Aperio Technology

Wireless access control - The evolution starts here

ASSA ABLOY

The global leader in
door opening solutions

Aperio Overview

Aperio is a new technology developed to complement new and existing electronic access control systems; providing end users with a simple, intelligent way to upgrade the controllability and security level of their premises.

The heart of Aperio is a short distance wireless communication protocol designed to link online electronic access control.

Application

An access control system is standard equipment for companies and public administrations; providing buildings with a very high level of security.

However, installing access control doors is very expensive due to the extensive wiring required. This is why access control systems often only cover doors with very high security requirements. Typically, all other doors have mechanical locks and therefore cannot be monitored and managed. If a master key is lost, there can be major security risks, not to mention the unsatisfactory set of circumstances for security officers - this is where Aperio technology comes in. Doors merely need to be equipped with wireless Aperio battery powered cylinders, escutcheons or locks with integrated RFID readers, then linked to the access control system online via a communications hub.

ASSA ABLOY's Aperio technology allows security and facility managers a convenient and cost-effective solution to increase the number of doors that can be monitored.

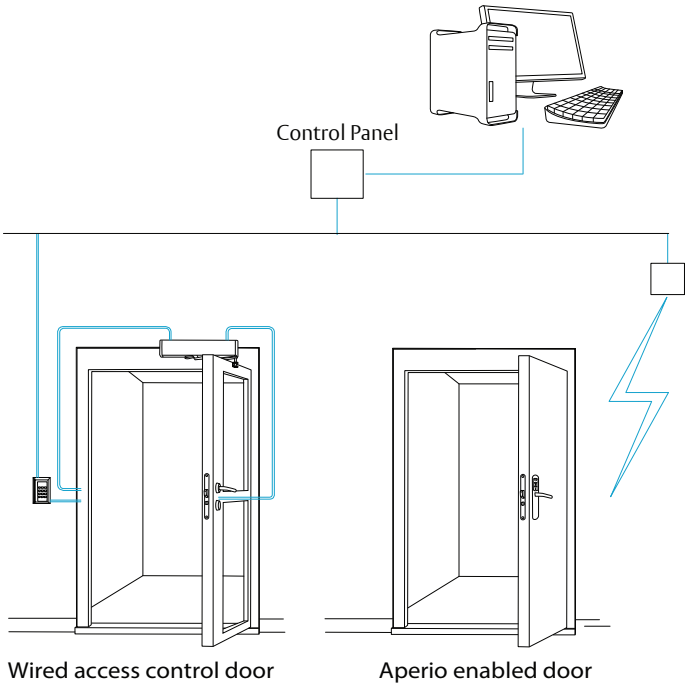
Aperio is HID genuine certified technology that supports a range of credentials including: iCLASS, MIFARE, DESFire, SEOS, Legic and 125 kHz Proximity (HID PROX/ EM410). With such a vast range of credentials supported there is generally no requirement to replace issued credentials.

Key Features

Affordable online door control of internal doors
- Few components
- Very easy installation
- No changes to existing access control installations

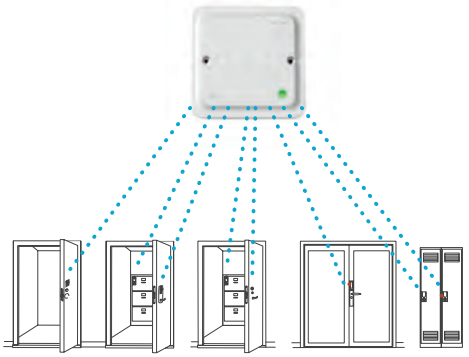
Extends existing access control system
- Connects over standard interface
- No separate management software:
  - uses existing access control system management software
- No change of cards

