aperio® Aperio® Technology

Wireless possibilities for online access control

A new approach to wireless access control from ASSA ABLOY Group brands:
ADAMS RITE | CORBIN RUSSWIN | HES | MEDECO | SARGENT | SECURITRON

ASSA ABLOY

The global leader in
door opening solutions

Aperio (Latin) / a'pe.ri.o/ – to uncover, open

Designed for easy integration into existing access control systems, the wide range of Aperio-enabled devices allow facilities to add access control to more applications than ever before.

Adams Rite

A100 Keyless Entry Control
Ideal for aluminum and glass storefront doors

Corbin Russwin

IN100 Lock
Ideal for commercial and educational applications

hes

K100 & KS100 Cabinet Locks
Ideal for cabinets, lockers & drawers – for healthcare, higher education and IT/ data centers

medeco

M100 eCylinder
Ideal upgrade to existing mechanical door hardware

SARGENT

PR100 and IN100 Locks
Ideal for institutional and commercial applications

SECURITRON

AS100 Sensor
Ideal for door position and dry contact sensing

SECURITRON

R100 Reader
Ideal for glass, stone and brick entryways

An innovative new approach to online access control

Aperio® technology is a global wireless platform that reduces the cost and inconvenience of traditional access control, with the flexibility to address any application.

Aperio utilizes local wireless communication between the lock and a communications hub to connect to an electronic access control system. You can easily expand the reach of existing access control systems and secure openings that would otherwise go unprotected.

With the global range of Aperio-enabled locks from ASSA ABLOY, online access control can be easy and cost-effective at any opening, with standardization across locations worldwide.

Advanced Capabilities

- No complex site surveys
- Minimal field configuration
- Simplified installation at the opening
- Fully-encrypted AES 128 wireless communication (IEEE 802.15.4)
- Real-time authentication and alarms

Easily expand the reach of your existing access control system
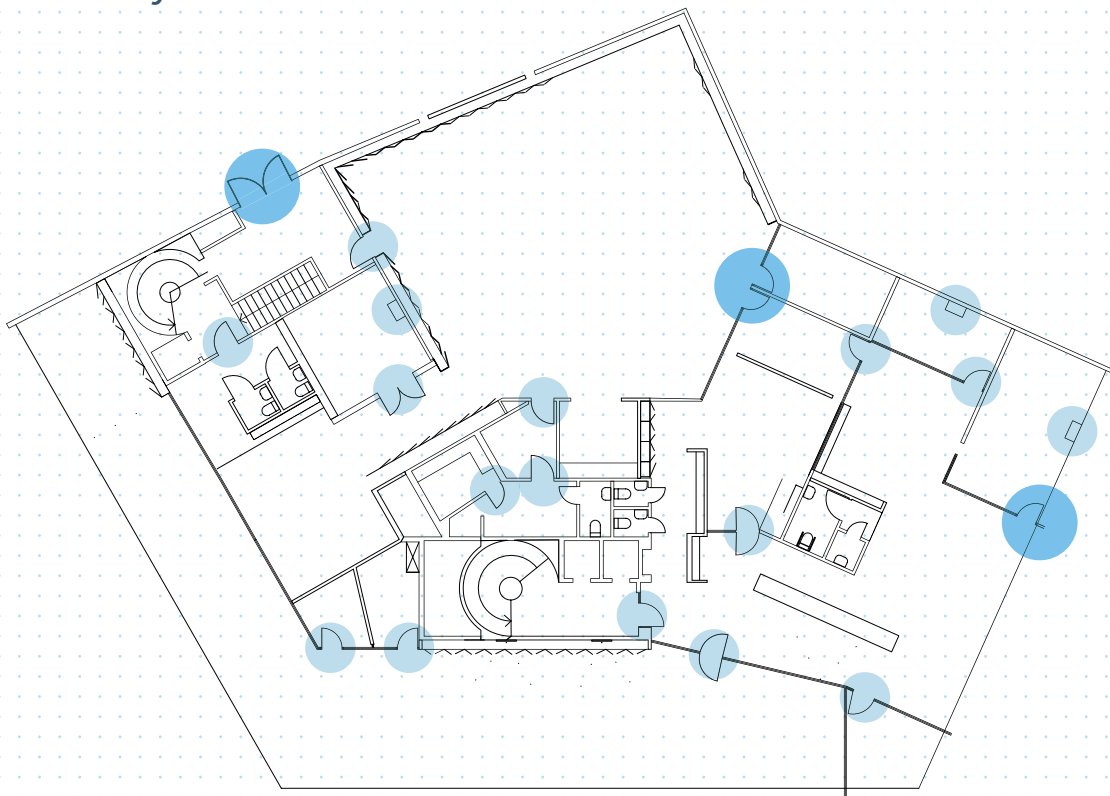
- Wired Access Control Door
- Aperio Enabled Door

