

# KEARNEY ENTERPRISES LLC

## INTEGRATED SMART HEALTH CARD SOLUTION



Kearney Enterprises LLC offers the most sophisticated on-line medications purchases system two years ahead of Amazon: Not available anywhere else.

The Kearney Smart Card System is ready to go now. Beginning in 2007, Dr. Kenneth Lill (Managing Member of Kearney) and his team anticipated the importance of on-line purchases and proved its system's success in Buffalo, New York, so Kearney is ready. Testimonial from the Chairman of the Pharmacy Department of the University of Buffalo (state University of New York) is available.

If a drugstore Chain uses Kearney's system, when a pharmacy customer using Kearney's system checks into a hospital and visits different departments, the hospital does not need to repeat questions – it has everything in one place.

The system that Dr. Lill and his team created in Buffalo can be tailored to become a de facto pharmacy loyalty card in line with prescription eligibility card requirements of Pharmacy operations.



Figure #1

### 1. What is the Kearney Smart Card System?



The Kearney Smart Card System consists of multiple forms of access utilization. First is a small card or similar device with an embedded integrated circuit chip. Smart cards typically look like a credit card (Figure 1) although they can take different forms (See FAQ 8). What makes the card "smart" is the embedded chip. The chip is a powerful minicomputer that is programmed for a variety of Healthcare Records management. Our chip enables the smart card to store and access data and applications securely and exchange data securely with readers and other end user systems. The Kearney Smart card technology will provide high levels of security and privacy protection, making it ideal for handling sensitive information such as identity and personal health information. The second access form is through a medical Kiosk or smart hand held device. Both are viable and provide the level of services.

### 2. How does the Kearney Smart Card System work?

A smart card connects to a card reader either through direct physical contact or through a remote, contactless radio frequency (RF) interface. A typical contact smart card has a plastic card body, a chip embedded in the body, and a contact plate. The contact plate (usually gold-plated) is visible on the surface of the card (Figure 2).

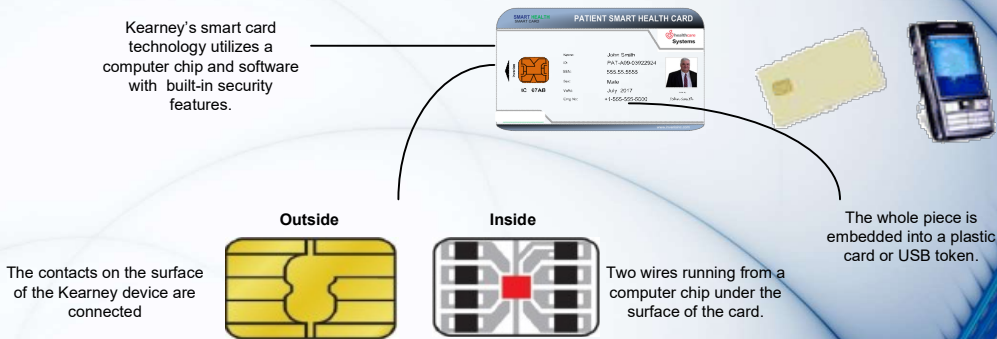


Figure #2

To work, a contact smart card is inserted into a smart card reader, which touches the contact plate. Commands, data, and card status are transmitted over the physical contact points.

**Special note: The Kearney System functions well within a remote smart device connection as well as Kiosk connectivity providing the same level of service found with the Smart Card technology.**

