SMARTair® Wireless Access Control Product/Technology Overview

ASSA ABLOY
Opening Solutions

Experience a safer
and more open world

SMARTair solution

A SMARTair solution is built around three main elements:

1. Wire-free locking devices to secure doors and other openings
2. Mobile phone based and/or hard RFID credentials are issued to users - no more keys
3. Intuitive software manages everything without hassle.
   You decide (and monitor) who goes where and when

Software and management equipment
- TS1000 software
- Web Manager
- Card encoder
- Portable Programmer or PC-TO-LOCK
- Updater (for Update on Card system)
- HUB (for Wireless system)

Learn more

Credentials
- RFID credentials
- Mobile phone credentials
  - Openow
  - SMARTair App

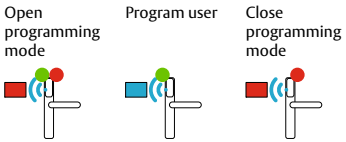
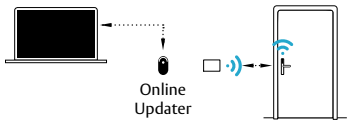
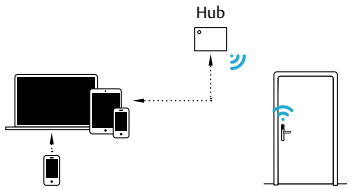
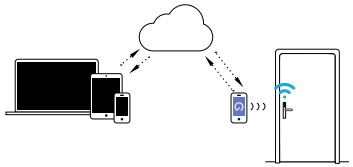
Discover

Electronic door devices
- *i-max* escutcheons
- Wall readers
- Knob cylinders
- *i-gate* padlock
- *i-volution* | *i-minimal* locks*
- *e-motion* cabinet lock

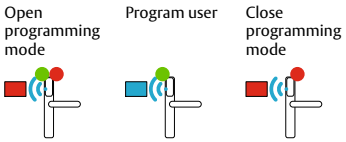
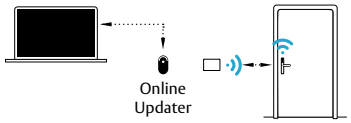
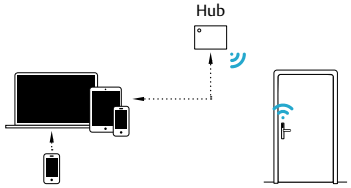
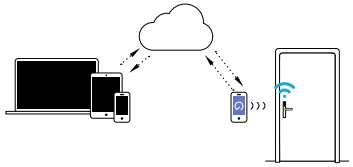
Compare

*Not available in Australia & New Zealand

Management systems

	 Standalone	 Update on Card	 Wireless Online	 Openow
Devices you need	· SMARTair door devices · Programming card · RFID credentials	· SMARTair door devices · Software license, card encoder and portable programmer (or PC-TO-LOCK) · Online updater (optional) · RFID credentials	· SMARTair door devices · Software license, card encoder, portable programmer (or PC-TO-LOCK) · HUB · RFID credentials and/or mobile phone credentials (Openow or SMARTair App)	· SMARTair door devices · Software license and portable progammer (or PT-TO-LOCK) · Mobile phone credentials (Openow)
Frequency of access rights update and user monitoring	Low	Medium	High	Medium to high
Access rights modification	Manually with “programming card” at the device	Automatically delayed via user card (read & write) after crossing wired updater	Automatically in real time via radio frequency	Automatically in real time via smartphone
Time / Calendar control	No	Yes	Yes	Yes
Audit trail	No	Automatically delayed	Automatically in real time	Automatically in real time
Alerts (door left open, intrusion)	No	No	Automatically in real time	Automatically in real time
Remote opening	No	No	Yes	No
Battery warning	Device signal	Device signal and automatically delayed alert	Device signal and real-time alert	Device signal and real-time alert
Upgrade/Downgrade	Update on Card, Openow, Wireless Online	Standalone, Openow, Wireless Online	Standalone, Update on Card, Openow	Standalone, Update on Card, Wireless Online
Upgradability	-	From Standalone to Update on Card: On all door devices: · No hardware changes required · Change of firmware with PP and upgrade key	From Update on Card to Wireless Online: · *i-max*: add WIR+BLE module + firmware upgrade + change of internal cover · Knob cylinder and *i-gate* padlock: change of firmware PP and upgrade key · *i-volution* and *i-minimal*: add WIR+BLE module + change of firmware · Wall Readers: add WIR+BLE module + change of firmware · e-motion: not available for Wireless Online	From Update on Card to Openow: · *i-max*: add BLE module + firmware upgrade + change of internal cover · Knob cylinder and *i-gate* padlock: change of firmware PP and upgrade key · *i-volution* and *i-minimal*: add BLE module + change of firmware · Wall Readers: add BLE module + change of firmware · e-motion: not available for Openow

