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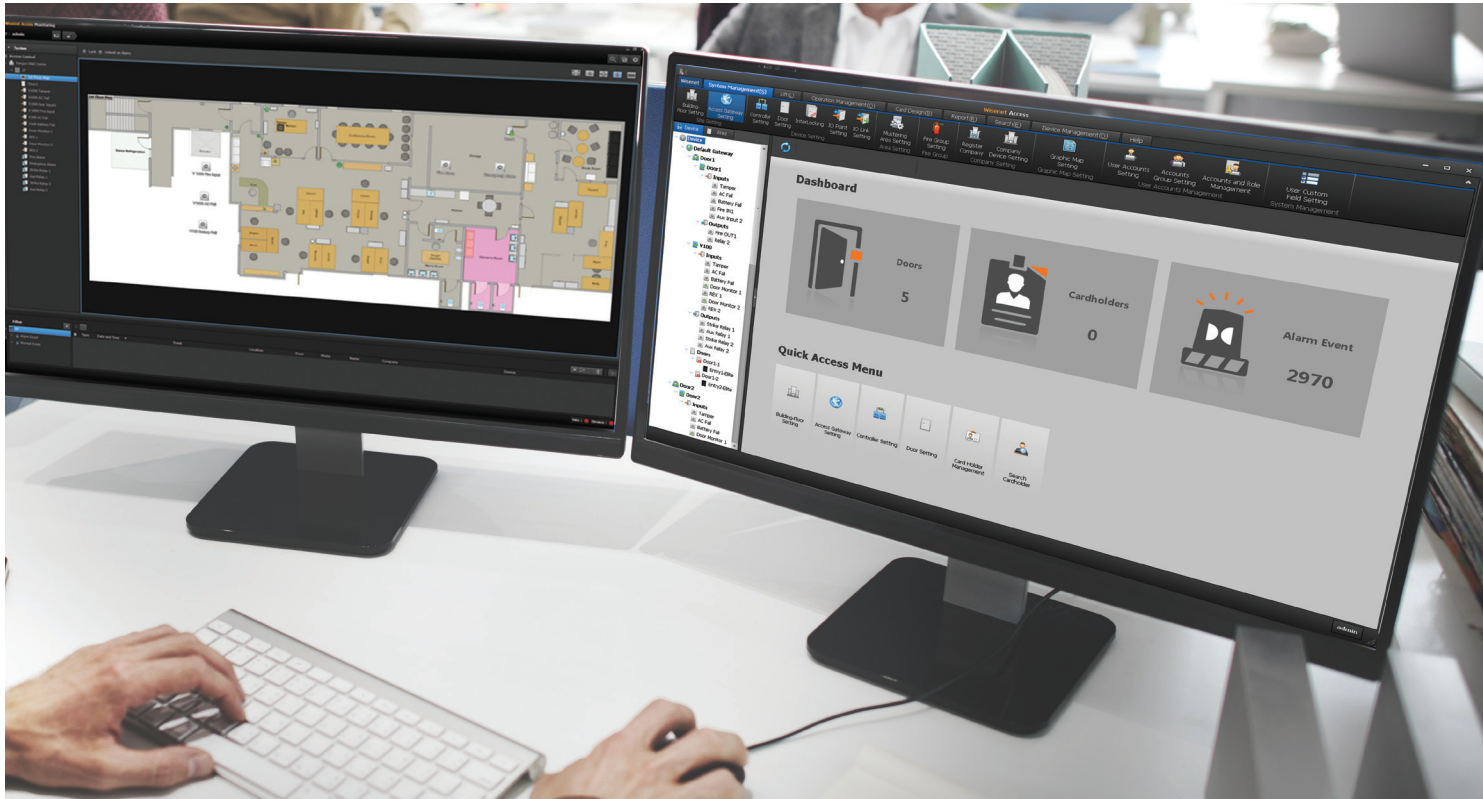


WISeNET ACS

Access Control Systems

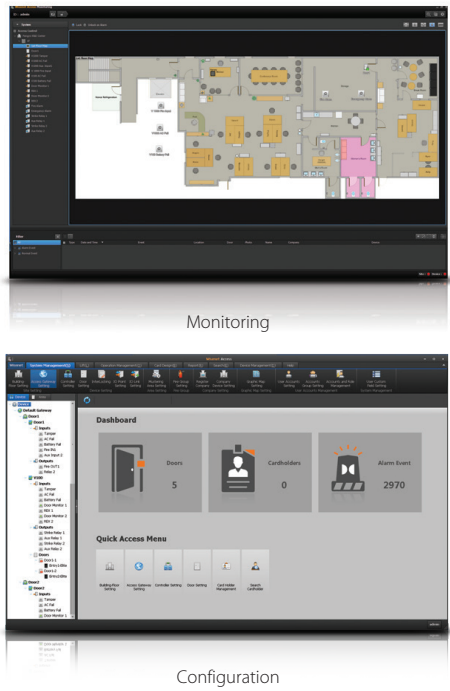
Wisenet ACS Control Software

Standard / Professional / Enterprise



Key features

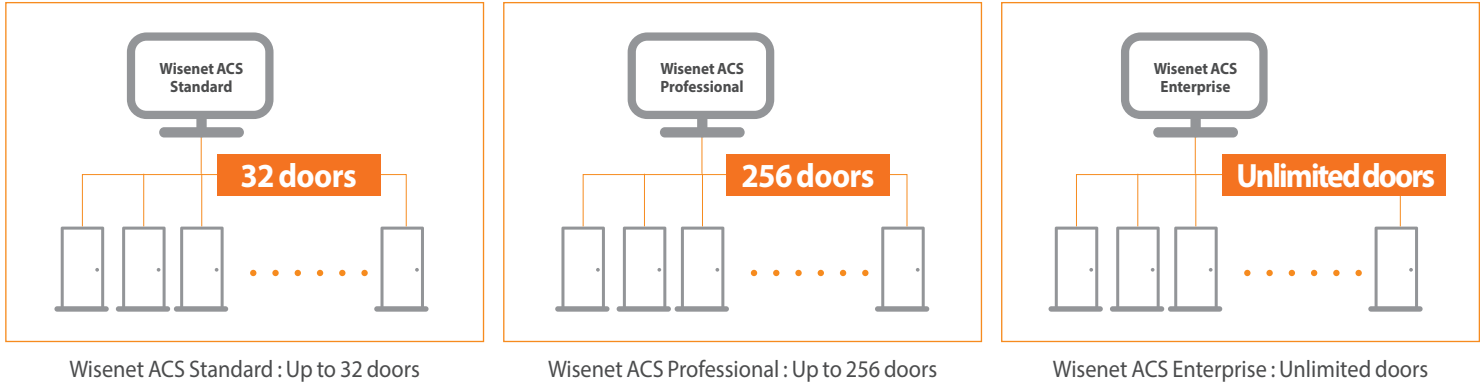
- Three types of licenses based on door count : Standard(up to 32 doors), Professional(up to 256 doors), Enterprise(unlimited doors)
- Unlimited Access Group and Time Schedule
- Real time access events & alarm monitoring
- Graphic Maps
- Remote Door Management(Close / Open)
- Mustering Report
- Card Design and Printing
- Video Integration with Wisenet SSM
- Auditing & User Activity Logs
- Interlocking
- Lift Control
- Meal Counting
- DB Migration
- Auto configuration for expansion board
- Multiple Access Group



