilton conference center in Texas also appreciates the added security for similar reasons. "Guests sometime allege articles are taken from their room. With RFID, we show them that no one entered the room when the guest said they were not there," said the director of loss prevention. "With our previous magstripe keys this was impossible. Now our keys tell the story. We interrogate keys to see where and when they were used. For greater staff oversight, we tell all new employees during orientation we can identify where they use their keys. This may help guide their actions."



# Savings in maintenance/ cleaning with sealed RFID locks

Magstripe locks must be regularly cleaned to continue working properly. Property engineers or security staff members typically use a specially treated keycard for cleaning. They push it into the lock repeatedly to clear away dust, debris and any buildup that the magstripe keys leave behind within the locking mechanism. This time-consuming maintenance activity is not required for RFID locks with sealed key reading mechanisms. Additionally, RFID technology is contactless, this means there are no moving parts in encoders and card readers. This reduces the potential failure points due to vandalism and wear and tear.



## RFID locks reduce maintenance costs

- The 1,600-room Orlando convention property routinely cleaned its magstripe locks once per quarter, taking an average of three hours per 100 locks. "The use of RFID locks delivers a significant reduction in labor costs over a year's time," said the general manager.

- The 400-room Hilton conference center in Texas assigned loss prevention officers to spend 48 hours or more per quarter cleaning magstripe locks to work reliably. "With RFID, those employees are now free to concentrate on guest safety and security matters," said the general manager.

- The large Embassy Suites in southern Texas is also realizing a solid ROI. "We retrofitted RFID after using magstripe units," the general manager reported. "Before that, we had to clean our old magstripe units once a quarter and it took an engineer all day. Our engineers now have more time to focus on other duties. This saves time and labor."

- The SpringHill Suites in Alabama reports savings. "At my previous Springhill Suites property we had to clean magstripe locks twice a month to keep them reading keycards properly," said the general manager. "This kept an engineer busy for most of a day every two months. In our new property, our engineer does not spend time cleaning any locks."



# Conclusion

A majority of properties worldwide are replacing magstripe door locks with RFID solutions. Guest satisfaction, reliability and security are primary motivators. Brand requirements are also a factor. Most brands require that franchisees provide guests with reliable, easy to use, secure door locks and assess financial penalties if properties do not meet the brand's guest satisfaction criteria. Trouble free RFID guest door locks and enhanced guest experience are a high priority as operators invest in brand standards.

## **RFID locks prove their value to operators and deliver a strong business case.**

In summary:

- RFID systems increase guest satisfaction. They virtually eliminate key erasures and associated guest complaints. RFID reliability frees staff from continually responding to guest complaints and time associated with recoding keys.
- Operators that have implemented effective key return programs realized minimal key replacement expense after initial RFID key purchase.
- Sealed RFID locks free engineers from the time and labor of frequent magstripe lock cleaning and enables them to focus on other duties.
- RFID locks provide heightened security for guests and staff. RFID locks automatically log door entries and lock diagnostic data for a safer property environment.
- Maintenance costs are reduced due to elimination of moving parts (in readers and encoders) that wear and tear.
- RFID locks simplify hotel operations.



The capability of running battery reports via staff cards rather than quarterly inspections means that battery levels can be more closely monitored and replaced only as needed.

RFID locks provide a solution that allows for future integration without entirely replacing the hotel's locking systems. For more information on RFID door lock systems and future technological possibilities, please contact us at [infolodging@dormakaba.com](mailto:infolodging@dormakaba.com) or visit our Lodging website [dormakaba.us](http://dormakaba.us).

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