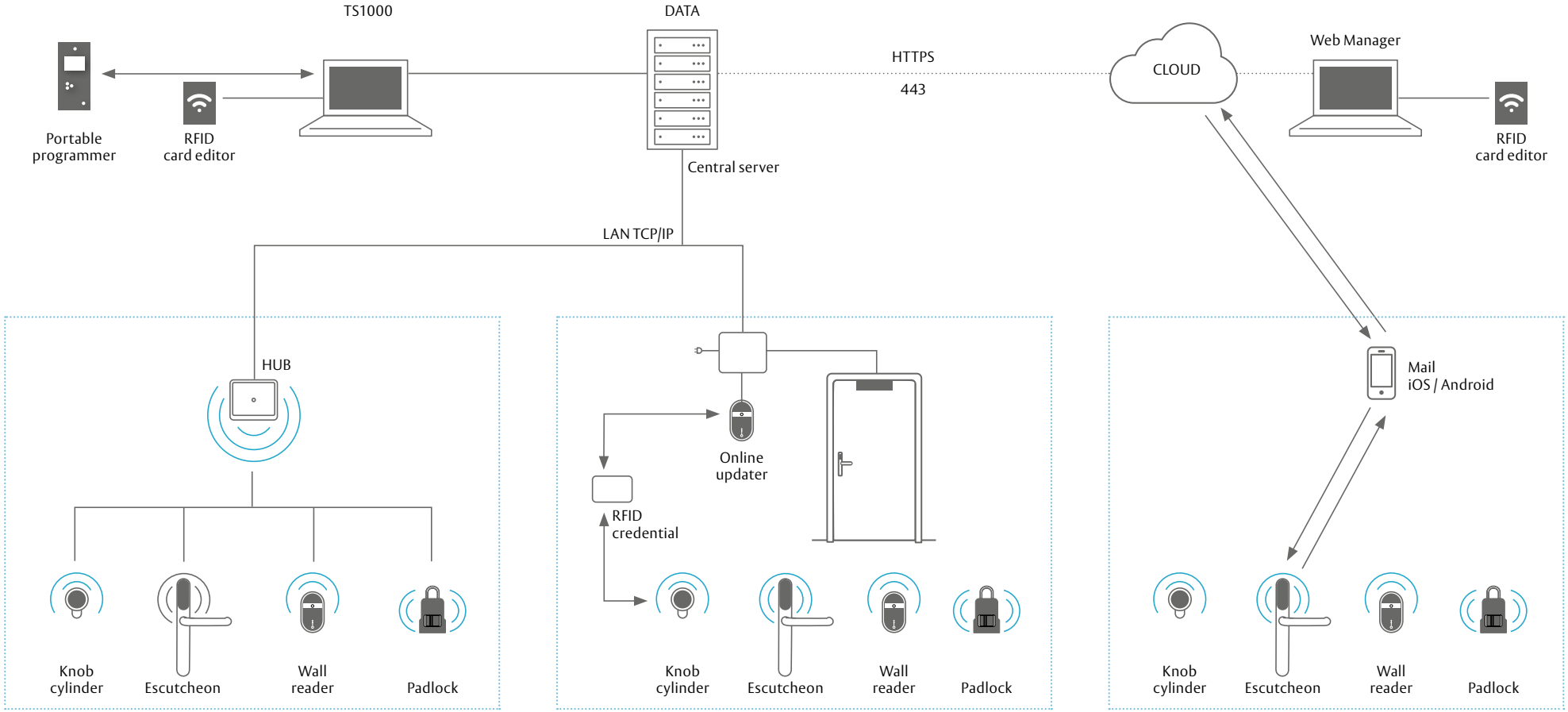
Management systems

	 Standalone	 Update on Card	 Wireless Online	 Openow
Automatic cancellation of lost or stolen cards	Manually	Yes	Yes	Yes
Activation and expiration dates and times	No	Yes	Yes	Yes
Special opening time for ADA users	No	Yes	Yes	Yes
Time schedules / Calendars	No	Yes	Yes	Yes
Operation modes (standard, passage, first user, PIN only, card + PIN, PIN + card, double user)	No	Yes	Yes	Yes
High traffic doors	No	Yes	Yes	Yes
Electronic privacy option	No	Yes	Yes	Yes
Privacy overrides passage	No	Yes	Yes	Yes
Escape / Return	No	Yes	Yes	Yes
Internal handle detection	No	No	Yes	No
Monitor doors in real time	No	No	Yes	No
Global lockdown	No	No	Yes	No
Automatic updates	No	No	Yes	No
GDPR compliance	No	Yes	Yes	Yes

SMARTair system architecture

Scalable and upgradable: Adapt an existing installation to your growing needs when required, while protecting your investment.

Combining different management systems at the same site is possible.



Wireless Online | **Update on Card** | **Openow**

Software and management equipment

Software

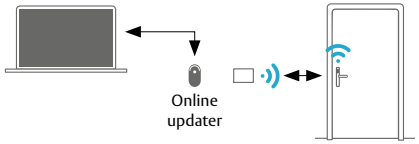
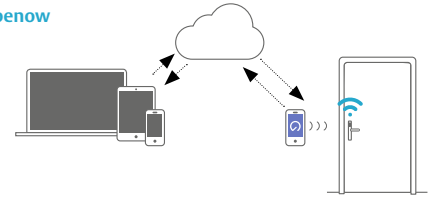
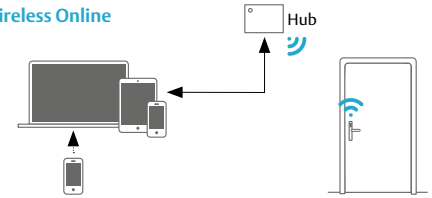
	TS1000	Web Manager
What is it?	The TS1000 is Windows client / server software. It has to be installed on the server and requires its own database.	Once the TS1000 software has been set up, the Web Manager is a web-based software that enables remote management of the installation. Executable from any devices or browser. The server must have a public IP address.