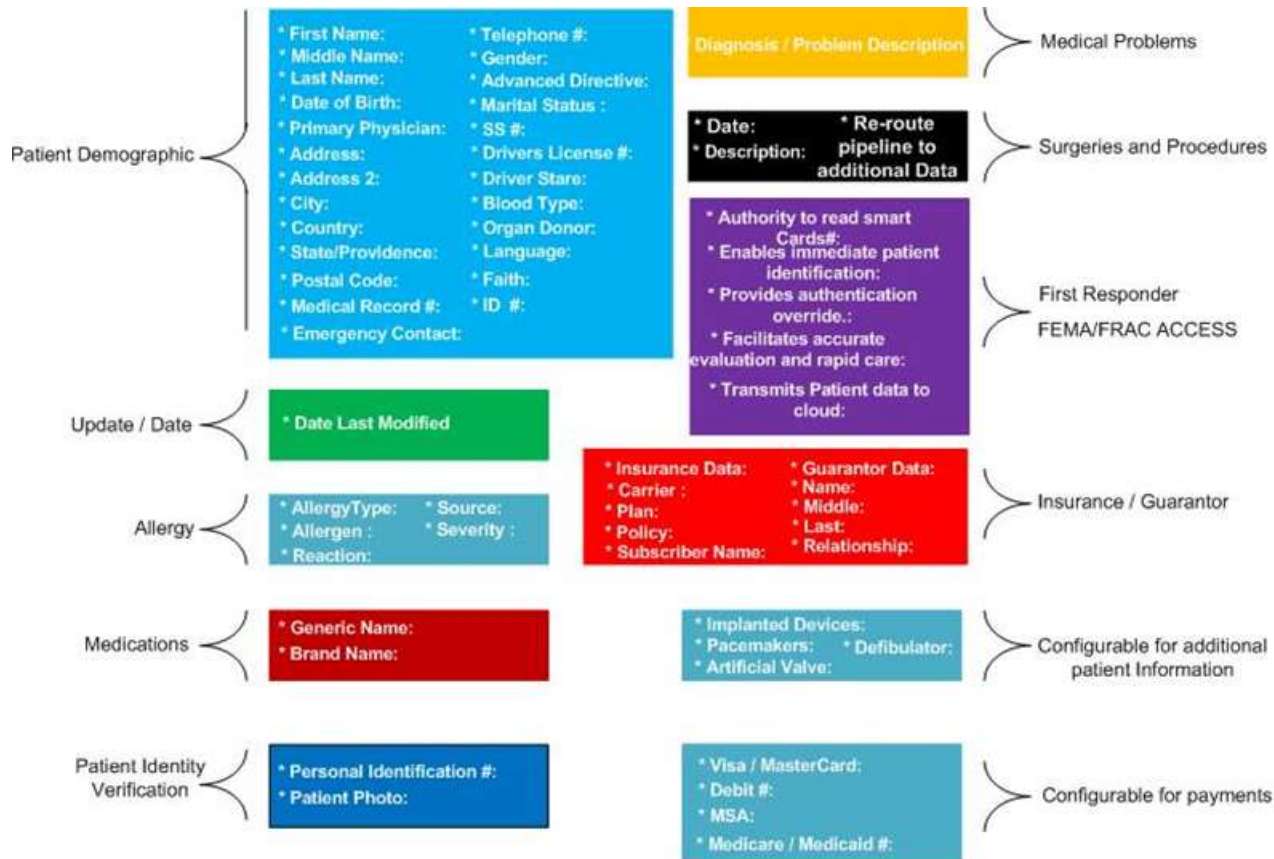




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### 3. What kinds of Healthcare information is stored on the Kearney Smart Card?

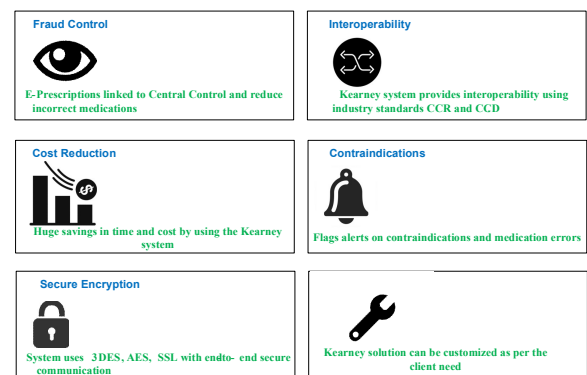
While some smart cards can securely link to cloud-based patient information systems, the Kearney smart cards can also store a wide variety of information to support healthcare applications. Figure 3 below illustrates examples of the types of healthcare information that may be stored on the Kearney Smart Healthcare card.



