

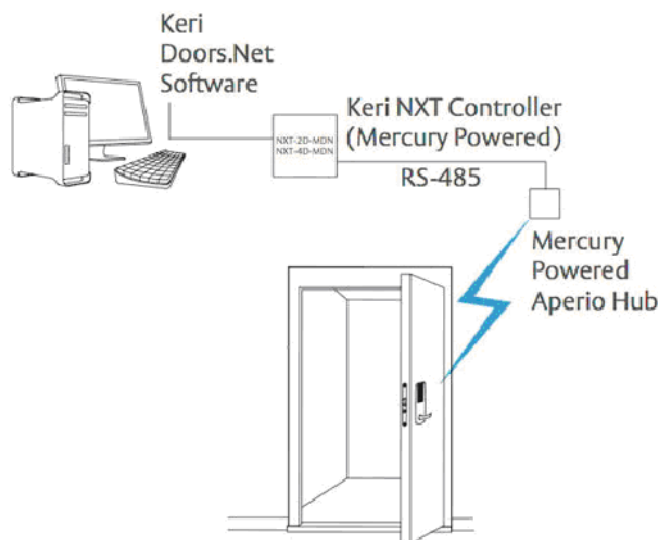
# Basic ASSA Aperio Configuration

## Application Note

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Doors.NET supports integration with the Aperio series wireless locks manufactured by ASSA Abloy when using Keri NXT Mercury Powered controllers.

Aperio locks communicate wirelessly to a communication hub. The hubs physically connect to reader busses on Keri NXT-MSC panels using either RS-485 or Wiegand interface.



Installers and integrators who wish to use the Aperio range of products with Doors.NET MUST be certified by ASSA Abloy. Keri Systems DOES NOT supply or support the software application which is required to configure the wireless locks. Keri Systems recommends that you contact your local ASSA Abloy supplier for further details about product training and support.

### Requirements:

- Doors.NET software must at least be version 3.5.1.15 or greater
- The number of Aperio readers must be enabled on the license
- The number of Aperio readers per controller must be enabled
- The locks must already be paired to the hubs prior to setting up in Doors.NET

### Limitations:

- 25M range between lock and hub (AH-30)/ 5M for the AH-15 (the stated range is subject to the hub being installed within ideal environmental conditions)
- Maximum of 16 Aperio locks per NXT MSC controller
- When the Aperio hub is being used the communication protocol of the bus is changed. As a result you cannot use NXT peripheral hardware such as a 4x4 module on the same bus.
- Only Mifare or iClass credentials (depending upon lock type) are supported at this time

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### 1.0 Supported Aperio Devices

The Aperio ribbon bar displays the supported wireless locking devices and the AH30 hub.



### 1.1 Communication Hubs

Doors.NET supports both the AH-15 and the AH-30 hubs. The AH-15 hub pairs directly with a single Aperio wireless lock. The AH-30 hub is capable of supporting up to 8 Aperio locks. Multiple hubs can be connected to a single NXT reader port, covering a maximum of 16 locks per controller.

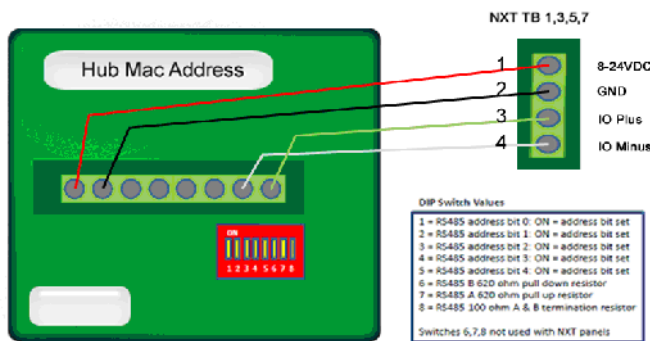
- When using a 1-8 hub, add the AH-30 hub first. Then use the ASSA Aperio Programming Application (APA) tool to add the locks to the hub.
- When using a 1-1 hub, add the lock to the bus. The AH-15 hub is added automatically by the Doors.NET software.