What is it for?	TS1000 is the software used to: · Configure the installation according to the acquired license · Initialize door devices with PP or PT-to-LOCK	Any operation can be done from the Web Manager: · Define users, doors, time zones and all other special functions · Add users and doors · Change access rights · Visualize events, etc · Wireless doors management (like door opening) · Encode RFID credentials
Main features	· Intuitive and easy to manage · Easy matrix visualization of any access plan	· Intuitive and easy to manage · Easy matrix visualization of any access plan · Fast visualization and management of users, doors and matrix in big installations

Management equipment

	Card encoder	Portable programmer	PC-TO-LOCK
What is it?	The new desktop proximity i-coder reads, encodes and deletes the information from the RFID credentials of the SMARTair system (keycards, fobs, wristbands, etc.)	It is the device to initialize and/or update door devices.	It is an alternative device to the portable programmer and is used to initialize and/or update door devices directly from a laptop or Windows tablet.
How does it work?	The i-coder communicates: · Via Ethernet (through a fixed IP address) and it is managed through the TS1000 Web Manager (without the need to install any software on that workstation). · Or through the standard USB communication to a PC or Laptop. This option can be managed through the TS1000 Web Manager (without the need to install any software on that workstation) or through the standard TS1000 Client/Server.	Data is transferred from the TS1000 software to the device. And then, from the portable programmer to door devices.	Directly in the door, it connects the door device to the laptop.