Wisenet ACS Control Software

Suitable for various projects

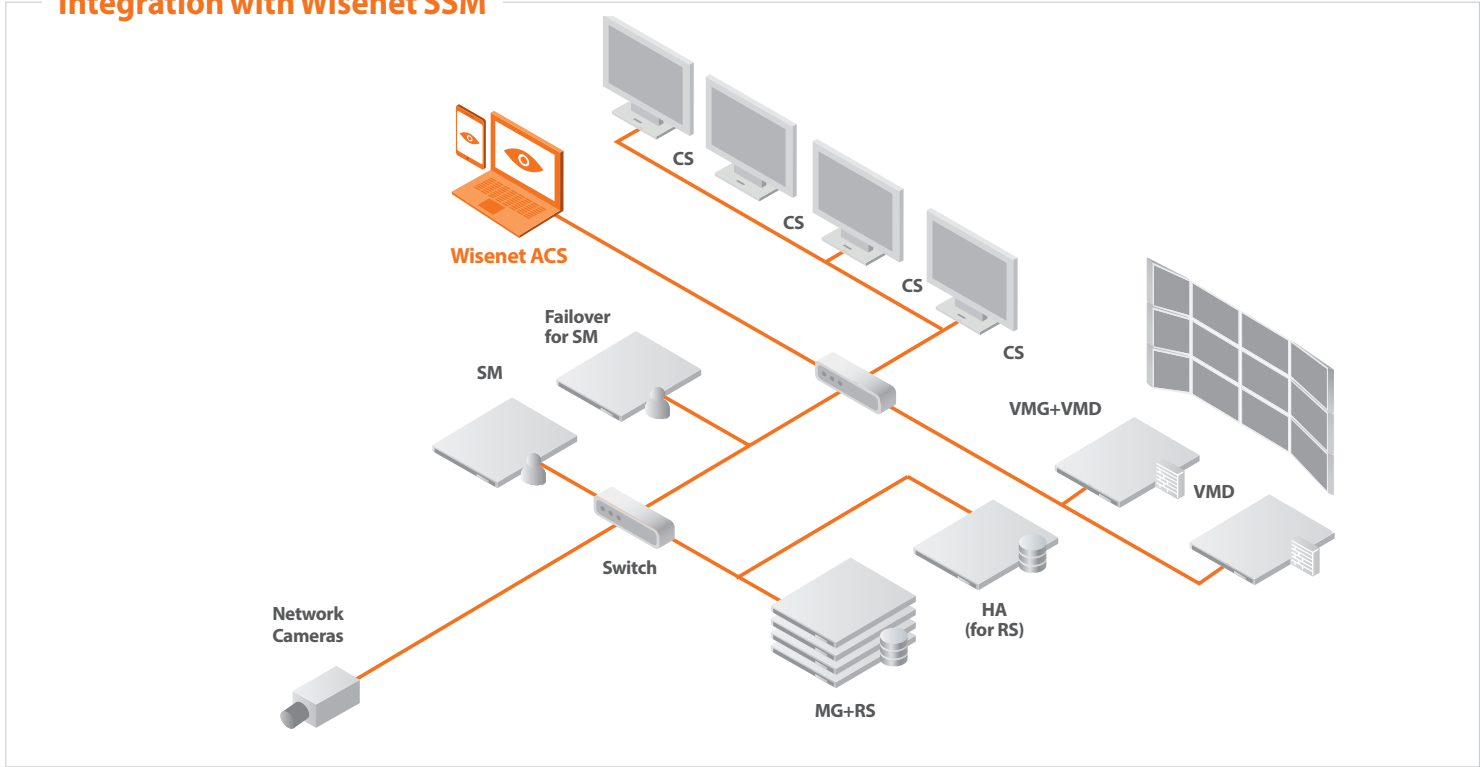
Wisenet ACS is provided in Standard, Professional and Enterprise according to the number of doors.



Seamless integration with video surveillance system

Wisenet ACS fully integrates seamlessly with Hanwha Techwin's VMS, Wisenet SSM, allowing real-time monitoring of entry control and alarm events. Independent systems previously monitored individually are now monitored by a single VMS allowing convenient system operation.

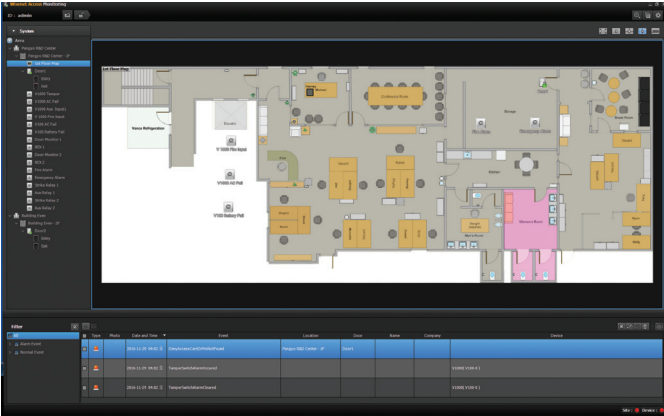
Integration with Wisenet SSM



Wisenet ACS Control Software

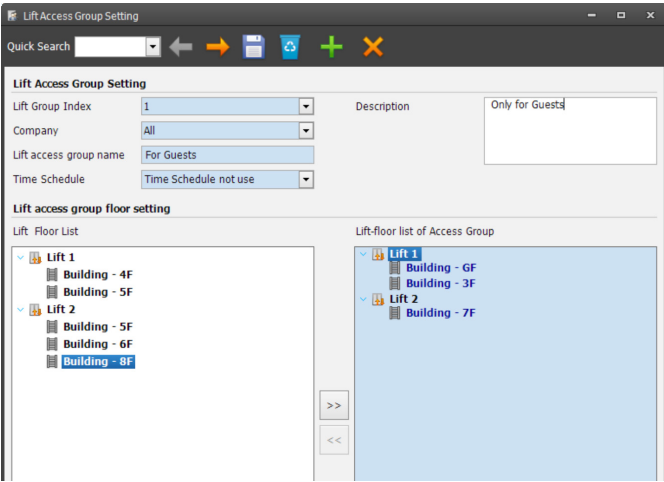
Graphic Map Monitoring

Door and lock icons positioned on drawings and birds-eye-view of buildings and locations allow real-time monitoring and door/lock control.



