

mCard CPK Supported Solutions

Century Longmai White Paper



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1. MCARD CPK CARD INTRODUCTION

Overview

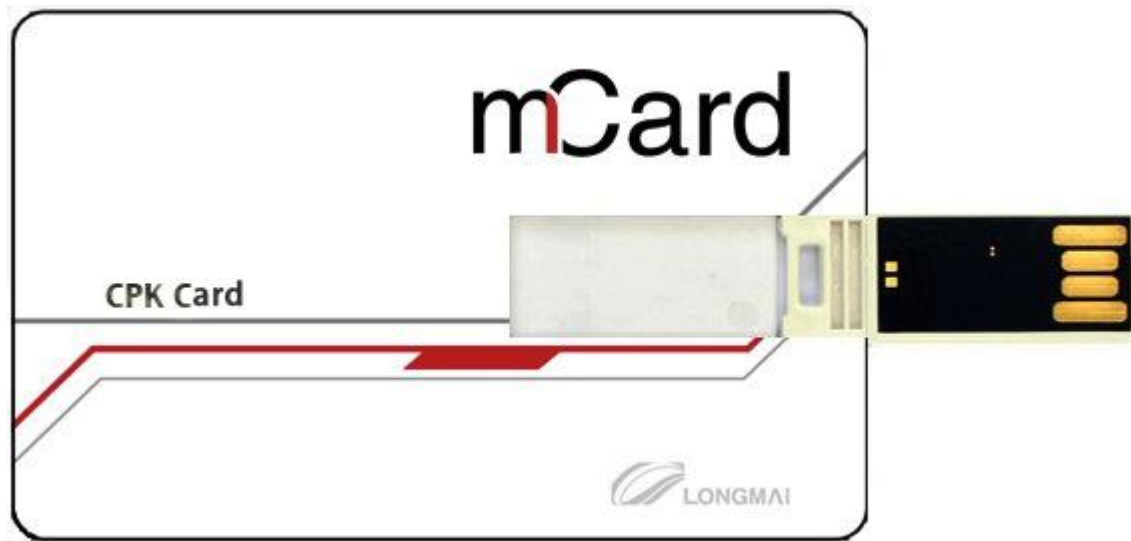
Today, the authentication market is seeking for portable device with increased efficiency and a broad range of on-board security applications like digital signature, user identification, secure on-line transactions and physical access control application. As one of the leading digital security providers, Century Longmai is excited to launch the first contactless card supporting public-key infrastructure (PKI) encryption with all the power of a multi-application contactless card and smartcard-based USB token in a single device; developed based on trending consumer requirements. This hybrid mCard CPK product delivers a robust solution in form of a secure smartcard-based USB token and MIFARE contactless card for applications such as micropayments, access management, Network security, and automatic fare collection systems in public transport, individual identification and physical access control in corporate, banking and government facilities.

Thanks to the full support for middleware, all mCard CPK card model support the PKCS#11 cryptographic standard on the Linux, Mac OS & Windows environments; users benefit from unparalleled level of integration with multi-platform based applications with a smartcard chip, it performs well in multiple working environments, such as online payment, identity authentication and information management. It is a secure innovative real deal for those who require an effective combination of security and portability in protecting important personal, financial and company information.