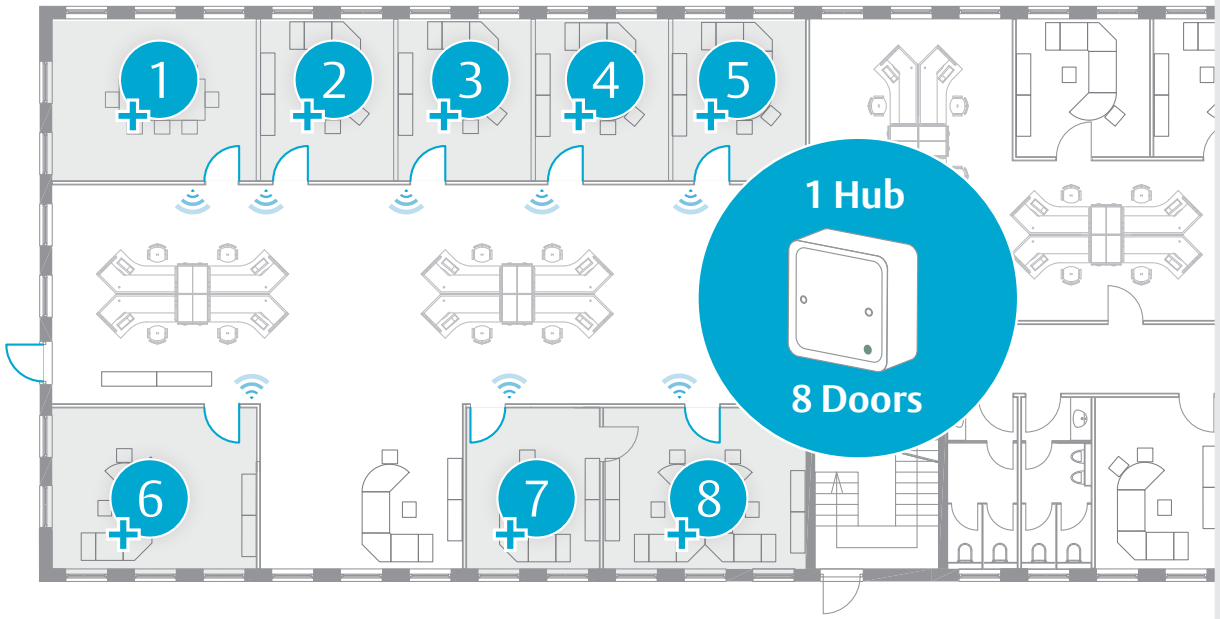
Enhances security for internal doors
- Eliminates key management issues
- Authorization changes in real time
- Encrypted communication
- Audit trails and time zones through existing system



The 1 to 8 Communication Hub

- 2.4GHz wireless communication with Aperio lock
- RS485 communication to access control system
- Secure 128-AES encryption
- Connects up to 8 Aperio devices
- Real time access & audit
- Significantly reduces cost for integrated access control doors
- Reduced time and effort required for installation
- Operates on a transmission range of about 25 meters





Aperio Components

C100 Cylinder
Converts any mechanical cylinder to an access control door.

K100 Cabinet Lock
Audit trail to medicine cabinets, cupboards, display cases, etc.

KS100 Data Cabinet Lock
Control access to data cabinets and servers. Data centre rack access solution.

E100 Escutcheon
All in one door furniture and reader with key override.

G100 Aperio Lockset

Electronic Features

ASSA ABLOY's Aperio™ technology is leading the evolution of online wireless door locks.

The new G100 is a fully motorized wireless lockset that offers the durability and quality that is synonymous with ASSA ABLOY.

Aperio is well known to provide a cost effective way to migrate wireless access control devices to an online electronic access control system.

Sophisticated battery powered technology communicates wirelessly to a hub.
The hub is then wired directly to the access control system and enables standard online access control functionality at significantly reduced costs to that of a hard wired door.

The G100 features the V3 platform, which enables high frequency entrance doors to operate for two years on a standard set of batteries; maintaining remote opening functions of typically 5 seconds communication time between the Aperio lock and the access control system throughout the battery life.

Installation is breeze with the enhanced clip bracket installation. This makes the ASSA ABLOY's G100 fully retrofit-able to most glass door applications. There is no need to have glass door pre-cut.(Door thickness 9mm - 13mm)

In addition, a capacitive keypad and proximity reader are also included in the motorized lock.

ASSA ABLOY's G100 provides the benchmark for premium wireless access control solution.

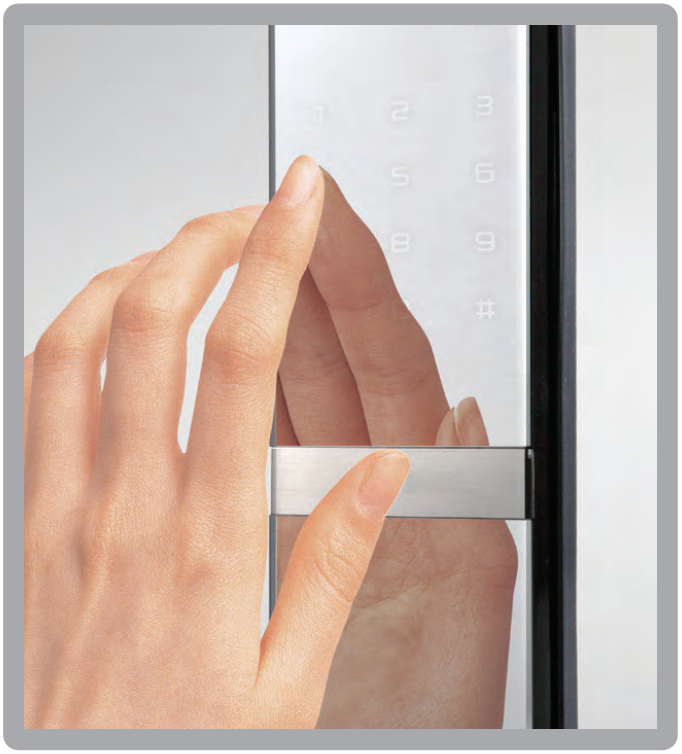
G100 Aperio Lockset Applications

- Existing or new swing glass doors; such as an office, reception or lift lobby
- Door thickness 9mm - 13mm
- Helps expand existing or new access control installations
- Heritage listed buildings