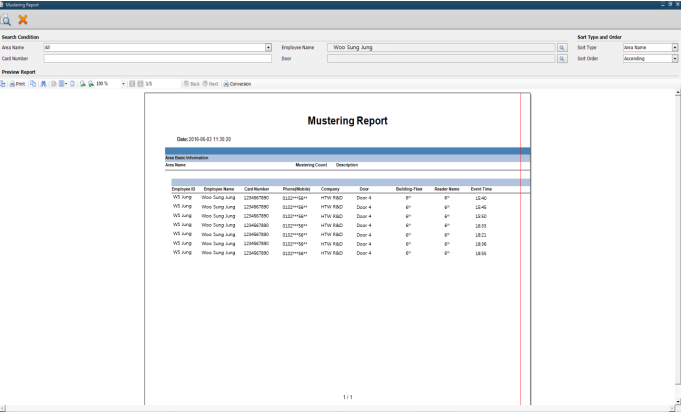
Lift Control

Cardholders are only allowed to go to the floors confirmed by system admin through the lift in the building.



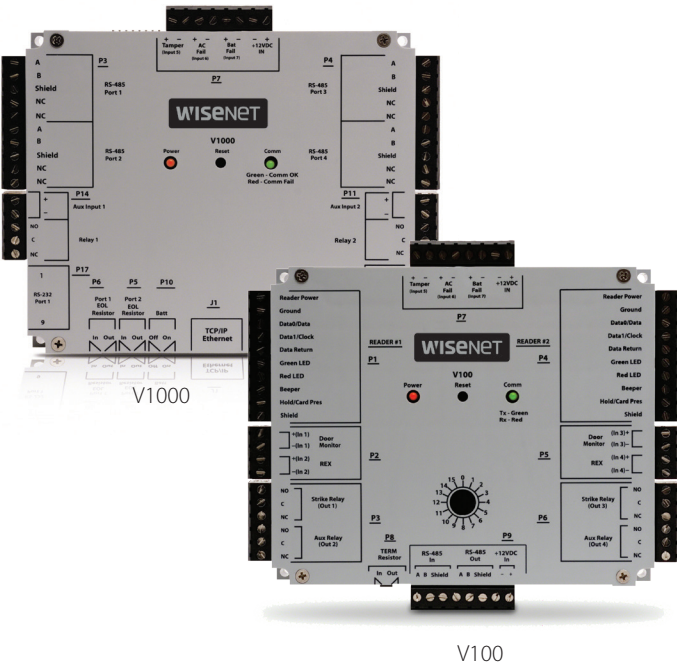
Mustering report

In case of emergencies, such as fire in the building, Wisenet Access provides real-time report of the number of employees and guests in the building contributing in safe evacuation activities.



Wisenet ACS Controllers

Wisenet Access Controllers are available in centralized and distributed types. Depending on the system scale and installation condition, the two controller types can be employed individually or simultaneously.



Centralized Controller V1000,V100

- Up to 20 doors (40 readers = 20 x V100 reader module) system
- Up to 250,000 card holders/ 99,999 event buffers
- Fully functional off-line operation during N/W communication is lost
- RS-485 communication with expansion board
- Up to 32 x expansion board (V100/V200/V300)
- 13.56MHz frequency
- Lift control
- Linux 2.6
- Up to 128bit Wiegand compatible



Distributed Controller V2000, EH400-K

- Up to 2 readers (V2000), 1 reader (EH400-K) interface
- UP to 250,000 users (V2000), 125,000 users (EH400-K) / 99,999 event buffers
- 4ea input/output port
- Fully functional off-line operation during N/W communication is loss
- Wiegand communication with readers
- 13.56MHz frequency
- Linux 2.6
- Up to 128bit Wiegand compatible
- PoE power (IEEE 802.3af) *EH-400K only

Wisenet ACS Readers



- Card/Key pad readers** R10, R40, RK40
- 13.56MHz Frequency
 - Wiegand, Clock & Data
 - Various cards Compatibility
 - HID iCLASS SE/Elite (HTW format) / DESFire EV I CSN
 - MIFARE (Classic) CSN / Felica CSN
 - NFC/ Bluetooth Smart feature (Mob Access)
 - IP55
 - Lifetime warranty



BioEntry W2

- Fingerprint reader** BioEntry W2
- New advanced LFD(Live Finger Detection) technology
 - Max template 1,000,000(1:1), 200,000(1:N)
 - Max user 500,000(1:1), 100,000(1:N)
 - HID reader module embedded (one card solution available)
 - iCLASS SE Card/ MIFARE(CLASSIC) CSN
 - / DESFire EVI CSN/Felica CSN
 - IP67
 - IK08
 - PoE (IEEE 802.3af)
 - TCP/IP, RS-485, Wiegand

Wisenet ACS Readers

Mobile Access(Tap or Twist and Go)

Wisenet mobile access can open doors in a whole new way.
It merges security with the convenience of mobile phones for opening doors. This function enables Android or iOS phones to communicate with readers using a close-range “Tap” mode, or from a distance “Twist and Go” mode.



Tap (close range)



Tap-in



Meeting zones

Twist & Go (longer range)



Garages



Entry gates



Turn Style Door



Speed Gates

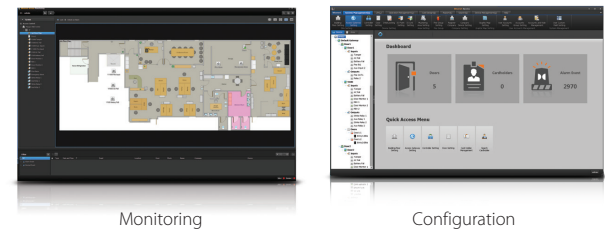


Warehouses



Loading bays

Wisenet ACS Control Software
Standard/Professional/Enterprise



Key Features

- Three types of licenses based on door count : Standard(up to 32 doors), Professional(up to 256 doors), Enterprise(unlimited doors)
- Unlimited Access Group and Time Schedule
- Real time access events & alarm monitoring
- Graphic Maps
- Remote Door Management(Close / Open)
- Mustering Report
- Card Design and Printing
- Video Integration with Wisenet SSM
- Auditing & User Activity Logs
- Interlocking
- Lift Control
- Meal Counting
- DB Migration
- Auto configuration for expansion board
- Multiple Access Group