Aperio® at a Glance

Locking Devices

Brand	Product Name	Credentials					Device Types Available								Typical Applications	Monitoring				
		Prox	iCLASS	iCLASS SE	multiCLASS SE	Keypad	Mortise Lock	Cylindrical Lock	eCylinder	Exit Device	Cabinet Lock	Keyless Entry Control	Surface Mounted Reader	Door Position Sensor		Door Position Switch	Request to Exit	Tamper	Battery	Deadbolt
ADAMS RITE	A100	•	•			•						•			Aluminum and glass narrow stile entrance systems	•	•	•	•	
CORBIN RUSSWIN	IN100				•		•	•							Commercial openings (offices, conference rooms, budget sensitive customers); K12 schools	•	•	•	•	
HES	K100	•	•	•			•	•			•				Cabinets, lockers and drawers	•		•	•	Lock jamb
HES	KS100	•	•	•							•				Server cabinets/racks with swing handle	•		•		
MEDECO	M100	•	•						•						Retrofit accountability solution - commercial openings (offices, conference rooms)			•	•	Lock jamb
SARGENT	IN100				•		•	•							Commercial openings (offices, conference rooms, budget sensitive customers); K12 schools	•	•	•	•	
SARGENT	PR100					•	•	•		•					Institutional openings (schools, hospitals)	•	•	•	•	•
SECURITRON	AS100													•	DPS monitoring; Form C relay	•			•	
SECURITRON	R100	•	•	•									•		Glass doors; marble, granite, concrete or other surfaces			•	•	

Wireless possibilities for online access control.

Quick, easy wireless deployments.

AS100 Sensor

Provide a wireless door position sensor monitoring solution to Aperio openings

The Securitron AS100 wireless door position sensor with Aperio® technology is an attractive way to add a DPS monitoring solution to aesthetically demanding entries. The AS100 mounts easily to the frame and monitors the position of the door. The signal is then wirelessly transmitted to an Aperio hub. It integrates securely and easily into existing access control systems.

The AS100 can be used on its own, paired with an M100 mortise cylinder or as an elegant complement to an R100 to provide wireless credential and DPS monitoring for glass entryways.

AS100 Features & Benefits

- Adheres to glass and other aesthetically demanding door frame surfaces without any connecting wires
  - Maintains the clean aesthetic of glass entryways
  - Ideal for other difficult to wire locations
- Quick and easy installation
  - Less wire to pull reduces installation costs
- Monitors current door status (open/closed)
- Supplement to ASSA ABLOY door readers for combined wireless credential and DPS signal
  - Complements Medeco M100 mortise cylinders
- Can also be used for dry contact sensing using the 3.5 mm jack

R100 Surface Mounted Reader

Extend elegant access control to hard-to-secure entryways

The Securitron R100 surface mounted wireless reader with Aperio® technology offers an aesthetically appealing way to extend access control to glass, stone, granite or marble entryways. As an elegant complement to an electronic locking solution, the R100 wirelessly transmits credentials for request to entry. Glass, stone and brick entryways can now integrate robust access control while maintaining a clean, wireless appearance.