G100 Aperio Lockset

Electronic Features

- Wireless online access control
- Authorization changes in real time
- Audit trails and time zones managed through existing EAC system
- REX - Request to exit (internal knob monitoring)
- Smart offline credential cache for last 200 users
- Store last 200 events and audit trails locally in the stock
- Battery powers-up to 40,000 operations
- LED for access granted/denied status
- Battery low indication in the EAC system
- Powerful new electronics with USB interface
- Heartbeat communication: 5-10 seconds
- Remote door opening/locking functions
- Supports multiple high frequency RFID technologies



Functions

External	Motor will retract the bolt to unlock. After closing the door, the lock automatically re-locks after a time delay as set by the user
Keypad	Touch keypad to wake up unit, enter an authorized pin and motor will retract the bolt to unlock
Internal	Twist and turn knob to retract bolt. User can turn the knob only if the user pushes both the buttons on the thumb turn simultaneously
REX	Allows the access control system to recognize valid egress when the internal knob is turned thereby avoiding false alarm
DPS	Allows the access control system to monitor the door status such as "Door closed" or "Door open"

Fitting

Clip Bracket	To ease the installation process, the lock is provided with a clip type bracket which comes with a strong double sided industrial grade tape (Glass door 9 mm to 13 mm thick)

G100 Aperio Lockset

Product Information

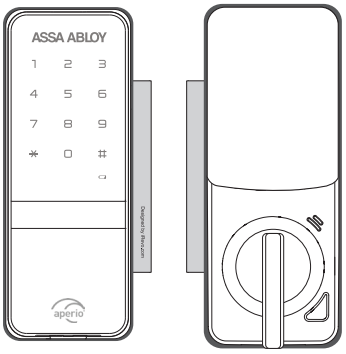
Electronic Technical Information	
Battery Type	4 x AA Alkaline
Battery Lifetime	>40,000 cycles
Radio Standard	IEEE802.15.4(2.SGHz)
Encryption	AES128Bit
Wireless Range	5-25m depending on location of Hub & Environment
RFID Technology	Mifare Classic / Desfire, Mifare Classic Plus & iCLASS
RFID Reading	UID/sector/block
Card Range	<2cm
Operating Temperature	-15°C - 55°C
Humidity	<85% non-condensing
Approvals	RCM CE

Product Details	
G100 Wireless Aperio Lockset	
Finish	Satin Chrome
Backset	60mm
Door Application	New and existing glass doors Thickness 9mm - 13mm
Internal Knob	Twist and turn internal knob to retract bolt (safe and secure)
Body Material	Mifare Classic / Desfire, Mifare Classic Plus & iCLASS
Override Cylinder	No
External Power	Micro USB in the front panel.
Lock Type	Motorized locking bolt

Dimension	
Front Body	14(D) x 72.8(W) x 186(H)
Rear Body	48.8(D) x 77.5(W) x 190.5(H)

Standards and Compliance	
CE	European Electric Compliance
	Australian electrical Regulatory Compliance

Dimensional Line Drawings



G100 Wireless Aperio Lockset Part Numbers	
G100	Aperio G100 V3 keypad + reader for Glass Doors 9-13mm Door Thickness

Communication Hub and EAC Interface

General Description

The communication hub is the link between Aperio locks and the access control system. Depending on the type of hub used, up to 8 locks can be paired with one hub.

The hub communicates directly with the locks over an encrypted 2.4Ghz wireless.

There are four communication hub types, Depending on the access control system you are connecting the hubs to will depend on the type of hub selected.

AH20

The AH20 utilises a standard wiegand interface between the hub and the existing access control system and in addition provides 4 relays to provide a low level interface to report, low battery, lock jamb, unlocked and lock offline. The hub is designed to communicate with a lock within a 25m range.

AH30

The AH30 utilises a RS-485 connection between the hub and the access control system. The hub is designed to communicate with up to 8 locks within a 25m range.