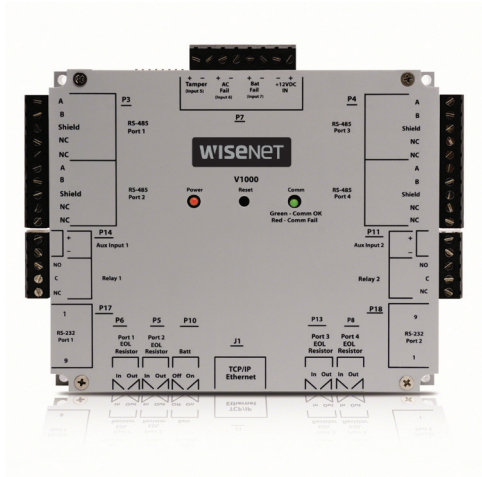
Supported Hardware



	Wisenet Access Standard/Professional/Enterprise (SSA-M3000/M4000/M5000)
ACCESS CONTROL	Device Auto Discovery
	Cardholder Management
	Batch Uploads
	Card(s) pre-registration
	Device Maintenance
	Unlimited Access Groups, Time Schedules
	Area/Zone Management
	Biometric Readers(FP)
MONITORING	Lift Control (with V300)
	Real time access events & alarm monitoring
	Graphic Maps
	Remote Door Management (Close / Open)
	I/O Monitoring
	Mustering
	Event Filtering for Monitoring
	Control Door Monitoring/Management permissions per User Group
CARD DESIGN AND PRINTING	Create multiple design templates
	Auto-fill card holder data from system database
	Print Cards
FIRE GROUPS	Create firegroups for each fire sensor input
ADVANCED REPORTING	Extensive reporting options
	Export to multiple formats (excel, pdf, word etc.)
VIDEO INTEGRATION WITH SSM	Full Integration with Hanwha Techwin's VMS, SSM
	Review video of the access events & alarms
	Real-time event & alarm notification to SSM
MAINTENANCE	User Group & User Privileges
	Manual & Scheduled database backup
	Database Restore
	Data Export & Import
	Custom Fields
	Auditing & User Activity Logs
SYSTEM	up to 32doors(Standard), 256doors(Professional), unlimited doors(Enterprise)
	Very simple and intuitive user interface
	Highly Scalable

V1000

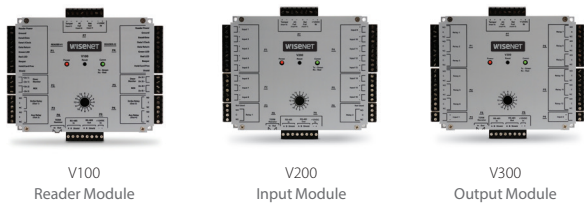
Centralized Controller



Key Features

- Up to 40 reader interfaces(up to 20doors) 250,000 cardholders
- TCP/IP to connect to the host
- Reports all activity to the host
- Reports supervised inputs/alarms with 255 priorities
- Fully functional offline operation when not actively communicating with the host : access decision, event logging
- Max. 32 expansion modules
- All connections and indicators are fully identified by silk-screened nomenclature on the cover

Expansion Module



	V1000
Mounting	Mount to any wall surface, using four screws. For UL compliance, one or more gateways can be mounted inside a locking customer supplied NEMA-4 rated enclosure
Dimensions (WxHxD)	5.8" x 4.825" x 1.275"(147.32mm x 122.55mm x 32.38mm)
Weight	12.4 oz (.35Kg)
Housing Material	UL94 polycarbonate
Audio / Visual Indicators	Power LED and RS-485 communications LED
Operating Temperature	32°F to 122°F (0°C to 50°C)
Operating Humidity	5% to 95% relative, non-condensing
Communication Ports	Ethernet (10/100), RS485 (Half duplex)
Certifications	UL294 (US) listed component, CSA 205 (Canada), FCC Class A (US), ICES-003 class A (Canada), CE mark EN 301 489-3 EN 55022 EN 50130-4 (EU), C-Tick AS/NZS CISPR 22 (Australia, New Zealand) & Korea (KCC)

INPUT POWER	
Operating Current (MAX)@12-24V DC	1000mA
Operating Current (AVG)@12V DC	210mA
Supervised Inputs Power (MAX)	0.025W (5mA sink, 5V nominal) 0 to +5VCD Ref
RELAY RATING	
Relay Contact Rating (Dry Output)	2A@30V DC (Max. Amperage that is UL Certified) 5A@30V DC

* The latestest product information / specification can be found at hanwha-security.com
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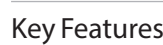
Expansion Reader Module



- Reports supervised inputs
- Connects to the V1000 via RS-485
- Receives and processes real-time commands from the V1000
- Reports all activity to the V1000
- Attractive polycarbonate enclosure protects components from damage
- All connections and indicators are fully identified by silk-screened nomenclature on the cover
- Processes off-line access control decisions based on facility code

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Expansion Input Module

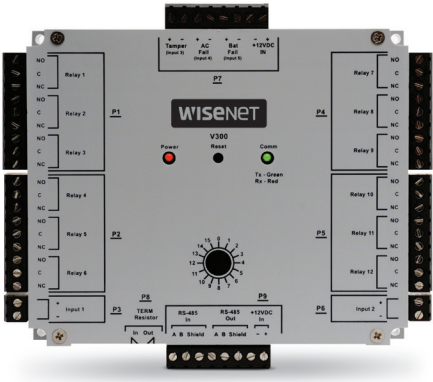


- Reports supervised or unsupervised alarm circuits
- Off-normal condition programmable for each input point (NO or NC alarm devices may be used)
- Connects to the V1000 via RS-485
- Receives and processes real-time commands from the V1000
- Reports all activity to the V1000
- Enables complex input/output linking when used with the V1000 and V300 output control interface
- Attractive polycarbonate enclosure protects components from damage
- All connections and indicators are fully identified by silk-screened nomenclature on the cover

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V300

Expansion Output Module



Key Features

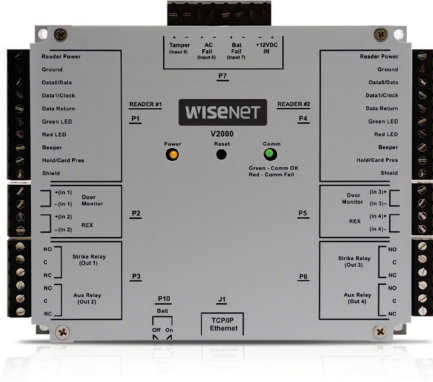
- Off-normal status programmable for each input point (NO or NC alarm devices may be used)
- 12 latching form-C relays, contacts rated at 2A@30VDC
- Connects to the V1000 via RS-485
- Receives and processes real-time commands from the V1000
- Reports all activity to the V1000
- Enables complex input/output linking when used with the V1000 and V200
- Attractive polycarbonate enclosure protects components from damage
- All connections and indicators are fully identified by silk-screened nomenclature on the cover