R100 Features & Benefits

- Adheres to glass and other aesthetically demanding surfaces without any connecting wires
  - Maintains the clean aesthetic of glass, stone, granite or marble entryways
  - Ideal for other difficult to wire locations
- Quick and easy installation
  - Less wire to drill or pull reduces installation costs
- Environmentally sealed electronics provide protection from moisture, heat and cold
- Complements ASSA ABLOY electrified locking devices including electromagnetic locks, electric strikes, electric locks and electrified exit devices
- Credential support:
  - HID® 125 kHz proximity credentials or ISO 14443 A/B and ISO 15693 13.56 MHz contactless credentials: HID® iCLASS / iCLASS SE (full authentication, all formats), MIFARE Classic and DESFire EV1 (full authentication, all formats); NFC (Near Field Communications) mobile devices; HID Seos® card technology.

M100 eCylinder
Add access control to any door in a flash

The Medeco M100 eCylinder with Aperio® technology offers an easy retrofit solution for mechanical door hardware. Add access control to any door in the time it takes to switch out a cylinder.

M100 Features & Benefits

- Retrofit lock design works with most mortise and rim applications
  - Can retrofit most higher-security applications, such as deadbolt function mortise locks
- Flexible design allows the lock to rotate clockwise or counter-clockwise direction depending on the lock hardware
- Real-time door locked status monitoring with integrated tamper and low battery signals
- Credential support:
  - Supports HID® 125 kHz Prox or 13.56 MHz iCLASS® contactless credentials

A100 Keyless Entry Control
Provide unique access control to glass and aluminum doors

The Adams Rite A100 with Aperio® technology is a unique keyless entry control, ideal for adding electronic access control to an aluminum narrow stile door. The A100 works with Adams Rite deadbolts, deadlatches and exit devices to offer all the benefits of keyless security and an innovative approach to online access control. Quickly upgrade a mechanical door to a fully electrified online door without the cost and inconvenience of wiring the door.

A100 Features & Benefits

- Suitable for Adams Rite deadlocks, deadlatches and exit devices
  - Compatible with select Corbin Russwin ED4000 and Yale 7200 Series exit devices
- Field selectable handing
- Vandal resistant lever with break-away (resettable) clutch
- Key override via mortise cylinder
- Credential support:
  - Supports HID® 125 kHz Prox or 13.56 MHz iCLASS® contactless credentials