### 2.0 Installing the Hub

Connecting the hub to the NXT Mercury Powered controller using the RS-485 interface is the default method. It is the same wiring for the AH-15 and the AH-30.

There is an 8-pin terminal block on the reverse of the hub for making the wiring connections to the controller.

#### 2.0.1 RS-485 Wiring to NXT Mercury Powered Controller





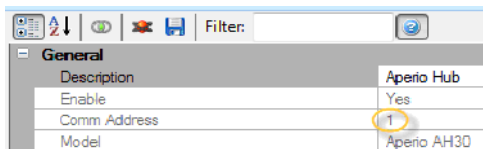
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### 4.0 Addressing the Hub

The address of the hub is determined by Doors.NET. Refer to the Comm Address field in the hub properties to determine the device address for the hub.



This addressing follows a specific pattern depending upon the types of hubs being installed. Refer to the table below appropriate to your installation.

**Table 1:** Addressing for Two 8-Port Hubs (AH-30)

Bus Number	First Hub Address	Second Hub Address
1	1	5
2	2	6
3	3	7
4	4	8

**Table 2:** Addressing for One AH-30 8-Port Hub (AH-30) and Eight AH-15 1-Port Hubs (AH-15)

Bus Number	8-Port Hub	1-Port Hub 1	1-Port Hub 2	1-Port Hub 3	1-Port Hub 4	1-Port Hub 5	1-Port Hub 6	1-Port Hub 7	1-Port Hub 8
1	5	9	13	17	18	19	20	21	22
2	6	10	14	17	18	19	20	21	22
3	7	11	15	17	18	19	20	21	22
4	8	12	16	17	18	19	20	21	22

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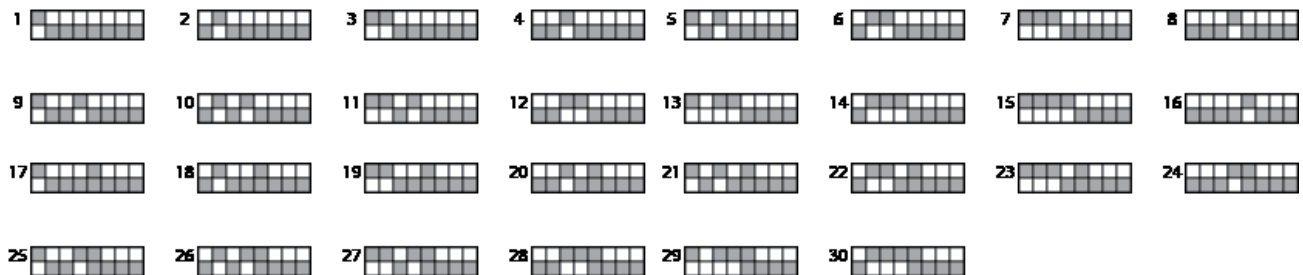
**Table 3:** Addressing for Eight 1-Port Hubs (AH-15) and One 8-Port Hub (AH-30)

Bus Number	8-Port Hub	1-Port Hub 1	1-Port Hub 2	1-Port Hub 3	1-Port Hub 4	1-Port Hub 5	1-Port Hub 6	1-Port Hub 7	1-Port Hub 8
1	1	23	24	25	26	27	28	29	30
2	2	23	24	25	26	27	28	29	30
3	3	23	24	25	26	27	28	29	30
4	4	23	24	25	26	27	28	29	30

*NOTE: Once the hub has been added to an NXT-MSK controller you MUST perform a RAM reset. The controller will re-configure the RS-485 protocol for Aperio devices. Only other Aperio devices can be used on that bus; no other peripheral type will be accepted.*

### 4.1 Setting the Address on the Hub

There are 30 available address numbers for the hubs, set via the DIP switch on each hub. For example, Switch 1 in the UP position and all others DOWN will set the unit to address 1. All 30 address switch positions are shown in the figure below.



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### 5.0 Contact Keri Systems

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