### 4. What Kearney features protect my personal and medical information?

Unauthorized access to sensitive personal healthcare information (PHI) is a critical concern, as more and more medical data is converted to a digital format. Multiple security features enable the Kearney smart cards to protect PHI—both information that resides on the card and information that resides on a remote server accessible over the internet through a secured socket.

The primary line of defense is the use of authentication methods that protect against unauthorized access to data stored on the card. The Kearney Smart cards are programmed to require a personal identification number (PIN). To protect the most sensitive PHI, our smart card can require multifactor authentication, which is enabled by requiring a combination of three factors for access: something the person knows (e.g., a PIN), something the person has (e.g., the smart card itself), and something the person is (e.g., a biometric characteristic, such as a fingerprint). Smart cards can also be programmed to enforce user access rules allowing only authorized doctors, hospitals, and medical staff to access all or part of a patient's PHI



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### 5. Does the Smart Card from Kearney have advantages over a magnetic stripe card?

Kearney Smart cards have significant advantages over magnetic stripe cards for healthcare applications.

The Kearney smart cards are highly secure; they are used worldwide when the security and privacy of information are critical requirements. Both contact and contactless smart cards can support the high levels of security required to protect sensitive information and enable secure transactions. Kearney Smart cards can protect healthcare information in a number of ways:

- Smart cards with embedded microcontrollers can encrypt and securely store a patient's personal health information.
- The Kearney Smart card can control who accesses the stored information.

For example, the patient's personal health information can be protected so that only authorized doctors, hospitals, and medical staff can access all or portions of that information. The smart card can enforce rules for accessing a patient's medical information, even when used locally with a reader that doesn't connect to a central system.

- Smart cards can support multifactor authentication.

Patients and providers can use smart healthcare cards as a second factor when logging in to a computer system to access information. Smart cards can also support the use of PINs and biometric data (e.g., a fingerprint) for further access protection.

- Kearney Smart cards can support digital signatures, which are used to determine whether the card was issued by a valid organization and whether the data on the card has changed since issuance.
- Kearney Smart cards use secure chip technology and are designed and manufactured with features that help deter counterfeiting and thwart tampering.

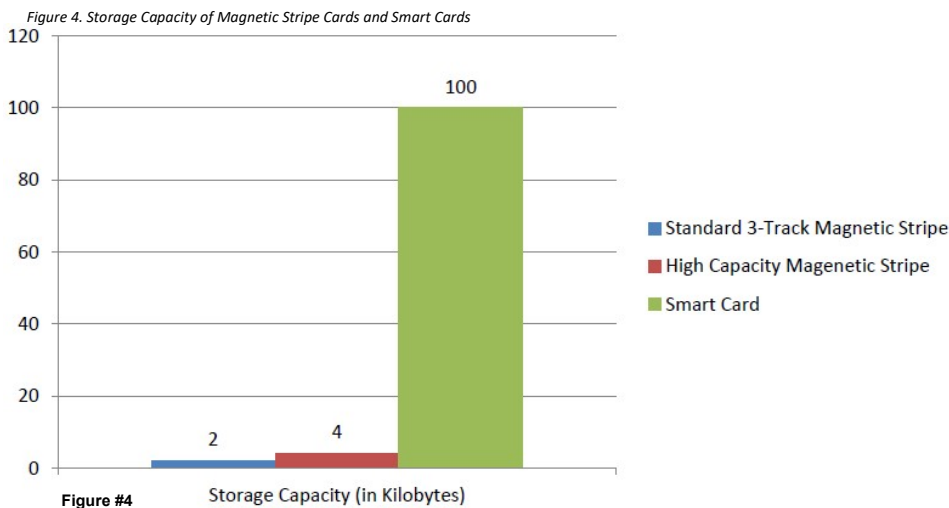
First, Kearney's secure smart chip technology, encryption, and other cryptography measures make it extremely difficult for unauthorized users to access or use the information on a smart card or to create duplicate cards. These capabilities help protect patients from identity theft and healthcare institutions from medical fraud and can also help healthcare providers meet HIPAA privacy and security requirements.

