



*Biometric Identification-
Something You Are*



E-Signature-Something You Have



Thin Client & Credential Physically Separated

www.hierstar.com



►► Company Profile


HierStar is committed to providing "cloud world" identification technologies, products and integrated security solutions for information security. We offer a series of protection technology to provide a full range of protection for critical data, communications, financial transactions and digital identification.

Founded in 2004, by a group of expertise with over 20 years experience in IT and security technology, HierStar started as an One-Time Password token designer and producer, and achieved over one million units of sales in the first start-up year. Today, HierStar has successfully accumulated over 10 million units of sales.

As the research getting further, HierStar embarked on a revolutionary upgrading design for dynamic password tokens since 2006, combined with consumer requirements of ultra-thin, flexible, and portable authenticated electrics. We've made great development on ultra-thin LCD display, ultra-thin and flexible battery module, ultra-thin card pre-lamination, and obtained corresponding patent rights, which made us a leader in the industry.

As continually innovating in hand-held terminal products (tokens, smart cards and related products) to customers, HierStar also vigorously develop software services, including cloud world identity services, network user ID management, and associated with real-time data encryption and back-up, etc. With a wide range of application in information security, banking, financing, medical insurance, taxing, e-government and many others will be involved in cloud computing in future. In 2009, HierStar R&D department began to explore cloud computing and security relevant research. Currently, we are dedicated to provide protection and a comprehensive information security management to businesses and individual consumers.

HierStar has a strong manufacturing, R&D and management team in the Great China region. We will rely on our professional R & D team and efficient management team to help consumers protect information against risk in this rapidly changing internet world, and to confidently realize business sustainable development.



OTP Tokens, Push Button & Always On

- ◆ Low Cost
- ◆ Customizable
- ◆ Water proof
- ◆ Long battery life
- ◆ Single button / always-on
- ◆ OATH
- ◆ Onsite contactless programming /configuration option
- ◆ ROHS and Environment friendly

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OTPID Jade-ON



OTPID Jade-PB



OTPID Crystal-PB





Securing Cloud Transactions One by One

OTPID PB / ON tokens, complying with OATH time and event working mode, can be customized according to customers' needs. These tokens conveniently enable customers to remotely access websites and network resources with secure one-time passwords generated by OTPID PB / ON tokens, which provide banks and business clients a strong and reliable authentication for their identity. Banks, government agencies and enterprises can swiftly deploy a comprehensive and scalable two-factor authentication solution to secure online applications and network access for customers and their own employees logon-on over Internet or Intranet. Customization is available for the number of effective password digits, display time, and company logo etc.

We support onsite configuration/programming capability through contactless methods (RF or Infrared) and we provide the full set of hard ware and software tools at a minimum cost.

These inexpensive tokens are recommended for high-end security protection for mobile financial transactions of banks and general identify protection need for online gaming, government and enterprises. With dynamic one-time password combined with digital signatures, customers can enjoy double protections.

Item	OTPID Jade-ON	OTPID Jade-PB	OTPID Crystal-PB
Dimensions (L*W*T)	44.1 ± 0.3 * 23.0 ± 0.3 * 9.7 ± 0.3 mm	64.5 ± 0.5 * 21.3 ± 0.3 * 7.8 ± 0.3 mm	46.3 ± 0.1 * 19.8 ± 0.1 * 7.3 ± 0.2 mm
OTP Algorithm	OATH TOTP / HMAC-SHA-1	SM3 OATH HOTP / HMAC-SHA-1 OATH TOTP / HMAC-SHA-1	SM3 OATH HOTP / HMAC-SHA-1 OATH TOTP / HMAC-SHA-1
Working Mode	Time Sync	Event Sync/ Time Sync	Event Sync/ Time Sync
Number of Switch	0	1	1
Seed Programming Method	Onsite programming supported with full hardware and software tool set	Onsite programming supported with full hardware and software tool set	Onsite programming supported with full hardware and software tool set
Time Interval Between Two OTP Displays	60s can be customized	60s can be customized	60s can be customized
Battery Life	5 years minimum, 3 years warranty	5 years minimum, 3 years warranty	5 years minimum, 3 years warranty