Product Introduction

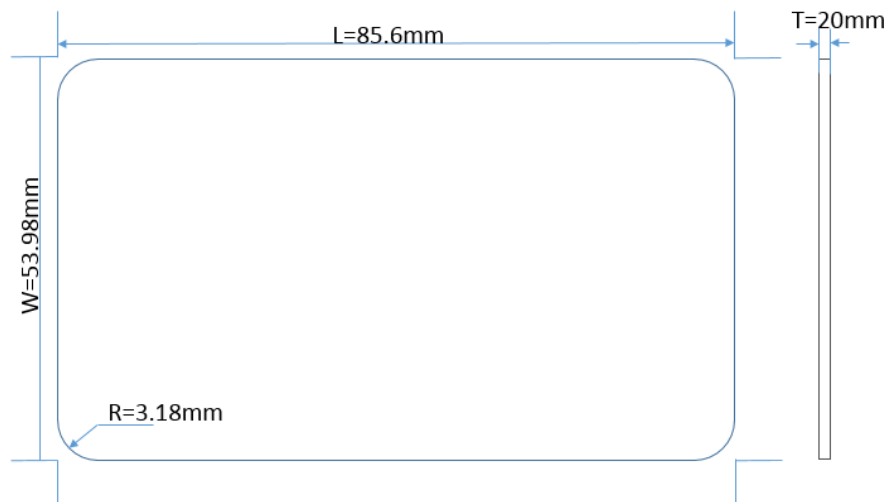
mCard CPK (Contactless access control card with USB port for PKI authentication) developed with a peculiar emphasis on user convenience, fast transaction speed, exceptional reliability for frequent usage, security against fraud and cost effectiveness. It is lightweight contactless MIFARE card with USB token that provide both contactless and strong authentication PKI based solutions. Proved waterproof, dustproof and quake proof is also secure and portable contactless device in the market adopting USB and IC packaging techniques in a single product to offer support for digital certificate management, private information protection, and physical & virtual access control.

Product appearance



mCard CPK Card Size:

- ❖ L: 85.6mm (85.47mm-85.72mm)
- ❖ W: 53.98mm (53.92mm-54.03mm)
- ❖ T: 20mm ($\pm 0.03\text{mm}$)*
- ❖ R: 3.18mm ($\pm 0.30\text{mm}$)



* implies the card's parameter is customizable based on user's requirements



Hardware parameters

The following list provides a summary of the technical information about mCard CPK

Category	Parameters
Contact smartcard chip Parameters	
Power Supply	USB Power Supply
Working Voltage	5V USB port power supply
Working Current	80-150mA
Operating Temperature Range	0 - 70°C
Storing Temperature	-20 - 85 °C
Casing Material	PVC
Communication Protocol	USB
Interface Type	USB 2.0/USB 3.0
Processor	32-bit smartcard chip
Certificate storage Capacity	192K
*External Storage Capacity	CD: 2M-8M, Default 2M USB Flash memory: 4G-32G
Contactless chip Parameters	
Power Supply	Build-in Coil Power Supply
Operating frequency	13.56MHZ
Operating range (Read & write)	2.5-10cm
Working Temp range	0 - 70 °C
Storage Temp range	-20 - 85 °C
Casing	PVC
Communication Protocol	ISO14443 Type A protocol
Processor	Read-Only; Logical encryption or CPU chip
Storage Capacity	M1: 1K or 4K CPU: 4K or 8K
Data retention	10 years

2. APPLICATION FEATURES & BENEFITS

Features

Century Longmai's mCard CPK Contactless card allows faster and more convenient micropayment transactions by eliminating the need for contact between the card and the scanner/reader. The USB part enables digital signatures, email encryption, micropayments, and other PKI applications. Thereby putting state of art technology to the service of organizations and governments committed to take their IT Security and access control infrastructure to the next level with robust multiple form factor solutions.


General Applications and Benefits

Applications

- ✚ e-Government
- ✚ Banking & Payment
- ✚ e-Healthcare
- ✚ Network Security
- ✚ Access Control
- ✚ Public Key Infrastructure
- ✚ Digital Signature

Benefits

- ✚ Unparalleled Integration with Identity and Access Ecosystem
- ✚ Support for Certificate Based two factor authentication (2FA)
- ✚ Compliance with industry standards
- ✚ Support for Windows, Linux & Mac Operating Systems
- ✚ Cost-effective Innovative MIFARE implementation
- ✚ Strong Smart card Security
- ✚ Smart Card integration with PKI application services such as Email, Web, VPN, etc.
- ✚ Reliability and Stability –adopts reliable and stable hardware, software and advanced technology to guarantee application security.
- ✚ Standardability– developed based on international standard.

 Scalability

3. MCARD CPK SUPPORTING SOLUTIONS

Design objective

Today, the authentication market is seeking for portable device with increased efficiency and a broad range of on-board security applications like digital signature, user identification, secure on-line transactions and physical access control application.