Second, Kearney smart cards are flexible. Information can be added securely to a card after the card is issued. This flexibility means that patient healthcare information can be written to and updated on a smart card by authorized healthcare providers. Updated information is then available to both the patient and all authorized healthcare providers.

For example:

- Patient prescriptions can be written to the card, providing up-to-date information when a patient is receiving medical care from multiple providers or in an emergency.
- Multiple patient identification or patient record identification numbers can be written to the card, facilitating record exchange and coordination of care among multiple healthcare providers.

Third, smart cards can store more information than magnetic stripe cards. Figure 4 compares the storage capacity of magnetic stripe and smart cards.



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### 6. Is a contactless smart card the same as RFID and can I utilize a medical kiosk?

Contactless smart card technology is not the same as RFID. Discussions of RF-enabled applications can be confusing, and contactless smart card technology is often incorrectly referred to as RFID. Currently, a wide range of RF technologies are used for a variety of applications, each with different operational parameters, frequencies, read ranges, and security and privacy features. For example, the RFID technologies that are used to track inventory operate over long ranges (e.g., 25 ft.) and have minimal built-in support for security and privacy.

Contactless smart cards use RF technology but, by design, operate at short ranges (less than 4 in.) and are very secure. Contactless smart card technology is currently being used for secure identity applications worldwide.

### 7. Can the Kearney Smart Card store all patient information?

Some smart health card implementations can and will provide secure access to a cloud-based health information systems as a way of ensuring a patient's health information is protected and accurate.

However, the Kearney smart cards are also available with a variety of features and memory capacity. A card equipped with 128 Kbytes of memory, for example, can store more than 120 pages of data. Large data files that cannot be stored on the card, such as lab reports or diagnostic images, can be stored on a central server and be accessed by the card.

For example, EMT responders or an "outside" provider could use the card to access patients' health records stored on a server in the cloud. Since the card authenticates the patient's identity and carries additional medical and demographic data, it can be used as a key for authorized healthcare providers to unlock and access additional data.

### 8. Who can access the information on my Kearney Smart card?

Kearney's Smart card systems are very secure. Access to the information on a card can be controlled and granted only to authorized personnel. A patient can control who accesses information, and access can be granted only with patient consent and given only to individuals identified by the patient or specified by policy. Access requirements can be defined; individuals may be given permission to access only specific information. For example, emergency personnel may need access only to details on allergies, prescriptions, or blood types. Access can also be controlled by PIN or biometric factor. All access transactions can be recorded for audit purposes and reported.

### IMPORTANT

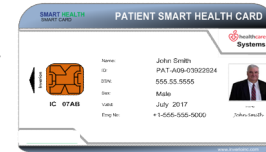
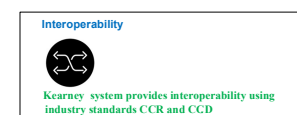
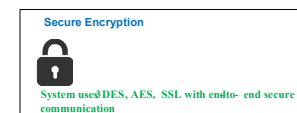


Figure #5



Special Note: Kearney can utilize medical Kiosk technology for entering visit and medical information.



### 9. What about Interoperability for existing systems **IMPORTANT**

Interoperability is achieved with native CCR protocol utilization. This is an industry standard for which Kearney provides heavy support. This allows unlike systems to correspond and work with each other. CCR (Continuity of Care Record) is a standard for the creation of electronic summaries of patient health. Its aim is to improve the quality of health care and to reduce medical errors by making current information readily available to physicians.

Like any personal health record (PHR), a Continuity of Care Record contains information such as patient demographics, insurance and health care provider information, medication lists, allergies and recent medical procedures. However, because a Continuity of Care Record is expressed in XML, it is not proprietary and can be created and read by any electronic medical record (EMR) or electronic health record (EHR) software system. In addition, records can be exported as PDF or OpenOffice XML files. The PHR services Google Health and Microsoft HealthVault both claim to support a subset of CCR standards.

Under United States guidelines for the meaningful use of EHR technology, a certified EHR system must be able to receive documents formatted in either the Continuity of Care Record or the Continuity of Care Document standard and display them in a human-readable format.