

Patented Data Security by CardConnect



CardConnect has been awarded two United States Patents for securing confidential information through tokenization.

There is a critical need to secure payment card information, personally-identifiable information (PII), and other types of confidential information that a business collects related to their customers, patients, and employees. To ensure that this need is met, all computer systems a business uses to process unencrypted confidential information, and possibly an entire corporate data center, must be compliant with a variety of regulations. The cost of compliance, as well as the cost of verifying compliance, can be substantial, both operationally and financially.

During the past 20 years, CardConnect has become quite familiar with these regulations when architecting enterprise-level payment solutions for dozens of corporations. CardConnect has worked to develop solutions that minimize the exposure and risk a business has when handling confidential information. The end result is a patented system that uses tokenization in regards to the introduction, storage and use of confidential information in corporate enterprise systems.

What is tokenization?

Before confidential information can enter a business system, application or computer, the information is captured and stored within a tokenizer. The tokenizer then returns a random string of data called a token. The token has no algorithmic relationship with the original piece of data (such as a credit card number), meaning the token is irreversible, and cannot be unlocked with a decryption algorithm. The only application that contains the token's corresponding confidential information is the tokenizer, which is securely hosted and protected by CardConnect.

Due to the irreversible nature of the token, tokens can be used in any application without the application, business system, or network having to comply with regulatory standards, such as the Payment Card Industry Data Security Standard (PCI DSS).

Official Definitions


Cardholder data:

PCI DSS standards define cardholder data as any clear or encrypted primary account number (PAN), and declare any system that "processes, stores or transmits" cardholder data, as well as any system on the same network segment, must comply with the DSS standards.

Personally-identifiable information (PII):

Government agencies describe PII as information which can be used to distinguish or trace an individual's identity (name, social security number, biometric records) alone, or when combined with other personal or identifying information which is linked or linkable to a specific individual (date and place of birth, mother's maiden name).

How CardConnect's Patented Tokenization Stacks Up

		Industry Standard
Token Security	Random Token (Irreversible)	Derivative Token (could potentially be hacked)
Token Intelligence	Luhn Test; BIN Recognition	Unrelated to 16-digit card number
Merchant Specific Security	Single use, intelligent token – unique to each merchant	Multi-use token – Using the same token for multiple merchants is a security risk
"High-Value" Token	Persistent Token – Merchant can reference a token without reissuing it for recurring payments	Individually Administered Token – a new token is issued for every transaction
PCI Scope Reduction	A combination of CardConnect's tokenization and integrated hardware (PANpad and P2PE terminals) help take a business out of PCI scope, greatly reducing requirements and cost of compliance.	Even with a quality tokenization solution, workstations and POS systems remain in scope of PCI compliance and potentially susceptible to catastrophic data breaches.
Keyed-in Card-Not-Present transactions	PANpad device encrypts and tokenizes card number immediately, removing customer service workstation from PCI scope	Card number entered via standard keyboard, leaving the customer service workstation subject to PCI regulations
Card Present Transactions	EMV-compatible P2PE devices resistant to malware	Standard swipe terminal potentially susceptible to malware attacks
E-Commerce	AJAX Tokenizer, iFrame, and Hosted Payment Page options	Basic encryption solutions that leave website or e-commerce application in PCI scope
Integration Capabilities	Developer friendly API that brings secure payment acceptance to most software applications	Integration requires costly customization
History of Protecting Payments	Launched in 2006 and used today by multiple Fortune 500 corporations without one security issue or leak of confidential information.	