OTP Tokens, Keypad PIN

- ◆ Transaction e-signature
- ◆ Waterproof
- ◆ PIN lock
- ◆ Two-way authentication against MIM attacks
- ◆ Long battery life
- ◆ OATH
- ◆ Onsite Contactless Programming/Configuration Option
- ◆ ROHS, Environment friendly

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OTPID Jade-PIN



OTPID Crystal-PIN



OTPID CNB-PIN





Securing Cloud Transactions One by One

In order to satisfy high-end security protection and mobile payment transactions, HierStar has the two-way authentication keypad Series tokens with one-time password and transaction e-signature functions. The transaction e-signature functionality provides excellent protection against so called man-in-the-middle attacks, especially for financial transaction purpose. The one-time passwords are used to log-on to restricted websites. During the authentication process, OTPID PIN offers one-time password, challenge/response and signing functionalities, allowing users to mutually authenticate with the server over secure sessions. We support onsite configuration/programming capability through contactless methods (RF or Infrared) and we provide the full set of hardware and software tools at a minimum cost.

These inexpensive tokens are mainly used by high-end security protection for mobile financial transactions in banks and for premium identity access protection needs for various applications including on-line gaming, enterprise or governments. With dynamic one-time password combined with digital signature capability, customers can assure of their customers and their applications or employees with a peace of mind against various identity theft risks, especially man-in-the-middle attacks.

Item	OTPID Jade-PIN	OTPID Crystal-PIN	OTPID CNB-PIN
Dimensions (L*W*T)	80.7±0.3 *33.0± 0.3*9.0±0.3 mm	74.0±0.3 *44.0± 0.3*5.0±0.3 mm	74.0±0.3 *44.0± 0.3*5.0±0.3 mm
OTP Algorithm	OATH OCRA / HMAC-SHA-1 can be customized	OATH OCRA / HMAC-SHA-1 can be customized	SM3 can be customized
Working mode	Challenge Response +PIN Challenge Response + Event Sync + PIN Challenge Response + Time Sync + PIN Challenge Response + Time Sync +Event Sync+ PIN	Challenge Response + Time Sync + PIN Signature+Time Sync + PIN	Challenge Response + Time Sync + PIN Signature+Time Sync + PIN
Seed Programming Method	Onsite programming supported with full hardware and software tool set	Onsite programming supported with full hardware and software tool set	Onsite programming supported with full hardware and software tool set
Number of OTP Digits	12	16	16
Time Interval Between Two OTP Displays	60 S, can be customized	60 S, can be customized	60 S, can be customized
Battery Life	5 years minimum, 3 years warranty	5 years minimum, 3 years warranty	5 years minimum, 3 years warranty

OTP Cards, Push Button

- ◆ Cost-effective
- ◆ Onsite contactless programming (RF or Infrared)
- ◆ Long battery life
- ◆ Card customization
- ◆ Segmented LCD displays with super low current
- ◆ ROHS and WEEE, Environment friendly
- ◆ ISO 7810 and ISO 14443 certified

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Securing Cloud Transactions One by One

HierStar designs and manufactures ISO standard one button smart display cards with its own patented proprietary technologies with high quality LCD displays. Type E is based on event synchronization working mode, while Type T is based on time synchronization mode. Customers can remotely access websites and network resources with secure one-time passwords generated by these cards.

We support onsite configuration/programming capability through contactless methods (RF or Infrared) and we provide the full set of hard ware and software tools at a minimum cost.