AH40

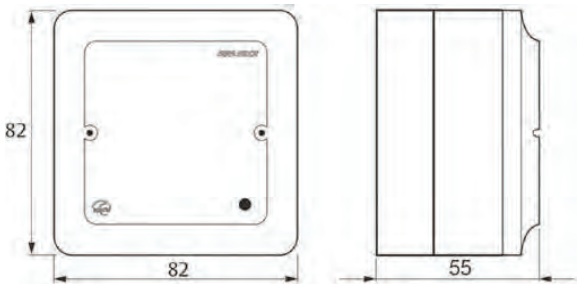
The AH40 utilises an IP (Ethernet) connection between the hub and the access control system. The hub is designed to communicate with up to 8 locks within a 25m range. The AH40 can be powered via both an external power supply and POE 3.5w.

Key Features

- Connect up to 8 Aperio devices to a single hub
- Different interfaces allowing connection to a wide range of access sontrol systems
- 128 Bit AES encrypted radio communications
- Intergrated antenna
- LED status for visual indication
- Applications

AH30 1:8 RS485 Hub

AH40 IP (Ethernet) Hub



Communication Hub Technical

Hub Version	Interface	Max. No. of Locks
AH20	Advanced Weigand	1
AH30	RS-485	8
AH40	IP (Ethernet)	8

Ordering Information

Product Description	Part Number
AH20 Aperio 1:1 Advance Wiegand Hub	AH20-2-0
AH30 Aperio 1:8 RS485 Hub	AH30-3-0
AH40 Aperio 1:8 IP(Ethernet) Hub	AH40-4-0

Software & USB Radio Dongle

General Description

The Aperio programming application is the software tool used to set up and programme Aperio based products.

Using the software the installer simply plugs in the USB radio dongle to the PC to communicate directly to the Aperio lock via the communication hub.

The software has an encrypted installation data base that can be used to manage any number of sites.

Key Features

Software

- Multilingual installation tool
- Encrypted installation database
- Installation management :
  - Unit configuration
  - Firmware update
  - Pair/Un-pair
  - Override credentials
  - Wireless status link
  - RS485 settings

Radio Dongle

- Provides communication to Aperio based products
- Encrypted radio communication

Applications

- Tools designed for the installer to set up and program Aperio based products

Ordering Information

Product Description	Part Number
USB Dongle	APRD1/PAP1

Notes:

ASSA ABLOY

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

ASSA ABLOY is represented in all major regions, in both mature and emerging markets, with leading positions in Australia, Europe and North America.

As the world's leading lock group, ASSA ABLOY offers a more complete product range of door opening solutions than any other company on the market

FCC Statement

This equipment has been tested and found to comply with the limits for a class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses, and can radiate radio frequency energy and if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio / TV technician for help.

Operation with non-approved equipment is likely to result in interference to radio and TV reception.
The user is cautioned that changes and modifications made to the equipment without the approval of manufacturer could void the user's authority to operate this equipment.

IC Statement

This device complies with Industry Canada license-exempt RSS standards(s). Operation is subject to the following two conditions:

(1) this device may not cause interference, and
(2) this device must accept any interference, including interference that may cause undesired operation.

Adams Rite
ASSA ABLOY

Conformité aux Normes FCC

Cet équipement a été testé et trouvé conforme aux limites pour un dispositif numérique de classe B, conformément à la Partie 15 des règlements de la FCC. Ces limites sont conçues pour fournir une protection raisonnable contre les interférences nuisibles dans une installation résidentielle. Cet équipement génère, utilise et peut émettre des fréquences radio et, s'il n'est pas installé et utilisé conformément ment aux instructions du fabricant, peut causer des interferences nuisibles aux communications radio. Rien ne garantit cependant que l'interférence ne se produira pas dans une installation particulière. Si cet équipement provoque des interférences nuisibles à la réception radio ou de télévision, qui peut être déterminé en comparant et en l'éteignant, l'utilisateur est encouragé à essayer de corriger les interférence par une ou plusieurs des mesures suivantes:

- Réorienter ou déplacer l'antenne de réception.
- Augmenter la distance entre l'équipement et le récepteur.
- Branchez l'appareil dans une prise sur un circuit différent de celui auquel le récepteur est connecté.
- Consultez votre revendeur ou un technicien radio / TV pour assistance.Avertissement.

Les changements ou modifications à cet appareil sans expressément approuvée par la partie responsable de conformité pourraient annuler l'autorité de l'utilisateur de faire fonctionner cet équipement.

Conformité aux Normes IC

Cet appareil est confrome avec Industrie Canada exempt de license RSS standard(s). Son fonctionnement est souimes aux deux conditions suivantes:

(1) cet appareil ne peut causer d’interférences, et
(2) cet appareil doit accepter toute interference, y compris des interférences qui peuvent provoquer un fonctionnement indésirable du périphérique.