

Aperio™ Hub AH40 Installation Instructions

ASSA ABLOY

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ETL marking
Recognized component



Intertek
4002570

Conforms to ANSI/UL standard 294, ANSI/UL 60950-1
Certified to CAN/CSA standard C22.2 No. 60950-1



For more detailed information about the Aperio system please read
ST-001279-Aperio Technology Installation Guide AH40.

AH40 - FCC and Industry Canada Statements

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 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.

This device complies with Part 15 of the FCC Rules and with RSS-210 of Industry Canada. Operation is subject to the following two conditions:

- (1) This device may not cause harmful interference, and*
- (2) This device must accept any interference received, including interference that may cause undesired operation.*

Le présent appareil est conforme aux CNR d'Industrie Canada applicables aux appareils radio exempts de licence. L'exploitation est autorisée aux deux conditions suivantes:

- 1. l'appareil ne doit pas produire de brouillage, et*
- 2. l'utilisateur de l'appareil doit accepter tout brouillage radioélectrique subi, même si le brouillage est susceptible d'en compromettre le fonctionnement.*

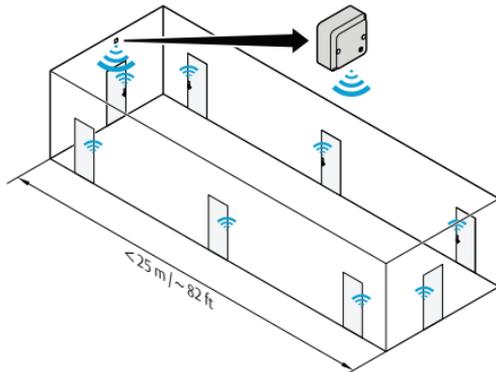
The term "IC:" before the equipment certification number only signifies that the Industry Canada technical specifications were met.

Le terme "IC" devant le numéro de certification signifie seulement que les spécifications techniques Industrie Canada ont été respectées.

FCC Caution: Any changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate this equipment.

IEEE 802.15.4 operation of this product in U.S.A. and Canada is limited to channels 11-25 by Aperio Programming Application. Outside of U.S.A. and Canada another version of the Aperio programming application allow use of channels 11-26.

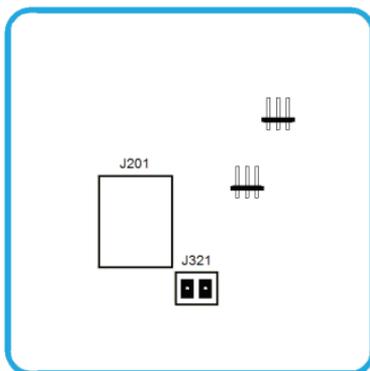
AH40 - Placement of Communication Hub



Placement of the Hub, 1-8 doors

Note: AH40 must be installed into a junction box ex European 2-Gang, Aperio bottom cover or with Americas adaptor plate to junction box. AH40 shall only be installed with qualified and trained personal. Indoor installation only!

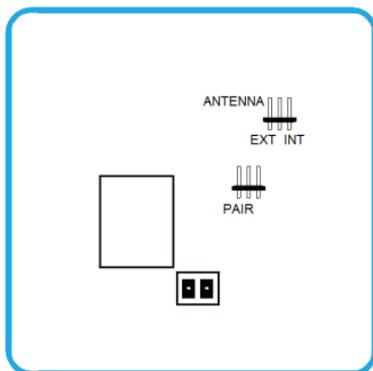
AH40 - Connectors



CONNECTORS	DESCRIPTION
J201	Ethernet connector. Connection to the Electronic Access Control system through a 10BASE-T / 100BASE-TX Local Area Network. Can also be used for power supply if connected to a IEEE 802.3af compliant Power Sourcing Device (PSE). Wire requirements CAT5 or higher.
J321	Power supply input, 8-24 V DC. The power supply shall be a Limited Power Source (LPS) according to EN 60950-1. The power supply shall be 3A over current protected. Wire requirements 16-22 AWG.