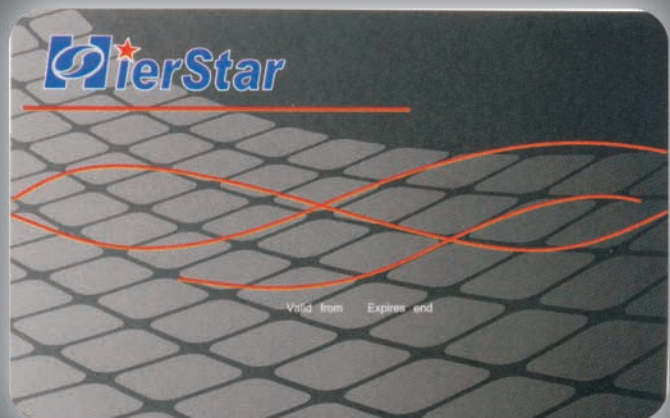
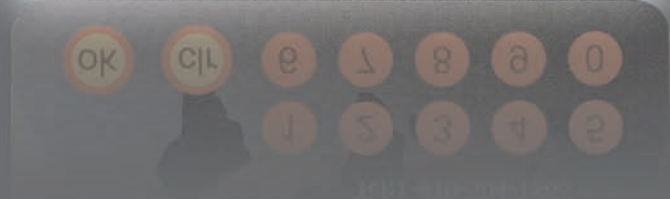
This product can be used by banks and other financial institutes for mobile transactions. It also can be used for information security in public service, such as ID card, medical insurance card. In addition, it can be used as a company intranet high-end security logon solution.

Product specifications	Description
Demisions (L*W*T)	85.6±0.12 * 53.98±0.05 * 0.80±0.04 mm
OTP Algorithm	OATH TOTP / HMAC-SHA-1 OATH HOTP / HMAC-SHA-1 can be customized
Working Mode	Time Sync / Event Sync
Seed Programming Method	Onsite contactless programming supported with full hardware and software tool set
Number of keypads	1
Time Interval Between Two OTP Displays	60 S, can be customized
Battery Life	5 years minimum, 3 years warranty
Card printing	can be customized

OTP Cards, Keypad PIN

- ◆ Cost effective
- ◆ Transaction E-signature
- ◆ Onsite contactless programming (RF or Infrared)
- ◆ PIN-lock with two-way authentication capability
- ◆ Sensitive keypad with 12 buttons (mechanical, membrane or touch)
- ◆ ROHS and WEEE, Environment friendly
- ◆ ISO 7810 and ISO 14443 certified
- ◆ Card customization

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Securing Cloud Transactions One by One

This challenge/response based OTP cards have 12-button sensitive mini keypad, adding e-signature in authentications and effective protection against man-in-the-middle attacks. This product supports PIN keypad protection in both time and event synchronization modes. Customers can select flexible system configurations according to different security needs. OTPID Card-PIN uses LCD displays.

We support onsite configuration/programming capability through contactless methods (RF or Infrared) and we provide the full set of hard ware and software tools at a minimum cost.

These products with somewhat higher cost can be used by commercial banks and other financial institutes for mobile transactions, combining with debit card/credit cards, prepaid cards and physical access cards etc. It also can be used for online information identity protection for public service, as ID card, medical insurance cards, social security services, social network services and online gaming. In addition, it can be used as a company intranet high-end security logon identity.

Product specifications	Description
Dimensions(L*W*T)	85.6±0.12 * 53.98±0.05 * 0.80±0.04 mm
OTP Algorithm	OATH OCRA / HMAC-SHA-1 can be customized
Working Mode	Signature + Event Sync + Time Sync + PIN Challenge Response + Event Sync + Time Sync + PIN
Seed Programming Method	Onsite contactless programming supported with full hardware and software tool set
Number of keypad	12
Time Interval Between Two OTP Displays	60 S, can be customized
Battery Lifetime	5 years minimum, 3 years warranty
Card printing	can be customized

OTP Cards with Dot-Matrix Displays

- ◆ Transaction E-signature
- ◆ Onsite contactless programming (RF)
- ◆ Card customization
- ◆ Sensitive touch keypad (mechanical, membrane or touch)
- ◆ Dot matrix displays, high definition, display up to 4 Chinese characters
- ◆ ROHS and WEEE, Environment friendly
- ◆ ISO 7810 and ISO 14443 certified

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Securing Cloud Transactions One by One

This high definition keypad smart display card is designed and manufactured using Hierstar patented proprietary technology. It's equipped with dot matrix displays, which enhances display flexibility for various information types and languages, supporting English uppercase and lowercase as well as Chinese and other eastern language characters, simultaneously up to four Chinese characters, commercially available for worldwide delivery. This card is NFC enabled.

