



Arcot Scrambled PIN Pad

Protect Passwords
From Spyware

DATA SHEET

Stop Keyboard Logging Attacks

Prevents automated capture of keystrokes or pattern matching based on mouse click

Integrated with ArcotID

Delivers tightly integrated, additional security to enhance the ArcotID software-based strong authentication and digital key protection solution

No Hardware Required

Direct and indirect cost benefits over hardware-based secure PIN alternatives

Custom Branding

User interface offers ability to display custom service brand to enhance customer confidence and loyalty

ARCOT SCRAMBLED PIN PAD DEFENDS AGAINST KEYSTROKE LOGGING VULNERABILITY: Also known as keyboard “sniffers”, this type of malware has become a serious threat to organizations that rely on authentication or log-on procedures that require a password or PIN entry. These keystroke capture programs are small, difficult to detect programs that can easily infiltrate a user’s computer without notice. These programs are designed to intercept and capture a user’s keystrokes in order to uncover a user’s personal passwords or PINs. Authentication systems such as username/password or password-protected PKI roaming servers are especially vulnerable. Once a password is logged, the user’s digital credentials are compromised. Using the stolen digital identity the attacker can now masquerade undetected as a legitimate user in the system.

To defend against this class of attacks, Arcot Systems has developed a patented (US Patent No. 6,209,102) technology to protect PIN (or password) entry from keyboard capture attacks. Arcot’s Scrambled Pin-Pad technology defeats keyboard “sniffers” bypassing the keyboard entry system but in a software only solution that is significantly easier to deploy and easily integrated with existing password/PIN-based authentication solutions. The Arcot system locks-out the keyboard at PIN entry, requiring the user to use their mouse to “click” the digits of their personal PIN on a randomly shifting keypad. The user is presented with a graphical keypad with scrambled digits. After each digit selection, the digits are re-scrambled thus preventing the attacker from reading any keystrokes or making pattern guesses based on mouse click locations.

RANDOMLY SHIFTING KEYPAD BLOCKS SPYWARE

The image shows a graphical keypad interface for entering a PIN or password. The keypad consists of 12 buttons arranged in a 4x3 grid. The top row contains buttons labeled '3 def', '7pqrs', and '1'. The second row contains '8 tuv', '9wxyz', and '4 ghi'. The third row contains '2 abc', '6 mno', and '5 jkl'. The bottom row contains '*', '0', and '#'. Below the keypad are two buttons labeled 'Clear' and 'Submit'. Below the keypad is a text input field labeled 'Password' with a red underline. Below the input field is a link labeled 'Forgot password?' with a red underline.

Arcot Software-based Strong Authentication & Secure Key Protection Solutions

Arcot is well established as a leading backbone solution provider for eTransaction cardholder verification infrastructures such as “Verified by Visa” , MasterCard “SecureCode” and JCB “J/Secure.” Arcot is now emerging as the leading provider of software-only strong authentication and key protection technology to enable the deployment of large-scale strong user authentication and digital signature-based applications. Fortune 500 customer deployments have proven that the Arcot solution is unique in the market. ArcotID offers a compelling and complementary value proposition to augment existing hardware-based strong authentication, and delivers a solution that is significantly more secure than any other software-based alternative.

Arcot Scrambled PIN PAD User Interface

The Arcot scrambled PIN pad replaces standard user PIN entry. When a user or application requests use of the protected credentials stored in an ArcotID or a hardware-based key container, a user PIN or password is required. At this point the Arcot scrambled PIN Pad is invoked and the keyboard is disabled. The user then uses the mouse to click the numbers represented on the screen to enter the PIN. The solution can also be implemented to enhance simple password-based systems.

What is ArcotID?

Used in conjunction with the scrambled PIN pad solution to deliver enhanced security, an ArcotID, like a smart card or USB token, is a secure private key container, instantiated completely in software. Those well-versed in hardware-based key protection solutions may be quick to challenge the security of software-based key protection. This stance is well justified and absolutely accurate, if not for Arcot’s patented “Cryptographic Camouflage” technology.

Cryptographic Camouflage

This breakthrough technology forms the basis for the ArcotID and defines the distributed, multi-key method for protecting an individual’s private keys. The solution offers a robust highly secure complement to hardware-based solutions and a scalable, user-friendly and economical choice for extended enterprise and consumer applications.

Unlike traditional software key containers, which are vulnerable to brute force attack, the ArcotID leverages its “Cryptographic Camouflage” technology to thwart this and other types of attack scenarios to provide a security level approaching that of hardware solutions and that is significantly more secure than any other software-based alternative.

About Arcot

Arcot is the cloud authentication leader. Our fraud prevention, strong authentication, and e-Document security solutions make Web transactions and online access safe for millions of consumer, enterprise, and e-Commerce users.

Organizations can transparently deploy stronger authentication and allow users to conveniently authenticate from any computer or mobile device. Arcot solutions deliver the right balance of cost, convenience and strength.

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