Access control in a flash.
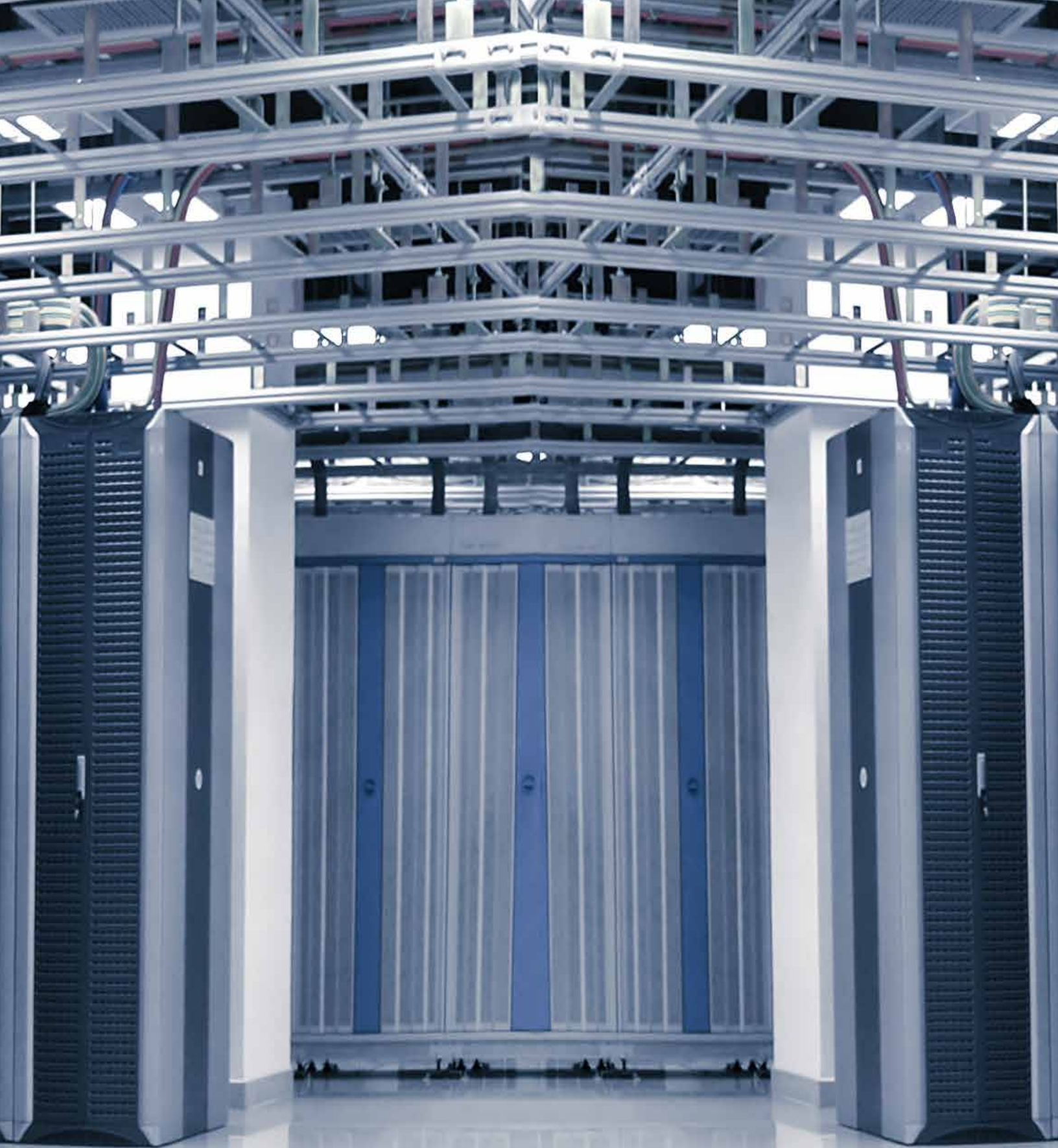
Redefining wireless access control.

K100 Cabinet Lock

Add security and accountability to cabinets, lockers and drawers

The HES K100 wireless cabinet lock with Aperio® technology expands access control to cabinets, drawers and lockers. Control and track access to pharmaceuticals, prototypes, restricted documents, evidence, tools and high value materials through the use of existing ID badges.

K100 Features & Benefits

- Works with cabinet doors and lockers with door thickness up to 1-1/2"
- Static strength 150 lbs
- Latchbolt status monitoring
- Product options: black or white finish; round, thumbturn, ADA lever
- Credential support:
  - HID® 125 kHz proximity credentials or ISO 14443 A/B and ISO 15693 13.56 MHz contactless credentials: HID® iCLASS / iCLASS SE (full authentication, all formats), MIFARE Classic and DESFire EV1 (full authentication, all formats); NFC (Near Field Communications) mobile devices; HID Seos® card technology.

KS100 Server Cabinet Lock

Protect sensitive data and equipment while ensuring compliance

The HES KS100 server cabinet lock with Aperio® technology helps address the security needs of data centers and colocation facilities by providing real-time access control to individual cabinet doors in a single-card system. Prevent data breaches and equipment failure that can be costly and damaging to any business.