We support onsite configuration/programming capability through contactless methods (RF or Infrared) and we provide the full set of hard ware and software tools at a minimum cost.

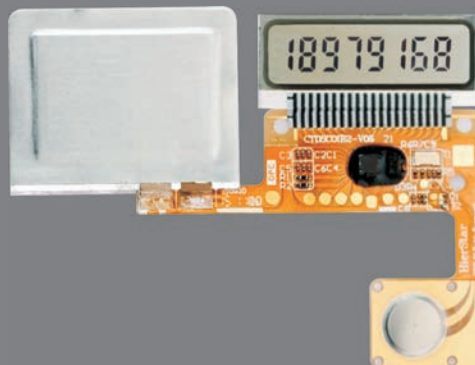
These products with somewhat higher cost can be used by commercial banks and other financial institutes for mobile transactions with the need for information displays such as success or error messages or other notifications from banks or terminals, combining with debit card/credit cards, prepaid cards and physical access cards etc. It also can be used for online information identity protection for public service, as ID card, medical insurance cards, social security services, social network services and online gaming. In addition, it can be used as a company intranet high-end security logon identity.

Product specifications	Description
Dimensions(L*W*T)	85.6±0.12 * 53.98±0.05 * 0.80±0.04 mm
OTP Algorithm	OATH HOTP/ HMAC-SHA-1 OATH OCRA / HMAC-SHA-1 Can be configured as customer needs
Working Mode	E-signature,Physical Access OTP Password Authentication Multifunctional Information Inquiry
Seed Programming Method	Onsite contactless programming supported with full hardware and software tool set
Keypads	16 buttons, mechanical, membrane or touch
Time Interval Between Two OTP Displays	60 S Can be configured as customer needs
Expected Lifetime	5 years minimum, 3 years warranty
Card printing	Can be configured as customer needs

OTP Card Inlay

- ◆ Cost-effective
- ◆ Contactless programming in RF or Infrared
- ◆ Customizable
- ◆ Long battery life
- ◆ ROHS, environment friendly
- ◆ LCD displays, segmented or matrix for special characters
- ◆ Flexible in meeting various card making requirements

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Securing Cloud Transactions One by One

HierStar offers state-of-the-art OTP card modules designed to meet the rigorous needs of card makers who have developed their own technology to make cards or prelamas based on fully assembled electronic modules.

We provide a various card types, OTP Inlay-Push Button, OTP Inlay-PIN-Membrane or Touch, and OTP Inlay-Matrix. OTP Inlay-Matrix features high definition display for Chinese, and other languages with special characters etc.

These products support onsite configuration/programming through contactless methods (RF or Infrared) and we provide the full set of hard ware and software tools at a minimum cost.