	V300
Dimensions (WxHxD)	5.8" x 4.825" x 1.275"(147.32mm x 122.55mm x 32.38mm)
Weight	12.4 oz (.35Kg)
Enclosure Material	UL94 polycarbonate
Power Supply Requirements	60mA@9 - 18 V DC Recommended : Supervised linear power supply with battery backup, input surge protection, and AC fail and battery low contact outputs. Separate supervised DC supply with battery backup recommended for relay-activated devices.
Relay Rating	2A@30V DC maximum load
Operating Environment	Indoors, or customer-supplied NEMA-4 rated enclosure
Operating Temperature	32°F to 122°F (0°C to 50°C)
Operating Humidity	5% to 95% relative, non-condensing
Communication Ports	RS-485 - two wire
Certifications	UL® 294 and UL® 1076 recognized component for the US, CSA 205 for Canada, FCC class A verification, EMC for Canada, EU (CE mark), Australia (C-Tick mark), New Zealand, Japan, EN 50130-4 access control systems Immunity for the EU (CE mark)
Cable Distance	RS-485 - 4000feet (1220m) to host, using Belden 3105A, 22 AWG twisted pair, shielded 100Ω cable. Input circuits - Output circuits - 500feet (150m), 2-conductor, Using Alpha 1172C (22 AWG) or Alpha 1897C (18 AWG). Minimum wire gauge depends on cable length and current requirements.

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V2000

Distributed Controller



Key Features

- Up to 2 reader Interfaces (up to 2 doors) and 250,000 cardholders
- TCP/IP to connect to the host
- Reports all activity to the host
- Reports supervised inputs/alarms with 255 priorities
- Fully functional offline operation when not actively communicating with the host : access decision, event logging
- Inputs for 2 door monitoring
- All connections and indicators are fully identified by silk-screened nomenclature on the cover

	V2000
Mounting	Mount to any wall surface, using four screws. For UL compliance, one or more gateways can be mounted inside a locking customer supplied NEMA-4 rated enclosure
Dimensions (WxHxD)	5.8" x 4.825" x 1.275"(147.32mm x 122.55mm x 32.38mm)
Weight	12.4 oz (.35Kg)
Housing Material	UL94 polycarbonate
Audio / Visual Indicators	Power LED and RS-485 communications LED
Operating Temperature	32°F to 122°F (0°C to 50°C)
Operating Humidity	5% to 85% relative, non-condensing
Communication Ports	Ethernet (10/100)
Certifications	UL294 (US) listed component, CSA 205 (Canada), FCC Class A (US), ICES-003 class A (Canada), CE mark EN 301 489-3 EN 55022 EN 50130-4 (EU), C-Tick AS/NZS CISPR 22 (Australia, New Zealand) & Korea (KCC)

INPUT POWER	
Operating Current (MAX)@12-24V DC	1000mA
Operating Current (AVG)@12V DC	625mA (with 2 iCLASS readers)
Supervised Inputs Power (MAX)	0.025W (5mA sink, 5V nominal) 0 to +5VCD Ref
OUTPUT POWER (MAX) FOR INDIVIDUAL FIELD DEVICES	
Wiegand / C&D Reader	12V DC, 250mA each
Relay Outputs	30V DC, 2Amp, resistive

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FaceStation2

Face recognition standalone controller



Key Features

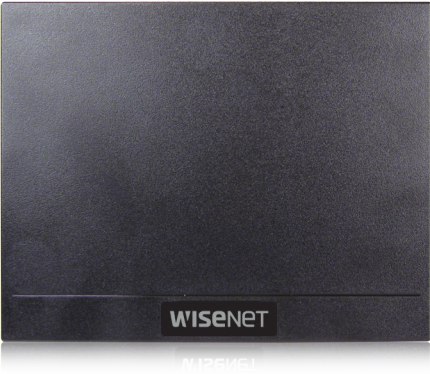
- Ultra Performance
 - Matching speed - 1 : 3,000 match/sec
 - User capacity : Max. 30,000 users (1 : 1), 3,000 users (1 : N)
- Highest Operating Illuminance
 - Operating illuminance from 0Lux ~ 25,000Lux
- Enhanced Security
 - LFD (Live face detection) - IR-based image analysis to prevent spoofing by printed images and LCDs
 - Enhanced security by android 5.0 lollipop
 - High quality Image log
- Ergonomics & User Convenience
 - Extended height range - 145cm ~ 210cm
 - Improved face enrolment procedure

	FaceStation2
Biometric	Face
RFID Card	iCIASS SE / MIFARE CSN / DESFire EVI CSN
RF Read Range	50mm
CPU	1.4 GHz Quad Core
Memory	8GB Flash + 1GB RAM
LCD Type	4" color TFT LCD
LCD Resolution	800 x 480pixels
IR LED	140ea
Sound	24 bit Voice DSP (echo cancellation)
Operating Temperature	-20°C ~ +50°C (-4°F ~ +122°F)
Operating Humidity	0% ~ 80%, Non-condensing
Dimensions (WxHxD)	141 x 164 x 125mm (5.6" x 6.46" x 4.92")
Weight	Device : 548g (1.21 lb), Bracket : 74g (0.16 lb) (incl. washer and bolt)
Certicates	CE, FCC, KC, RoHS, REACH, WEEE, BT SIG
Power	24V DC / 2.5A
Image Dimension	720 x 480pixels
Live Face Detection	Supported
Max. User	30,000 (1 : 1), 3,000 (1 : N)
Max. Log	5,000,000 (text), 50,000 (image)
Wi-Fi	IEEE 802.11 b/g (FS2-AWB only)
Ethernet	10/100/1000Mbps
RS-485	1 ea Host or slave (Selectable)
Wiegand	1 ea input, 1 ea output
TTL Input	1 ea input
Relay	1 ea
USB	USB 2.0 (Host)
Tamper	Available

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EH400-K

PoE Controller



Key Features

- For one door with one reader and 125,000 cardholders
- TCP/IP to connect to the host
- PoE (802.af) support
- Reports all activity to the host
- Fully functional offline operation when not actively communicating with the host : Access decision, event logging
- Interface with one wiegand or clock-and-data reader