KS100 Features & Benefits

- PoE hardwired via standard IEEE 802.3af, 48 VDC Power over Ethernet (PoE Injector not included)
- Designed for standard 25 mm x 150 mm server lock openings
- Static strength 250 lbs
- Lock and DPS status monitoring
- Mechanical key override capable with SFIC (SFIC not included)
- Credential support:
  - HID® 125 kHz proximity credentials or ISO 14443 A/B and ISO 15693 13.56 MHz contactless credentials: HID® iCLASS / iCLASS SE (full authentication, all formats), MIFARE Classic and DESFire EV1 (full authentication, all formats); NFC (Near Field Communications) mobile devices; HID Seos® card technology.

PR100 Lock

Bring access control deeper into your facility

The SARGENT PR100 lock with Aperio® Technology makes it easy and cost-effective to bring access control to additional doors. It uses local wireless communication between an Aperio lock and hub to connect to an access control system, eliminating the greatest cost and inconvenience of traditional access control – the wiring at the door.

PR100 Features & Benefits

- Industry leading ANSI/BHMA Grade 1 hardware offers the highest degree of physical security available in access control locks
- Quick and easy installation
  - Integrated reader, monitoring and short range wireless radio simplifies installation and reduces material costs
- Real-time door status monitoring with REX, DPS, deadbolt, tamper and low battery signals
- Available in: 10 Line Bored Lock; 8200 Series Mortise Lock; 80 Series Exit Device, offering the flexibility to support a variety of openings
- Available with keypad for two-factor authentication
- Credential support:
  - Supports HID®125 kHz Prox or 13.56 MHz iCLASS® contactless credentials

IN100 Lock

Expand your access control system easily and affordably

Available from ASSA ABLOY Group brands Corbin Russwin and SARGENT, the IN100 lock with Aperio® Technology makes access control easy and affordable. This next generation lock offers the convenience and flexibility of Aperio wireless technology with the real-time communication of online access control. As part of the Aperio family of wireless locks, the IN100 offers easy expansion of existing access control systems to bring a new level of control to your facility.

IN100 Features & Benefits

- Industry leading ANSI/BHMA Grade 1 hardware offers the highest degree of physical security available in access control locks
- Quick and easy installation
  - Integrated reader, monitoring and short range wireless radio simplifies installation and reduces material costs
- Real-time door status monitoring with REX, DPS, tamper and low battery signals
- Lockdown capability allows the IN100 to respond to lock/unlock commands from a host EAC system in less than 10 seconds in battery powered applications
- Support for passage mode scheduling offers convenience for office environments
- Available in cylindrical and mortise lock configurations offering the flexibility to support a variety of openings
- Credential support:
  - 13.56 MHz credentials: iCLASS®, iCLASS SE® (SIO-enabled), iCLASS® Seos®, SIO on MIFARE® Classic, SIO on MIFARE DESfire® EV1, MIFARE Classic, DESfire EV1, NFC-enabled mobile phones
  - 125 kHz credentials: HID Prox®
- Patent-pending credential cache ensures access when the lock is offline from the EAC system

A wireless solution that is truly easy.

Aperio® Hubs

Designed for easy integration into existing access control systems, Aperio-enabled locks communicate wirelessly to an Aperio hub, which connects to the access control system using Ethernet, RS-485 or Wiegand wiring.

Order String	Description	Max. # Devices Supported by Hub	Conductors Required	Communication Interface
AH-20-W14-NNNN	Wiegand Hub	1	12	Wiegand
AH-30-R12-NNNN	Generic RS-485 Hub	8	5	RS-485
AH-30-RN1-(XXXX)*	Mercury Powered RS-485 Hub	8	5	RS-485
AH-30-R25-NNNN	VertX® Hub	2	5	RS-485
AH-40-IN2-NNNN	IP Hub	16	Cat 5 or higher	IP

* Replace (XXXX) with Mercury Access Control Manufacturer Partner Code.