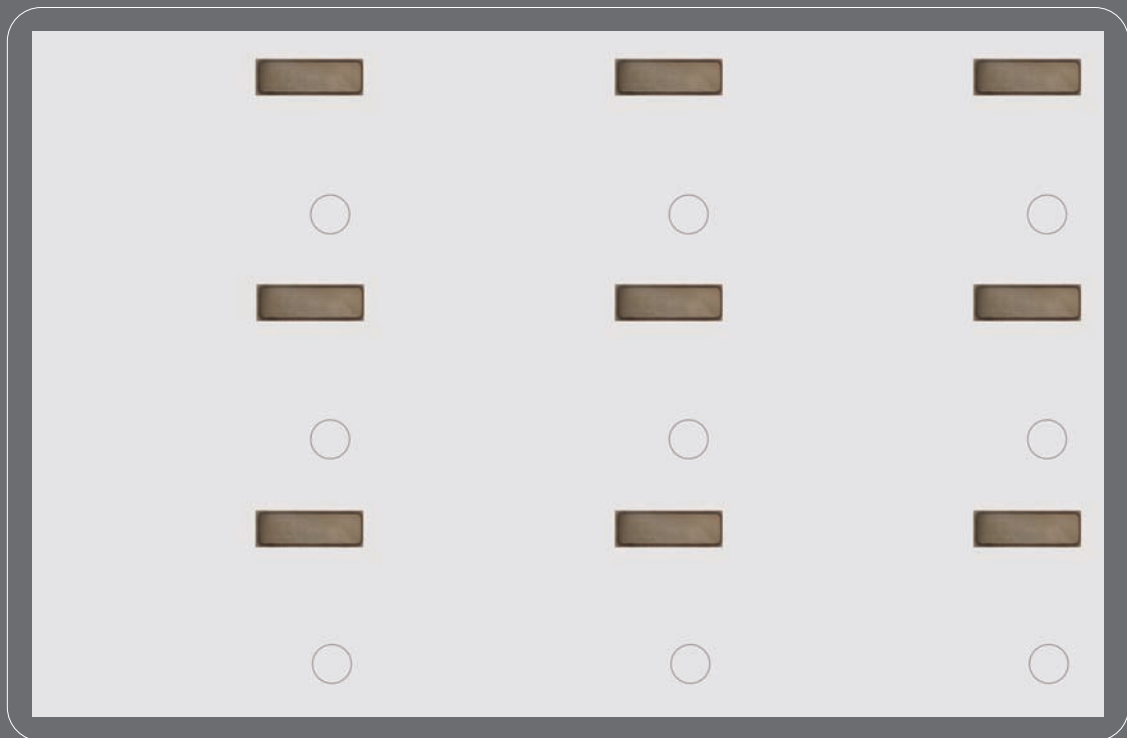
Cards made of these products can effectively enable various cards with strong online access capability for eBanking, eBusiness or eCommerce, including bank debit cards, credit cards, medical insurance cards, transportation cards and access control cards, etc.

Item	OTPID Inlay-PB	OTPID Inlay-PIN	OTPID Inlay-Touch	OTPID Inlay-Matrix
Thickness	0.48±0.02/-0.06 mm			
OTP Algorithm	OATH HOTP /HMAC-SHA-1 OATH TOTP /HMAC-SHA-1	OATH OCRA /HMAC-SHA-1	OATH OCRA /HMAC-SHA-1	OATH OCRA /HMAC-SHA-1 OATH OCRA /HMAC-SHA-1 Can be customized
Working Mode	Time Sync / Event Sync	Signature + Event Sync+Time Sync + PIN / Challenge Response + Event Sync + Time Sync + PIN	Signature + Event Sync+Time Sync + PIN / Challenge Response + Event Sync + Time Sync + PIN	E-signature,Physical Access, OTP Password Authentication, Multifunctional Information Inquiry
Seed Programming Method	Contact programming / Infrared programming / RF programming	Contact programming / Infrared programming / RF programming	Contact programming / Infrared programming / RF programming	Contact programming / Infrared programming / RF programming
Number of Switch	1	12	12	16
Battery Life	5 years minimum, 3 years warranty	5 years minimum, 3 years warranty	5 years minimum, 3 years warranty	5 years minimum, 3 years warranty

OTPID Prelam

- ◆ Cost-effective
- ◆ Customizable
- ◆ Contactless programming in RF or Infrared
- ◆ Long battery life
- ◆ Traditional laminators with low to warm temperature
- ◆ ROHS, environment friendly
- ◆ Card making start-up assistance package

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Securing Cloud Transactions One by One

OTPID Prelam is an intermediate product, which has electronic component embedded in a 0.50~ 0.55 mm plastic sheet of various sizes without printing overlay. This intermediate product allows traditional cards' manufacturers get into display card industry with low cost and short time to market. Currently, HierStar offers a few different types of prelams: push button, keypad or PIN (membrane, mechanical or touch) with segmented or matrix displays. The matrix version has high definition LCD displays, good for displaying Chinese characters and other languages with special characters.