System management devices

Management equipment

	Online updater	Openow	Hub
	Update on Card 	Openow 	Wireless Online 
What is it?	In the SMARTair Update on Card system, the updater is a TCP/IP online wall reader. It is recommended to install it at building's main access points. It works as an online wall reader and as an updating point for users' RFID credentials.	Openow is an intelligent, efficient access control management system powered by a smartphone app working with the TS1000 software. It makes security management considerably easier, providing real-time data without the need to install any hubs.	In a SMARTair Wireless Online system, the HUB is the communication link between wireless door devices and the server.
How does it work?	· It reads events stored in the user's credential and sends them to the server · It writes modifications of the user's access plan into the user's credential, which are later, transferred to the door devices	· Secure data transmission for all communications is ensured by industry protocols (AES 128) · It collects all events from door devices, and sends updates to the closing plan, directly from a mobile and from anywhere, without any need for users to interact with an updater	· Connected to the server via the TCP/IP network of the building. SSL encryption · Connected to door devices using 868MHz frequency. AES128 security protocol · It includes a PoE module · It works with bi-directional communication in real time, with automatic updates in both directions

Credentials

MIFARE™ DESFire™

MIFARE™ CLASSIC

iCLASS by HID

SKIDATA KUDELSKI GROUP

RFID credentials

	Card, fob, tag
Technologies	Compatible with many 13.56MHz contactless read & write identification technologies: MIFARE Classic, MIFARE DESFIRE EV1, i-CLASS, Standard ISO15693, Skidata.
How does it work?	Multi-application: the same credential can be used with several services like vending machines, canteen, etc. The SMARTair information is stored in the credential's free memory space.

Mobile credentials

	Openow	SMARTair Remote App
Technologies	Virtual mobile credentials based on BLE technology. Identical benefits to any RFID credential.	Special app to open doors remotely, regardless of where the user is.
How does it work?	· The app is available for iOS and Android · The Openow credentials are directly sent (or revoked) from the management software (both TS1000 and Web Manager) to the user's mobile phone · The user must have the Openow app on their mobile phone and must register using their email address and activate data through an operator and/or wifi network · The Openow app works as a wallet. It can hold as many virtual credentials from different installations as needed	· The user must download and install the app and activate mobile data through network operator or wifi · The user will see a list of doors in the installation where they have access. They have to select the door they want to open · The same app allows several lists of doors from several installations where the user has access

Door devices

	i-max	**Knob cylinder**	**i-volution** *Not available in Australia & New Zealand*	**i-minimal** *Not available in Australia & New Zealand*
Door profiles	Suitable for wooden, narrow or glass doors	Suitable for wooden, narrow or glass doors	Suitable for wooden doors	Suitable for wooden doors
Traffic volume	Medium to high	Medium to high	Medium to high	Medium to high
Exterior usage	· IP56 (Extreme version) in models without keypad · Up to 85% humidity · -20°C to + 70°C	· IP56 (Extreme version) · Up to 85% humidity · -20°C to + 70°C	· IP56 (Extreme version) · Up to 85% humidity. · From -20°C to +70°C (external) · From 0°C to +50°C (internal)	· IP56 (Extreme version) · Up to 85% humidity · From -20°C to +70°C (external) · From 0°C to +50°C (internal)
Hardware compatibility and installation	· High retrofit (compatible with most common mortise locks) · Drilling. No cabling · Doors from 30mm up to 110mm (thicker doors may be possible on demand)	· High retrofit · No drilling. No cabling · Maximum door leaf length: · Cylinders with fixed body: Different sides: 160mm (60mm x 100mm) Both sides equal: 120mm (60mm x 60mm) · Cylinders with modular body: No restrictions	· Medium retrofit · Drilling. No cabling · Doors from 30mm up to 100mm	· Medium retrofit · Drilling. No cabling · Doors from 30mm up to 100mm
Power supply	· Battery from 75,000 to 105,000 cycles (depending on the management system) · Max. 2 years standby (depending on cycles per day) · Type of batteries: 3 LR03 AAA 1.5V alkaline batteries	· Battery up to 40,000 cycles (depending on the management system) · Max. 2 years standby (depending on cycles per day)	· Batteries from 80,000 to 105,000 cycles (depending on the management system) · Max. 3 years standby (depending on cycles per day)	· Batteries from 80,000 to 105,000 cycles (depending on the management system) · Max. 3 years standby (depending on cycles per day)
Multi-authentication	Yes (Card + PIN, PIN only, Card only)	No. Only RFID	No. Only RFID	No. Only RFID
Status information	· Internal handle usage alert · Internal thumb-turn use recorded (only in models with electronic privacy) · Door position alert: connection for door sensor included (NO normally open). Door sensor not included · Mechanical opening recorded (in combination with a special mortise lock and mechanical cylinder)	No	Mechanical key override detection (if a mechanical cylinder is installed). · Door position: events reported when the door is left open, door incorrectly closed, intrusion, etc.	Mechanical key override detection (if a mechanical cylinder is installed). · Door position: events reported when the door is left open, door incorrectly closed, intrusion, etc.
Certifications	CE (EMC, R&TTE), ROHS, REACH, WEE, EN1634 (Fire) EN1906 Category of use Grade 4, RCM & R-NZ	CE (EMC, R&TTE) ROHS, REACH, WEE, Durability EN15684 Class 6, RCM & R-NZ	CE (EMC, R&TTE), ROHS, REACH, WEE, EN14846 and EN12209	CE (EMC, R&TTE), ROHS, REACH, WEE, EN14846 and EN12209
13.56MHz RFID technologies	MIFARE Classic and Ultralight HID iCLASS, DESFire, Standard ISO 15693, SKIDATA	MIFARE Classic and Ultralight HID iCLASS, DESFire, Standard ISO 15693, SKIDATA	MIFARE Classic	MIFARE Classic
Compatible mobile solutions	Openow™ (Bluetooth Low Energy) SMARTair Remote Opening app	Openow™ (Bluetooth Low Energy) SMARTair Remote Opening app	Openow™ (Bluetooth Low Energy) SMARTair Remote Opening app	Openow™ (Bluetooth Low Energy) SMARTair Remote Opening app
System management upgradability	All systems	All systems	All systems except Standalone	All systems except Standalone