Century Longmai presents the mCard CPK solution that combines two-factor authentication PKI token functions with MIFARE contactless card functions into a single powerful function yet portable product that supports multiple applications.

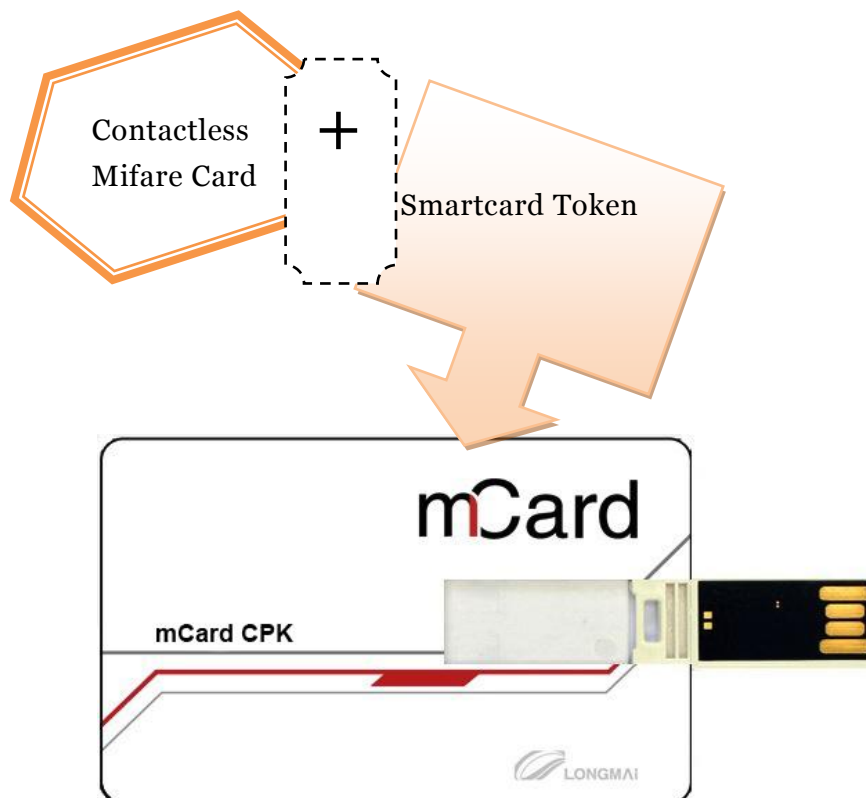


Fig 1-1 mCard CPK Contactless card

For Secure Electronic Healthcare Records (eHealthCare)

With the rapid development of Information and technology, HIS (Hospital Information System) is becoming one important branch of new medical informatics. Adopting new technology applications using computers, internet, and other communication devices - to collect, store, process, extract and exchange medical information within the Hospital authentication system are is widely applied in many hospitals worldwide.

According to recent Industry Research: Reliable, secure, efficient and connected healthcare IT systems are essential for reducing cost by cutting the heavy administration bills normally associated with public healthcare programs.

They are also a key to preventing fraud seen by many as one of the biggest problems in balancing social security budgets.

Solution Benefits in eHealth environment

- Ensuring confidentiality of stored data (medical records)
- Identifying and authenticating individual users
- Securing data and communications
- Storage space for personal data
- Security, confidentiality, and validity of medical data
- System Security and Data Integrity

Learn how the unique features of mToken CPK offers strong security, differential access to data, and definitive auditing in eHealth.

1. [mCard CPK card – MIFARE card + USB Token Introduction](#)
2. [mCard CPK Solution Case studies -mCard CPK eHealth Solution White Paper \[PDF\]](#)
3. [Longmai eHealthCare Solution Design](#)

eCampus Campus Solution

Overview

Technological advances over the last five years have created far greater options for students when it comes to on campus micropayments. Now, more than ever, it is critical that educational institutions deliver the safety and convenience students have come to expect

while squeezing the most out of budgets. The goal of many forward-thinking institutions is to establish an environment in which any student, teacher, or member of the campus community can use a universal account on campus, off campus, and online for all commerce transactions, activities, and when accessing facilities.

