

# HID Global OMNIKEY® 1021 Desktop Smart Card Reader



## HID GLOBAL ENABLES CHINA UNICOM'S BUSINESS OPERATING PROCESS

**Through the deployment of OMNIKEY® 1021 USB desktop smart card readers, China Unicom's business operating process is running in a more secure, efficient and environmental friendly manner.**

With modern communication networks connected to the world and extensive coverage across the country, China Unicom has operations in 31 provinces (including municipalities and autonomous regions) in China as well as numerous countries and regions around the world. It is the only China-based telecom operator that is publicly listed in three locations – Hong Kong, New York and Shanghai. In January 2009, China Unicom was granted the license to operate 3G digital cell business with WCDMA technology nationwide in China. In October 2009, China Unicom formed alliance with Apple.

China Unicom has engaged in a wide range of communications and information-related business, including fixed-line voice; mobile communication services; domestic and international telecommunications facilities and services; satellite international private leased circuits; data communication services; internet access services; and a variety of value-added telecommunications services. As at the end of 2008, its total assets amounted to RMB526.66 billion and they had a total of 46.3 million employees on staff.

By integrating OMNIKEY® 1021 card readers into its business operating system, not only has a more secure platform been made available at the customer service centres, but it has also enhanced efficiency for the company's front line operations. OMNIKEY® 1021 smart card readers are capable of writing data directly into SIM cards without requiring configuration of personal data. This reduced the staff's workload and inventory level of SIM cards. As a result, the SIM card usage has increased and thus save resources.

### The Challenge

It used to be very complicated to issue SIMs card for mobile communications at China Unicom. Before a SIM card is activated, it has to perform a data exchange with the server through a switch in order to assign a telephone number to the card. When a customer subscribes to a new mobile number, the customer service personnel has to activate the SIM card that is configured with the number chosen by the customer. However, such SIM card issuance procedures lead to a waste of resources. At China Unicom, mobile numbers represent different services, tariff standards and subscribers' home regions. Once a SIM card has been written with an assigned mobile number, it can only be used by the customer service center that is in the home region associated with the number. For instance, if the number of the SIM card belongs to Shenzhen city of Guangdong province,



the SIM card can only be allocated to the customer service centers in Shenzhen. When the SIM card inventory level in Guangzhou city of Guangdong province are insufficient to meet demands, SIM cards in Shenzhen can't be transferred to Guangzhou for use. Accordingly, China Unicom has to estimate the demand for each type of SIM card in every region, followed by SIM card configuration to ensure sufficient inventory level. As a result, each customer service center generally reserves more SIM cards in inventory to cater emergency needs. This trend is likely to result in waste and idle cards.

With thousands of customer service centres in provinces and municipalities across the country, China Unicom imposes very high standards for the terminal card readers to be used in its nationwide business operating system. Not only do they require the product quality to be reliable and compliant with various international standards, but they also require future-proof technology so as to tackle the current technical issues relating to SIM card issuance as well as cope with future development.

- The card reader should interoperate with SIM and USIM cards belonging to different number ranges and different IMSI (International Mobile Subscriber Identity), so as to increase card usage and reduce inventory level.
- The card reader should meet the quality assurance requirements and commercial qualifications as stated in the selection criteria of China Unicom's project hardware, including product safety, reliability and technical standards set by the National Electronic Business Authentication Bureau.
- The card reader should apply leading-edge technology that is compatible with various OS environments, and meet future needs.
- The card reader should have a stable performance record with fast reading speed for increased card issuance efficiency and reduced waiting times for customers at the customer service centers.
- Comprehensive product warranty with fast and efficient after-sales service.

### The Solution

In order to select the most qualified product, China Unicom sent all 7 short-listed products to the National Electronic Business Authentication Bureau for testing on product safety, stability, technology and more. Five products failed in the tests and were eliminated. In consideration of the brand reputation, technology advancement, localized support, as well as the OMNIKEY® 1021 USB desktop smart card reader's leading-edge Genuine HIDTM technology, simple and intuitive design, China Unicom decided to install HID Global's OMNIKEY desktop card reader in its customer service centres across the country.

OMNIKEY® 1021 USB desktop smart card reader has leading read/write capability and complies with international standards and the reader is easy and convenient to operate. By simply plugging it into a desktop PC via a USB or serial cable, it can be used right away. With high level of compatibility and scalability, the reader can support major operating systems from Windows platforms to Linux and Mac OS.

OMNIKEY® 1021 supports most types of contact smart cards, including all 5V, 3V and 1.8V smart cards, ISO 7816 Class A, AB and C complied smart cards, thereby resolving the interoperability issues of SIM and USIM (3G smart cards) cards belonging to different



IMSI (International Mobile Subscriber Identity). At the same time, it simplifies the card issuance process. OMNIKEY® 1021 USB desktop smart card reader also enables read/write of a SIM card without any configured mobile number. When a user purchases a SIM card, the mobile number chosen by the user can be directly written into any SIM card via the reader, which significantly enhances the efficiency and reduces the workload of front-line staff.

Currently, China Unicom has already installed and deployed OMNIKEY® 1021 desktop smart card readers at customer service centers located in over 20 provinces. By eliminating mobile number configuration into SIM cards, China Unicom has reduced SIM card inventory level and waste. It is estimated that the total SIM card orders across the country will be reduced by 8 to 10 million per quarter after the project has fully implemented.

OMNIKEY® 1021 has a high data transmission speed with an interface speed of 420kbps and clock frequency of up to 8MHz. It not only speeds up the processing time of card issuance, but also shortens customers' waiting time at the counters, and enhances their satisfaction with China Unicom's services.

No additional hardware or software is required for the reader. When China Unicom's system is upgraded, administrators can simply to download the OMNIKEY® 1021 software. The system will be smoothly migrated and is compatible with the relevant operating system, fully leveraging China Unicom's existing investments.

Additionally, OMNIKEY® 1021 will drive the development of China Unicom's personalized services. Currently, there is still a lot of business potential in SIM card services. By leveraging OMNIKEY® 1021's scalability and high data transmission speed, China Unicom can develop a series of personalized SIM card applications. Users will be able to personalize the STK menu of their SIM cards. At the same time, popular applications can be embedded into the SIM menu during SIM card issuance at the counters, adding greater convenience to the users.

### Testimonial

"A desktop card reader is an important component for secured PC logon solutions, and this is also a management tool that telecommunications operators will heavily invest in. Therefore, China Unicom places great importance on this project. As our operations and customers span across the country, the system should have a high level of compatibility along with reliable quality and ease of use. Since this is our first time handling desktop card readers, we are very cautious with the product selection process. The question of how to choose a cost-effective and high quality card reader has become the greatest challenge of this project. After research, enterprise qualification screening, and product comparison, we finally chose HID Global's OMNIKEY® 1021 desktop smart card reader. During negotiations, not only did HID Global extend the warranty period, but HID staff often worked with us to understand our project requirements and progress, and they promptly responded to needs at different locations. This led to a successful project.