	EH400-K
Mounting Holes	US double-gang, US single-gang and EU / APAC 60mm
Dimensions (WxHxD)	6.1" x 4.8" x 1.5" (154.9mm x 122.5mm x 37.1mm)
Weight	11.3oz (320g)
Housing Material	UL94 polycarbonate
Audio / Visual Indicators	Two LEDs on RJ-45 port for network : beeper for boot and tamper
Operating Temperature	32°F to 122°F (0°C to 50°C)
Operating Humidity	5% to 95% relative, non-condensing
Communication Ports	Ethernet (10/100), Wiegand or clock-and-data
Certifications*	UL294 (US) listed component, CSA 205 (Canada), FCC Class A (US), ICES-003 class A (Canada), CE mark EN 301 489-3 EN 55022 EN 50130-4 (EU), C-Tick AS/NZS CISPR 22 (Australia, New Zealand) & Korea (KCC)

INPUT POWER	
DC Input (MAX)@PoE	14.4W (300mA@48V DC)
DC Input (MAX)@AUX+12V DC	18W (1500mA@12V DC)
DC Input (MAX)@AUX+24V DC	36W (1500mA@24V DC)
Supervised Inputs Power (MAX)	0.025W (5mA sink, 5V nominal) 0 to +5V CD Ref
OUTPUT POWER (MAX) FOR TOTAL SYSTEM (ALL FIELD DEVICES)	
DC Input@PoE	9.6W
DC Input@AUX+12V DC	14.4W
DC Input@AUX+24V DC	28.8W
OUTPUT POWER (MAX) FOR INDIVIDUAL FIELD DEVICES, DC INPUT = POE	
Wiegand / C&D Reader	7.1W (580mA@12.25V DC)
Wet Output (@12V DC)	6.9W (580mA@12V DC)
Wet Output (@24V DC)	8.6W (360mA@24V DC)
OUTPUT POWER (MAX) FOR INDIVIDUAL FIELD DEVICES, DC INPUT = 12V DC	
Wiegand / C&D Reader	3.9W (320mA@12.25V DC)
Wet Output (@12V DC)	8.4W (700mA@12V DC)
OUTPUT POWER (MAX) FOR INDIVIDUAL FIELD DEVICES, DC INPUT = 24V DC	
Wiegand / C&D Reader	7.3W (600mA@12.25V DC)
Wet Output (@12V DC)	8.4W (700mA@12V DC)
Wet Output (@24V DC)	16.8W (700mA@24V DC)
RELAY RATING	
Relay Contact Rating (Dry Output)	2A@30V DC

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Mobile Access

Mobile ID / Admin Card



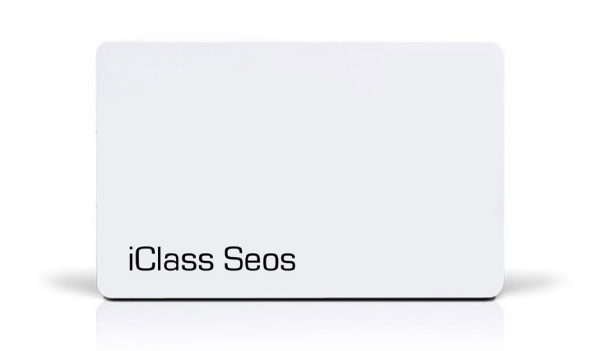
Key Features

- Consistent user experience across different devices and operating systems including iOS and Android
- Phone and reader interaction is intuitive, easy to use and enables new ways to open doors
- Offers a comprehensive, best-in-class management portal to issue and revoke Mobile IDs
- Reading range is adjustable up to 10metres by Mobile Admin card

	MOBILE ACCESS®
Mobile Device Support	Android 4.3+ using Bluetooth® smart Android 4.4+, iOS 7.0+ using Bluetooth smart
Mobile Access® App	Multiple mobile IDs managed in one application No need to start application when opening a door Consistent user experience
Opening Modes	Tap (Like a contactless card) Twist and go gesture (From a distance of up to 2m or 6ft)
Contactless Technologies	Powered by Seos utilizing Bluetooth smart or NFC communications standards
Secure Identity Services™ Portal	Issue and revoke mobile IDs Simple upload and management of users Fully automated process
Security	• Mobile IDs can be protected by device lock screen • Over-the-air communication with session based keys secured by AES 256 / SHA-256 • Mobile IDs are signed and encrypted using CMAC 96 / AES 256 • Mobile IDs are stored in mobile device operating system or in secure element, where available

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iClass Seos/ Seos Elite



Key Features

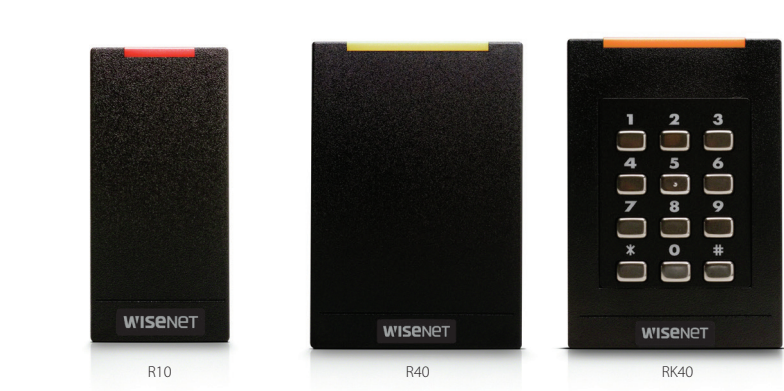
- High Frequency Solution for Increased Security, Privacy and Portability
- Data confidentiality and strong authentication – State-of-the-art cryptography providing mutual authentication and data encryption for additional protection of contactless communications between card and reader.
- Strong privacy – No traceable identifier exchanged during card sessions, preventing data associated to a given card from being divulged or cloned.
- Increased interoperability – Open, standards-based solution that supports future technologies; is portable to smartphones and other media; and can store data for multiple applications on a single card or device.
- Technology-independent security – Provides multi-layered security beyond the device technology with support for multiple SIOs in a single credential for individual protection of each application's identity data.
- Encoded Hanwha Techwin own format (Seos Elite)

	iClass Seos/Seos Elite
Base Part Number	500 for standard card 501 for embeddable card
Operating frequency	13.56 MHz with ISO/IEC 14443 Type A
Typical Maximum Read Range	3-4" (depending the reader used)
Dimensions	2.127" x 3.375" x 0.033" max (5.40 x 8.57 x 0.084 cm)
Construction	Composite with 60% PET/40% PVC
Operating Temperature	-40° to 158° F (-40° to 70° C)
Weight	0.20 oz (5.5g)
Memory Size/ Application Areas	Flexible memory allocation : 8 KB available space
Privacy Mode	Privacy-preserving mode (with encryption of device identifiers)
Secure Messaging	EN 14890-1 using AES or DES3
Mutual Authentication Mechanism	Based on ISO/IEC 24727-3 2008 with NIST SP800-56A (for session key derivation)
Write Endurance	Min 500,000 cycles
Data Retention	Min 20 years
HID Proximity	No
Contact Smart Chip Embeddable	Yes
Printable	Yes (white/white card) Usable with direct imaging and thermal transfer printers (from HID but also from other suppliers) Exclusion areas for printing may apply in some areas of the card plastic
Slot Punch	Not available
Secure Identity Services	Customized cards are available through HID Identity on demand
Visual Security Options	Optional including hologram, anti-counterfeiting, holographic foil...
Additional Security Options	Corporate 1000, Secure Identity Object (SIO) programming with SE-Elite
Warranty	Lifetime, see complete warranty policy for details