Aperio Hub Specifications

- Wireless Coverage Range: Up to 50 feet (2 interior walls) between the Aperio locking device and communication hub on building environments**
- Voltage: 8 to 24 VDC
- IP Hub: Supports PoE, IEEE 802.3af compliant Class 1 powered device (PD)
- Maximum Standby Current: 80 mA at 12 VDC /250 mA at 24 VDC
- Operating Temperature: 41 to 95 degrees F (5 to 35 degrees C)
- Operating Humidity: 0 to 95% relative humidity non-condensing
- Monitoring: AH20 includes 4 form C relays for door status monitoring (DPS, REX, battery, tamper)

** An optional external antenna (part no. EXT-10-ANT) with max antenna gain of 3, 9 dBi (SMA connector) is available for use with AH20, AH30 and AH40 Aperio hubs. This is a 2.4 GHz dipole, omnidirectional antenna that may be used to obtain a more uniform coverage pattern (in the form of a dough nut) around the hub. Please note that this does not extend the maximum range of the hub and is limited to no more that 25 feet between the locking device and hub (reference illustrations to the right).
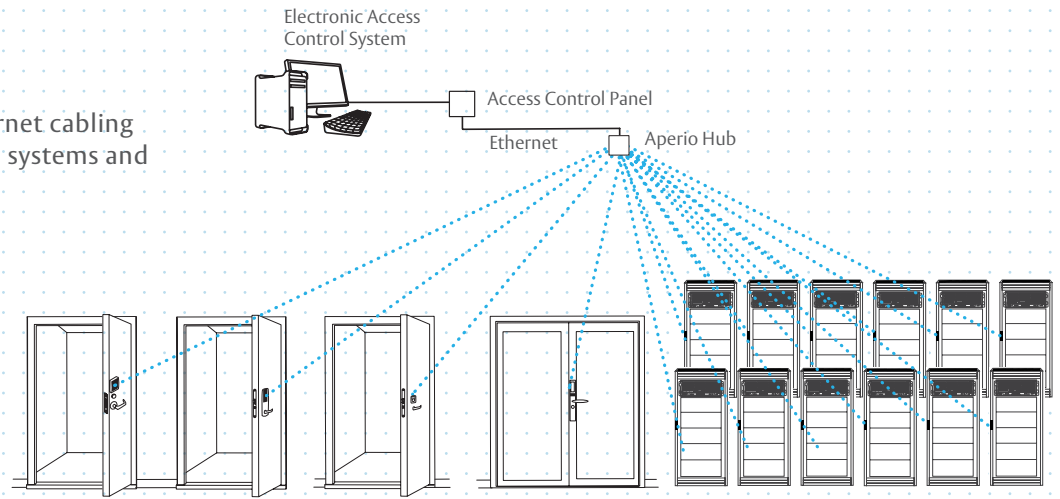
Wireless Coverage
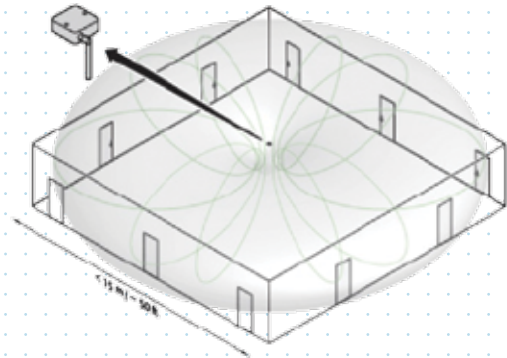
With external antenna
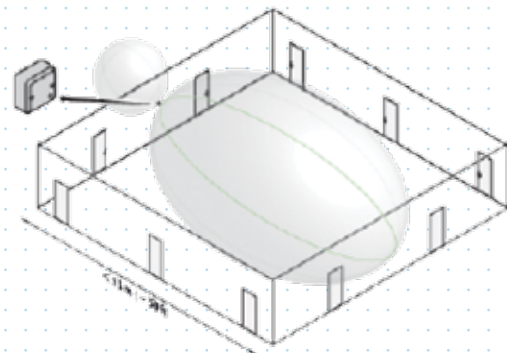
Without external antenna

IP Hub

The IP Aperio hub uses standard Ethernet cabling to connect to IP-based access control systems and supports up to 16 devices per hub.