With this product, card manufacturers can control the card making process and perso to meet their customers' different needs, such as customizing the appearance of the cards to help companies improve images. We support onsite configuration/programming capability through contactless methods (RF or Infrared) and we provide the full set of hard ware and software tools at a minimum cost.

Cards made of these products can effectively enable various cards with strong online access capability for eBanking, eBusiness or eCommerce, including bank debit cards, credit cards, medical insurance cards, transportation cards and access control cards, etc.

HierStar is committed to meeting different card manufacturers' needs, through good product design, scalable manufacturing platform, and cost-effective products and services.

Item	Description
Dimensions	Default 297mm ×210mm (3×3 standard cards) Can be customized to 3×6 or larger
OTP Algorithm	OATH HOTP / HMAC-SHA-1 OATH TOTP / HMAC-SHA-1 OATH OCRA / HMAC-SHA-1
Working mode	E-signature / Challenge & response / Time based OTP / Event based OTP
Seed Programming Method	Contact/contactless (RF and infrared) programming
Number of OTP Digits	1/ 12 /16
Type of keypad	Mechanical / Touchpad
Time Interval Between Two OTP Displays	60 S (can be customized)
Battery life	5 years minimum, 3 years warranty

Loyalty and Gift Card Series

- ◆ Sound or LED light
- ◆ Customizable
- ◆ Cost-effective
- ◆ High sensitive pressure keyboard / shaking switch
- ◆ ROHS & WEEE , environment friendly
- ◆ ISO7810 certified

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Securing Cloud Transactions One by One

This series includes several different products: PayCard Sound (patented-sound-technology-based music gift card), PayCard LGF (Light - Guided - Film gift card), and PayCard LED (LED-flash-based gift card). PayCard Sound provides a brand new product platform to gift card market. PayCard LGF is added on LED-based flash circuit through our proprietary optical technology. Customer specified pattern and company logos can be customized on this card.

This product series can be used by supermarket, shopping malls, hotels, and clubs etc for effective promotion of their businesses and their image. It can work as membership card, gift card or VIP card. In addition, this card can be individually tailored for enterprises, which can help enterprises improve companies' image.

Item	PayCard Sound	PayCard LGF	PayCard LED
Dimensions (L*W*T)	85.6±0.12*53.98±0.05 * 0.80±0.4 mm	85.6±0.12*53.98±0.05 * 0.80±0.4 mm	85.6±0.12*53.98±0.05 * 0.80±0.4 mm
Working Mode	Play pre-stored music	Illuminate the area you want to highlight	LEDs randomly flashing
Number of keypads	1	1	1
Number of LED	2-6 (can be customized)	1-3 (can be customized)	2-6 (can be customized)
Color of LED	Red, yellow, blue(Can be customized)	White (high light)	Red, yellow, blue(Can be customized)
Card printing	Can be customized	Can be customized	Can be customized
Battery life	Customizable	Customizable	Customizable

Flexible LCD Displays

- ◆ Ultra thin 380-410um
- ◆ ISO bending tested
- ◆ Thinner, lighter, anti-bending
- ◆ Super low power consumption
- ◆ Fully customizable
- ◆ Developer-friendly

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Securing Cloud Transactions One by One

HierStar's ultra-thin flexible LCD displays (380-410um) has been widely used in the display card industry for years by the best display card vendors in the industry. The types include segmented, graphic or dot-matrix displays. Matrix displays features high definition LCD display good for Chinese characters, and other languages with special characters.