Note: When PoE (Power over Ethernet) is used, no power supply may be connected to J321. The installation shall comply with national wiring regulations.

AH40 - Jumpers

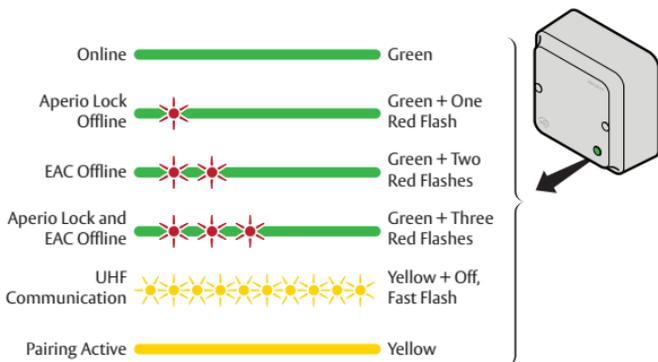


JUMPERS	DESCRIPTION
ANTENNA	Select external antenna by connecting the two left pins. Select internal antenna by connecting the two right pins.
PAIR	Select pairing mode by connecting the two left pins.

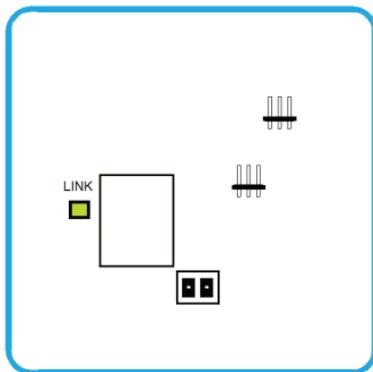
Note: To install an external antenna use a thin screw driver and gently bend the antenna cap loose. **Be careful**, there are sensitive components behind the cap!

AH40 - Communication Hub LED Indications

The Communication Hub has a status LED visible through the front cover. It supports optical schemes with red, green and yellow. The indication schemes are described by the figure below:



Note: With the software tool *Aperi Programming Application* and an *USB radio dongle*, further system installation parameters can be set.



The "LINK" LED on the communication Hub indicates both status of the Ethernet Link level and if communication is ongoing. Note: LED on the Ethernet connector is not used.

AH40 - Technical Data

Physical Dimensions	82 mm x 82 mm x 37 mm (H x W x T)
Power Supply	8-24 V DC or Power over Ethernet (PoE)
Power Rating	Power supply The power supply shall be able to deliver minimum 3.5W. The power supply shall be 3A over current protected PoE IEEE 802.3af compliant class 1 Powered device (PD)
Ethernet	10BASE-T / 100BASE-TX Local Area Network
Radio Standard	IEEE 802.15.4 (2400 – 2483,5MHz) 16 channels (11-26) 15 channels in USA and Canada (11-25) AES 128 bit encryption
Receiver Sensitivity	-100 dBm
Wireless Transmit Power	10 dBm/MHz according to EN ETSI 300 328. Maximum spectral density.
Wireless Operating Range	Indoors up to 25m meters depending upon installed environment.
Internal Antenna	Two port cross polarized patch antenna.
External Antenna	One reverse polarity SMA external antenna connector. AH40 is certified to be used with ASSA ABLOY external antenna AH ANTENNA 1. If other external antenna is used it must be of same type (dipole) and not have larger antenna gain than 3,9dBi.
Operating Temperature	5°C to 35°C
Humidity	< 95% non-condensing
IP Classification	IP20
Safety and Emissions	FCC 47CFR Part 15 subpart B and subpart C IC RSS-210 EN ETSI 301 489-17 v2.2.1 EN ETSI 300 328 v1.8.1 EN 60950-1 2006 / A11:2009 / A12:2011 / A1:2010 / AC:2011 UL 294-2010

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