Research shows that about 85% of parents believe the safety of a campus is an important factor in choosing a college. Thus at Century Longmai, we designed mCard CPK to provide an increased level of security and access control to the campus population. It offers all operations including enrolment management, logging changes in students' status, access to classrooms, Library, Labs, Meeting rooms, canteen etc.

mCard CPK is a unique product that is integratable with existing data management systems in educational institutions - provides the tools for ENABLING a secured, efficient management of the vast amount of information (including financial and access control records) educational institutions generate.

For students this unique product increases convenience and mobility while accessing on-campus services or applications. For educational management staff, it can offer all the operations including enrolment management, logging changes in student status, access to classroom, Library etc. Furthermore, *you can cut costs, lock down access and improve processing with maximum security.*

Benefits of mCard CPK in eCampus

- **Improve convenience and flexibility**
 - Allow students make transactions on campus conveniently by enabling quick and simple purchases.
 - Utilizing all in one card capabilities creates a cashless convenient campus for on-campus purchases while improving management of limited resources
- **Strengthen Security**
 - Enhance campus safety with controlled entrance exit access
 - Fully integrate PKI-enabled solution with campus network access seamlessly by integrating mCard CPK with existing network and access control systems
- **Increase Efficiency**
 - Streamline business operations and increase efficiency

Deploy a solution that brings immediate positive impact on students' life on campus. Read more about this solution here: <http://lm-infosec.com/products/mcard/cpk-card/>



For Public Transport

mCard CPK contactless cards can offer passengers a faster and easy travel solution. That is why we recommended our transport operator partners to implement such a convenient and secure transaction powered travel solution:

- Speed and convenience – streamline journeys across smart/connected cities
- Reducing transport costs when compared to cash or traditional paper tickets
- Providing an innovative means in transportation
- Providing a green solution that is more environmental friendly
- Providing a means for accounting thus reducing fraud

Join our innovation struggle or just deploy ready-made new contactless ticketing solutions.



What else can you benefit from working with Longmai?



Century Longmai is more than just a PKI token manufacturer, regardless of your geo-location; you can work with us to benefit from deployment of standard technology solutions and our industry experience:

- ✓ We have over 12 years' experience in digital security industry
- ✓ We offer a wide range of technologies in the Information security industry
- ✓ We have Bluetooth Low energy low PKI products that realize true wireless PKI.

We also have an extended portfolio of innovative hardware products including contact and contactless solutions for multi-industry application. Find out more about our range of products for multiple industries: discover Contactless CPK cards, our Bluetooth low energy technology powered PKI, data security in a micro SD, traditional USB PKI token, and so much more.

We guide our customers through the various stages of information privacy and security deployments and support them further with a range of products and services. We really do much more than provide you can imagine.



About Century Longmai

Established in 2003, [Century Longmai Technology Co., Ltd](#) is one of the most leading digital security device vendors in China with extended experience in developing latest generation of digital security solutions and products for secure information access and transmission. Our product portfolios include USB PKI token, wireless PKI tokens, OTP tokens, smartcard, JAVA cards, software license dongles, Smartcard readers, Electronic document protection (DLP) solution and OEM services. Proved to be secure and convenient, our solutions and products are dedicated to help customers build safe, efficient and sustainable networks, financial systems and enjoy secure access to data and information everywhere whenever they want.

- ✚ 20,000 customers from various industries
- ✚ 70 Employees (2015)
- ✚ 10 Product series
- ✚ Over 50 digital security solutions

GET STARTED

Have a question or Need more info?

To learn more on how the unique features of mCard CPK offers strong security, differential access to data and definitive auditing in eHealth, eCampus and Transport, please request for access for **mCard Technical Paper** or [contact](#) our sales directly [More Info](#).

Solutions dedicated to your market... Discover the smartcard-chip based solutions dedicated to your industry, [Click to Learn More](#)

Contact Details

Century Longmai Technology Co., Ltd

3/F, GongKong Building, No.1, WangZhuang Road, Haidian District, Beijing, P.R.China

Postcode: 100083

Tel: (86) 10-62323636 | Fax: (86) 10-62313636

Sales E-mail: info@longmai.net Support E-mail: support@longmai.net

Website: <http://lm-infosec.com>