See page 5

Other devices

	Wall reader STR	***i-gate***	**Cabinet lock STE**
Door profiles	-	External gates, closets, cabinets, etc.	Cabinets
Traffic volume	High	Medium to high	High
Exterior usage	· IP55 (Wall reader) · Up to 85% humidity · -20°C to + 80°C (Wall reader) · -10ºC to + 80ºC (Relay board)	· IP68 Certification. Resistant to extreme weather conditions · Up to 85% humidity · -20°C to + 70°C	· Exterior usage · Humidity: up to 85% without condensation · Temperature: on the outside from – 20ºC to 70ºC · IP56 Certification
Hardware compatibility and installation	· To be combined with electromechanical devices to unlock the door (e.g. electric strike plates, electromagnetic locks or escape routes) · Cabling needed	· High retrofit · No drilling, no wiring	· High retrofit · No drilling, no wiring
Power supply	· Cabled 12-24 VAC – VDC: powered through relay board · Max power consumption (reader + relay board): 500mA @ 12V / 250mA @ 24V	· Battery up to 60,000 cycles (depending on the reading technology: MIFARE, DESFire, etc) · Max. 2 years standby (depending on cycles per day) · Type of batteries: One CR2 3V lithium battery	· Battery (from 75,000 to 105,000 cycles) * max. 2 years standby** · Type of batteries: 3 LR03 AAA 1.5V alkaline batteries
Multi-authentication	Yes (Card + PIN, PIN only, Card only)	No (only RFID)	No (only RFID)
Status information	· Door position (door sensor not included) · Request to exit · Tamper	No	No
Certifications	CE (EMC, R&TTE), ROHS, REACH, WEE, RCM & R-NZ	CE (EMC, R&TTE), ROHS, REACH, WEE, Durability EN15684 Class 6, IP68, RCM & R-NZ	CE (EMC, R&TTE), ROHS, REACH, WEE IP56, RCM & R-NZ
13.56MHz RFID technologies	MIFARE Classic and Ultralight. HID iCLASS, DESFire, Standard ISO 15693, SKIDATA	MIFARE Classic and Ultralight. HID iCLASS, DESFire, Standard ISO 15693, SKIDATA	MIFARE Classic and Ultralight. HID iCLASS, DESFire
Compatible mobile solutions	Openow™ (Bluetooth Low Energy) SMARTair Remote Opening app	Openow™ (Bluetooth Low Energy) SMARTair Remote Opening app	No
System management upgradability	All systems	All systems	Standalone Update on Card

See page 5

The ASSA ABLOY Group is the global leader in access solutions. Every day, we help billions of people experience a more open world.

ASSA ABLOY Opening Solutions leads the development within door openings and products for access solutions in homes, businesses and institutions. Our offering includes doors, door and window hardware, locks, access control and service.

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