Electronic Access Control System
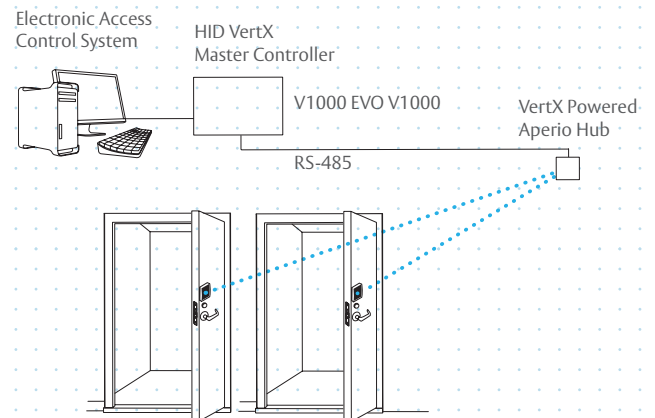
Access Control Panel

Ethernet

Aperio Hub

1:8 Hubs

The Mercury-Powered and standard RS-485 versions of the Aperio hub offer the flexibility and scalability to support up to eight devices per hub*.

Electronic Access Control System

Access Control Panel

RS-485

Aperio Hub

MERCURY Powered
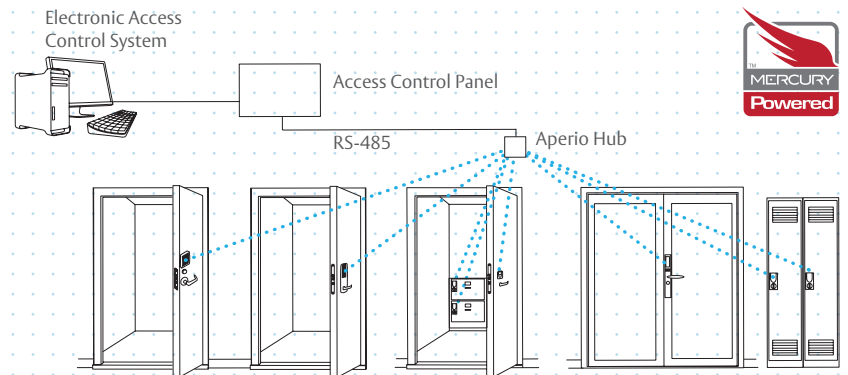
VertX-Powered Hub

The VertX®-powered Aperio hub connects to the access control system using RS-485 wiring and supports up to two devices per hub.

Electronic Access Control System

HID VertX Master Controller

V1000 EVO V1000

VertX Powered Aperio Hub

RS-485

Wiegand Hub

Industry standard Wiegand output offers easy integration with many popular access control systems.

Electronic Access Control System

Access Control Panel

Wiegand

Aperio Hub
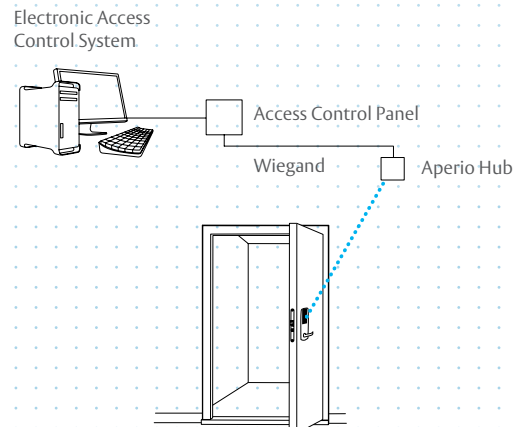
* Must be supported by EAC system.

ASSA ABLOY is the global
leader in door opening solutions,
dedicated to satisfying
end-user needs for security,
safety and convenience

ASSA ABLOY

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