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R10/R40/RK40

Card / Keypad Reader



Key Features

- 13.56MHz card compatibility
- Wiegand, Clock and data
- Multi-format is available
 - Hanwha Techwin format
 - iCLASS SE
 - DESFire EV1 CSN
 - MIFARE CSN
 - Felica CSN
- NFC/ Bluetooth smart feature
- UL294 / FCC / IC / CE / RCM / SRRC / KCC
- NCC / IDA / RoHS / FIPS201/ MIC
- Life time warranty

	R10	R40	RK40
Typical Read Range* (Inches)	13.56MHz single technology ID-1 credentials (Cards) – SIO data model		
	iCLASS® SE™ : 2.8" (7.1cm) SE for DESFire® EV1 : 1.6 (4.1cm) SE for MIFARE® classic : 2.6" (6.6cm)	iCLASS SE : 3.5" (8.9cm) SE for DESFire EV1 : 1.8" (4.6cm) SE for MIFARE classic : 2.8" (7.1cm)	iCLASS SE : 3.4" (8.6cm) SE for DESFire EV1 : 1.6 (4.1cm) SE for MIFARE classic : 2.9" (7.4cm)
	13.56MHz single technology tags/fobs – SIO data model		
	iCLASS SE : 1.5" (3.8cm) SE for MIFARE classic : 1.2" (3.0cm)	iCLASS SE : 1.8" (4.6cm) SE for MIFARE classic : 1.4" (3.6cm)	iCLASS SE: 1.4" (3.6 cm) SE for MIFARE classic : 0.5" (1.3cm)
Mounting	Mini-mullion size : physically HID's smallest iCLASS® readers and are ideally suited for mullion-mounted door installations, U.S. single-gang J-box (with mud ring) or any flat surface	Wall switch size : designed to mount and cover single gang switch boxes primarily used in the Americas and includes a slotted mounting plate for European and Asian back box spacing	
Color	Black		
Keypad	No		Yes (4 x 3)
Dimensions	1.9" x 4.1" x 0.9" (4.8cm x 10.3cm x 2.3cm)	3.3" x 4.8" x 1.0" (8.4cm x 12.2cm x 2.4cm)	3.3" x 4.8" x 1.1" (8.5cm x 12.2cm x 2.8cm)
Product Weight (Pigtail)	3.9 oz (113g)	7.7 oz (220g)	9.0 oz (256g)
Product Weight (Terminal Strip)	2.9 oz (84g)	7.5 oz (215g)	8.0oz (226g)
Operating Voltage Range	5-16V DC, Linear supply recommended		
Current Draw - Standard Power Mode*** (mA)	45	65	100
Current Draw - Intelligent Power Management (IPM) Mode*** (mA)	25	25	65
Peak Current Draw - Standard Power or IPM Mode*** (mA)	75	105	130
NSC** Power Consumption - Standard Power Mode (W@16V DC)	0.7	1	1.6
NSC** Power Consumption - w/ IPM (W@16V DC)	0.4	0.4	1
Operating Temperature	-31° to 150° F (-35° to 65° C)		
Storage Temperature	-67° to 185° F (-55° to 85° C)		
Operating Humidity	5% to 95% relative humidity non-condensing		
Environmental Rating	IP55		
Transmit Frequency	13.56MHz		
13.56MHz Card Compatibility	Secure identity object™ (SIO) on iCLASS SE/SR, SE for MIFARE DESFire EV1 and SE for MIFARE classic (On by default) Non-default programmable options include : additionally support - Standard iCLASS access control application (Order with standard interpreter) - ISO14443A (MIFARE) CSN, ISO14443B CSN, ISO15693 CSN - ISO14443A/B (FIPS-201 transparent FASC - N read) (Order - F model with FIPS interpreter)		
Communications	Wiegand/Clock and data interface 500ft (150m) (22AWG) - Use shielded cable for best results		
Panel Connection	Pigtail or terminal strip		
Certifications	UL294/cUL**** (US), FCC certification (US), IC (Canada), CE (EU), C-tick (Australia, New Zealand), SRRC (China), MIC (Korea), NCC (Taiwan), iDA (Singapore), RoHS, FIPS-201 transparent FASC-N reader		
Crypto Processor Hardware Common Criteria Rating	EAL5+		
Patents / Housing Material	US7124943, US6058481, US6337619 / UL94 polycarbonate		
Manufactured with % of Recycled Content (Pigtail)	10.5%	10.5%	10.9%
Manufactured with % of Recycled Content (Terminal Strip)	11.0%	11.0%	12.4%
UL Ref Number	R10D	R40D	RK40D
Warranty	Limited lifetime		

* Typical read range achieved in air. Different types of metal will cause some degradation (typically up to 20%). Use spacers to space product off metal and improve read range if required.
** NSC = Normal Standby Current *** Measured in accordance with UL294 standards **** UL294 functionally certified for Wiegand output only

* The latest product information / specification can be found at [hanwha-security.com](#)
* Design and specifications are subject to change without notice.