Flexible LCD uses a plastic film instead of a glass substrate, and has been proven to pass several times of ISO twisting and bending tests.

The product has over the last few years been successfully applied in next generation of banking smart cards, medical equipments, consumer digital products, computers & peripherals, high-end toys, etc. In the near future, with the popularity of cloud computing, it also can be used in household appliances, high-end clothing, and household vehicles. This product is perfect for general information applications as well as medical or other innovative applications of your imagination!

Item	FlexThin Matrix	FlexThin Seg-7	FlexThin Seg-14
Total Thickness	0.46±0.02mm	0.46±0.02mm	0.46±0.02mm
Compressive Strength	20Kg	20Kg	20Kg
Viewing Direction	6 o'clock	6 o'clock	6 o'clock
Connection Method	ACF / HSC	Heat Seal or ACF	Heat Seal or ACF
Operating Temperature	-20 °C~50 °C	-20 °C~50 °C	-20 °C~50 °C
Storage Temperature	-30 °C~60 °C	-30 °C~60 °C	-30 °C~60 °C

Flexion Battery

- ◆ Thinner, lighter, unbreakable anti-bending
- ◆ High temperature lamination tolerant
- ◆ High pressure lamination tolerant
- ◆ Insensitive to operating temperature
- ◆ ISO 7810 certified, ROHS, UL, and EPA certified, environment friendly

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Securing Cloud Transactions One by One

HierStar is an exclusive distributor for Solicore's Flexion series of batteries in China and Hong Kong. Solicore's batteries are thin flexible lithium polymer batteries. Currently, HierStar mainly offers Solicore Flextion2529-14EC and Solicore Flexion 2529-17BC to customers. As a result of flexible substrates, this battery can provide much more flexibility than many other batteries. No more bulky and rigid cell restricted, designers can feel free to create. In future, flexible battery technology is leading us to a new beginning.

This product can be widely used in powered cards, radio frequency products and medical products, etc.

Powered cards--- One Time Password, secure access/ID, loyalty & gift, financials, audio authentication, and biometric cards

Radio frequency products --- Powered tags, powered e-passport, physical access control, time indicator, and temperature indicator.

Medical products--- Patient monitoring & tracking, trans-dermal drug delivery, accelerated healing devices and pharmaceutical compliance, etc.

Product specification	Description
Battery material	Lithium Polymer
Cathode	Manganese Dioxide
Anode	Metallic Lithium
Nominal Voltage	3.0 volts
Nominal Capacity	14mAH- 25mAH
Maximum Thickness	0.45mm
Self-discharge	Per month<1%
Anode Tab	Nickel-plated copper electrode
Cathode Tab	Aluminum electrode
Jacket	Flexible foil

Hierstar Authentication Server

- ◆ Banking grade, enterprise functionality
- ◆ Fast and high throughput
- ◆ Secure & flexible
- ◆ Easy-to-use
- ◆ Compatible & cross-platform
- ◆ Standard integration (API available)
- ◆ Scalability
- ◆ Flexible pricing model

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Securing Cloud Transactions One by One

Hierstar authentication server is aimed to easily and seamlessly integrate with an existing system by using open architecture of OTP authentication system. As the identity authentication needs growing, one can add new authentication methods by simple upgrades, which can reduce deployment and operation cost, complexity, and realize investment protection.

Authentication Proxy

- Windows, Linux, Unix, Solaris, AIX system registry
- Apache, IIS website login
- OWA2003/OWA2007 login
- VPN login
- OA , ERP, CRM, SCM system registry

Applications

- Ethernet intelligent access control systems, such as access control identification
- Finance, securities, insurance, telecommunications, security, government offices, education, business, entertainment and consumption, etc
- Streaming media applications, such as video conferencing, remote scheduling
- Telephone, mobile phone, digital TV-based applications, such as telephone banking , telephone stocks, mobile office, TV shopping, etc
- Protect the LAN applications and Internet applications



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