BioEntry W2

In/Outdoor Fingerprint / Card Reader



Key Features

- 1.2GHz quad-core CPU
- New advanced Live Finger Detection (LFD) technique
- Improved OP5 optical sensor and algorithm
- Max. 500k users / 1 million text logs
- 2GB Flash + 256MB RAM
- PoE (802.3af) support
- IK08/IP67 support
- Wiegand, RS485, TTL I/O. relay
- 13.56MHz card compatibility

	BioEntry W2
Biometric	Fingerprint
Template	SUPREMA / ISO 19794-2 / ANSI 378
Extractor / Matcher	MINEX certied and compliant
LFD	Supported
13.56MHz	iCLASS SE
Card Compatibility	MIFARE/ DESFire EV1/ Felica CSN
CPU	1.2GHz Quad Core
Memory	2GB Flash + 256MB RAM
Max. User	500,000 (1 : 1), 100,000 (1 : N)
Max.Template	1,000,000 (1 : 1), 200,000 (1 : N)
Max. Logs	1,000,000 (Text)
LED	Multi-color
Sound	Multi-tone buzzer
Ethernet	10/100Mbps, Auto MDI/MDI-X
RS-485	1CH host or slave (Selectable)
Wiegand	1CH input or output (Selectable)
TTL	2CH input
Relay	1
PoE	Supported (IEEE 802.3af compliant)
Ingress Protection	IP67
Impact Protection	IK08
Tamper	Supported
Power	12V DC
Operating Temperature	-20°C ~ 50°C
Operating Humidity	0% ~ 80%, Non-condensing
Dimensions (WxHxD)	50.0mm x 172.0mm x 43.5mm
Weight	251g (294g incl. bracket, washers, bolts)
Certicates	CE, FCC, KC, RoHS, REACH, WEEE, IP67, IK08

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5427CK

Card Scanner



Key Features

- CCID support
Native CCID implementation supporting WINDOWS®, LINUX® and MAC® operating systems
- Keyboard wedge
Fully configurable and programmable keyboard wedge functionality featuring an integrated management console. Flexible configuration of data structures and output modes.
- Enhanced lifecycle management
Easy firmware updates and configuration setting utilizing a Web interface, SNMP messages and configuration cards.

	5427CK
Dimensions (WxHxD)	2.79" x 3.66" x 0.63" (71mm x 93mm x 16mm)
Weight	Approx. 3.53 oz (100g)
Power Supply	Bus powered
Operating Environment	Indoors, or customer-supplied NEMA-4 rated enclosure
Operating Temperature	32°F to 158°F (0°C to 70°C)
Operating Humidity	10% to 90% relative humidity
Storage Temperature	-4°F to 176°F (-20°C to 80°C)
International Protection Rating	IP54 (Dust / Splashing water) (in preparation)
HOST INTERFACE	
Host Interface	USB 2.0 (Also compliant with USB 1.1)
Transmission Speed	12Mbps (USB 2.0 full speed)
CONTACTLESS SMART CARD INTERFACE	KEYBOARD WEDGE
Cards / Protocols High Frequency	MIFARE™ classic 1K/4K, Ultra light, Ultra light C, Plus (Security Lvl 1) , MIFARE™, DESFIRE™ 0.6, MIFARE™, DESFIRE™ EV1 (MAC/DES/3DES/3K3DES/AES), iCLASS®, iCLASS* SE/SR, MIFARE SE, DESFire EV1 SE
Supported APIs	Human interface device
PC / SC Driver Support	Compliant with native human interface drivers Drivers available for Windows® XP / Vista / 7 (32 bit / 64 bit), 2003 Server, 2008 R2 Server
Status Indicator	Dual color LED (White = ready, Blue = busy) Buzzer (Programmable)
Color	Cover : Black / Body : Light grey
Accessories (Included)	Removable card holder for card-present operation
Optional Accessories (In Preparation)	Mounting jacket & adhesive tape Vertical standing base (in preparation)
Connector Cable / Length	USB type A connector / 78.7" (200cm)
Customization Options	Customer-specific logo / housing color (Available upon request)
Composition	PC
Meantime Between Failure (MTBF)	500,000 hours
Compliance / Certification	Microsoft® WHQ2
Approvals / Environmental	Compliant RoHS (REACH), WEEE, UL, CE, FCC, ICES (Canada)
Warranty	Two-year manufacturer's warranty (For drivers, see complete lifetime support policy)

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BioMini

Fingerprint Scanner



Key Features

- World's best performing fingerprint algorithm :
Top results in NIST MINEX tests and FVC
- FIPS 201 certified template extractor and matcher
- NIST certified interoperable template format standards (ANSI-378/ISO19794-2)
- Image compression standard (WSQ)
- Fast matching speed : 100,000 match within a second*
Multi-threaded code design fully utilizing multi-core CPU power
- Plug and play USB 2.0 high speed interface
- Supports multiple device handling
- 500 dpi optical fingerprint sensor
- Scratch free sensor surface
- Supports MS Windows and Linux

	BioMini
Fingerprint Sensor	Optical (Scratch free sensor surface)
Resolution	500 DPI / 256 gray
Sensing Area	16.0x18.0mm
Image Size	288 x 320pixels
Interface	USB 2.0 high speed / Full speed, Plug & play
O/S	Microsoft Windows, Linux
Operating Temperature	-10°C ~ 50°C
Certification	CE, FCC, KCC, WHQL
Dimensions (WxHxD)	66.0mm x 90.0mm x 58.0mm

	SDK
Template Size	384 Bytes (Configurable)
Enrollment Time*	< 0.1 second
Verification Time*	< 0.1 second
Identification Time*	100,000 matches per second
Database	Microsoft Access
Encryption	AES 256
Supported Platforms	Windows 7 / Vista / XP / 2000 / ME / 98, Linux

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SSA-X300

Power Package for Access Controllers



Key Features

- Power package for control panel
- Low battery check
- AC power failure check
- Battery recharge circuit
- Tamper alarm for opening door

	SSA-X300
SMPS	
Input Power	100~240VAC(50Hz/60Hz)/2.0A
Power Consumption	13.5V±5%, 4.7A (Strobe, Horn DC 12.5V±5%)
Charging Current	700mA
Dimension(mm)	120 x 250 x 49
Battery	12V, 18Ah, Rechargeable
SMPS Status Transmission	AC Loss, Battery Fail(Non Battery)
Terminal Interface	AC FAIL(+,-) 1Port, NON_BATT(+,-) 1Port, CONTROLLER/INTERFACE(+,-) 2Port, LOCK(+,-) 2Port, STROBE/HORN(+,-) 2Port, CHARGE(+,-) 1Port
Power On/Off	By Switch
AC Input Protection	Yes, by Fuse in input port
Battery Backup	Yes
Battery Overcharge Protection	Yes, protect battery to supply less than 10.8V
Power Restart by Battery	Yes
Protection from Battery	Yes, CHARGE(+,-) Battery(+,-) connection should be correct
Overcurrent protection	Yes, Controller / Expansion board (3.2A), Strobe / Horn(0.8A), Charge(0.7A)
Power Down Protection	Yes, Protected from Strobe / Horn Short
Operation Temperature	0°C ~ 45°C
Certificate	CE, KC
ENCLOSURE	
Dimension(mm)	410 x 410 x 97
Battery Fixture	Black tiebelt to fix battery inside enclosure
Case Lock	Lock on front door with keys
Case Open Status Transmission	Alarm occurs when tamper switch of enclosure door is activated
Controller/ Interface On board	Max 2EA Boards in enclosure

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