

db ServerRack Bus Controller/Remote Node Installation Manual



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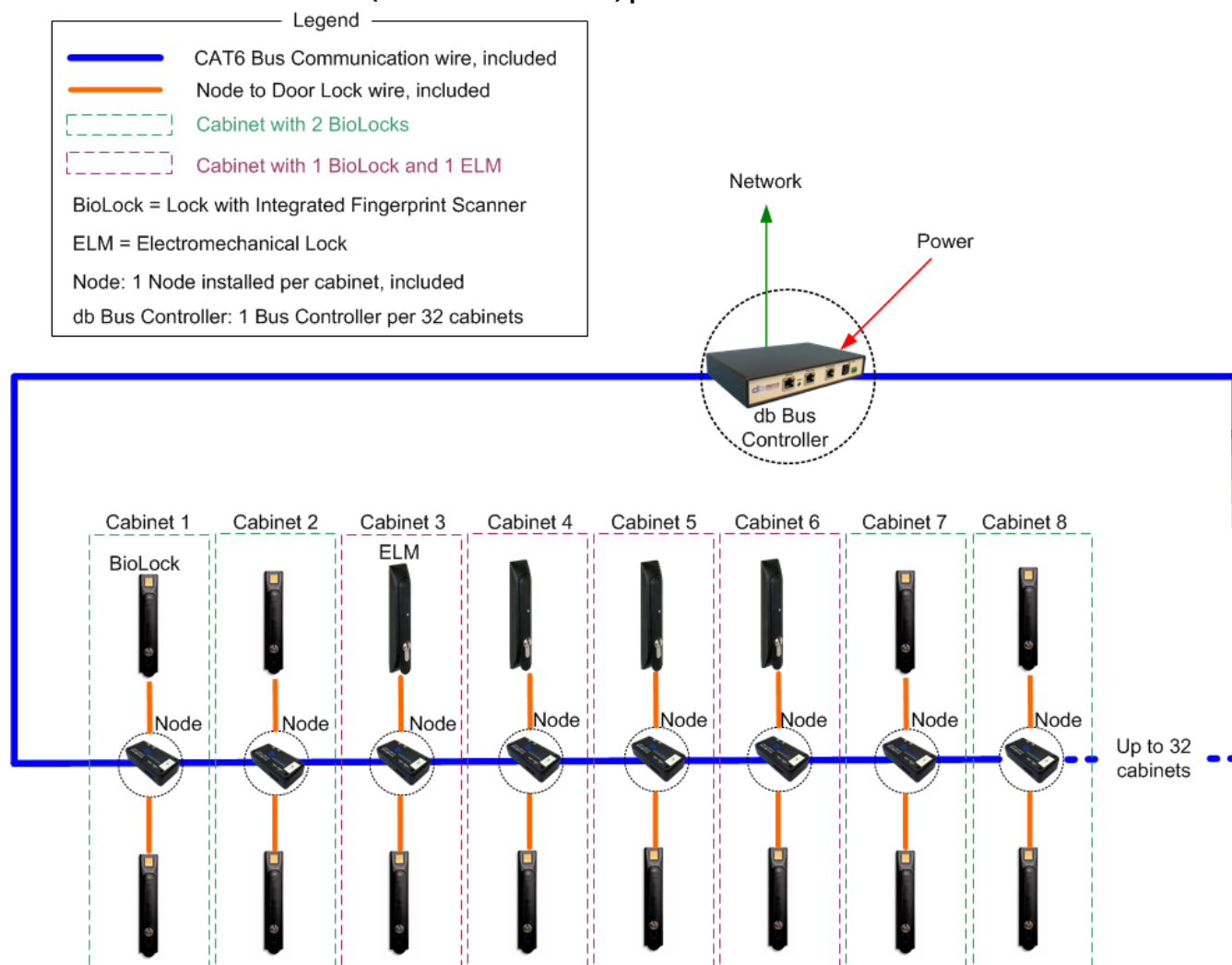
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db Bus Overview

The bus architecture consists of the following components:

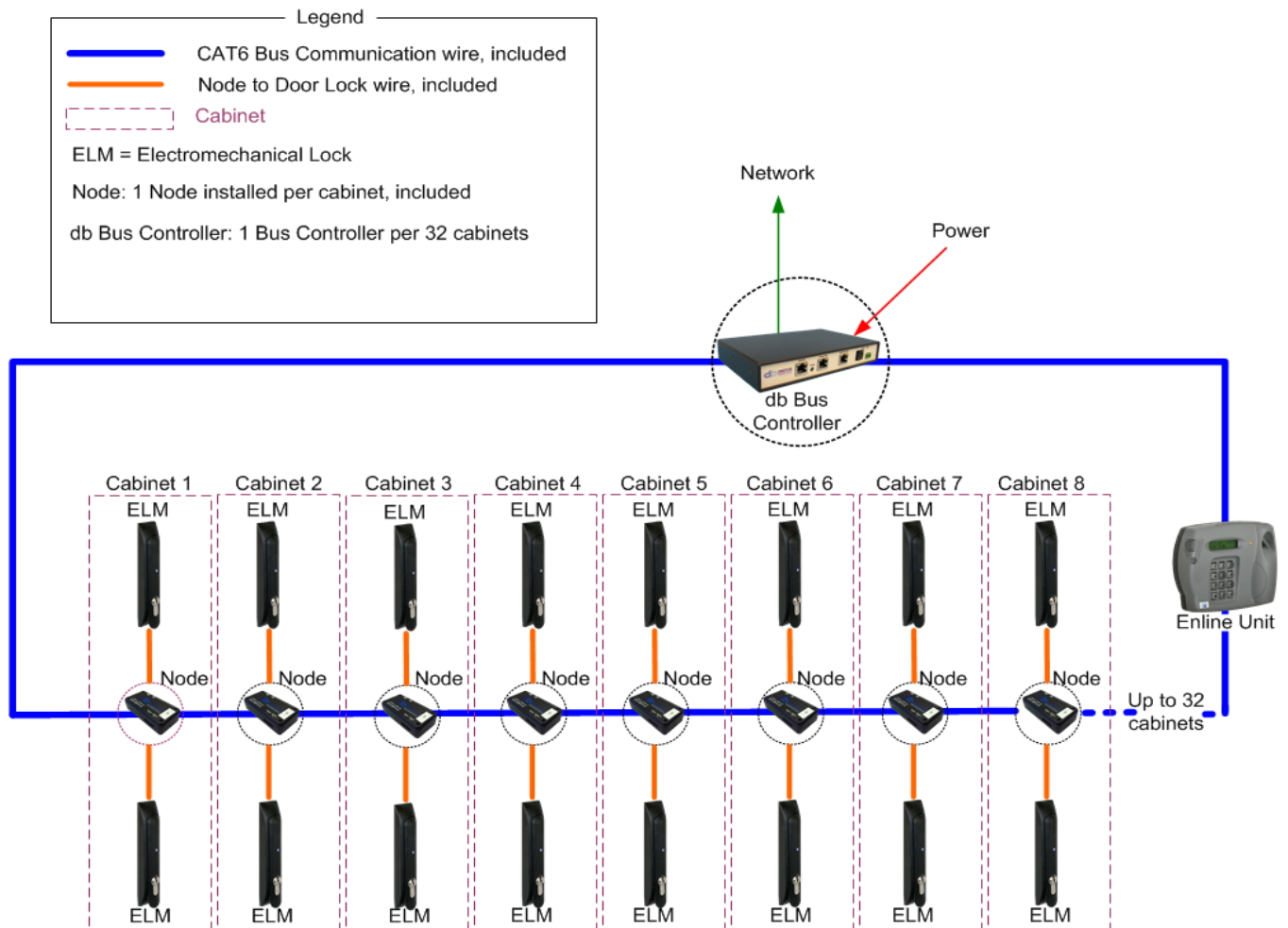
db Bus – Cabinet-level Solution

- 1 x db Bus Controller per 64 cabinet doors
- 1 x Remote Node per cabinet (assuming 2 doors per cabinet)
- 1 x db BioLock or db ELM (electromechanical lock) per door



db Bus – End-of-row Solution

- 1 x db Bus Controller per 64 cabinet doors
- 1 x Remote Node per cabinet (assuming 2 doors per cabinet)
- 1 x db BioLock or db ELM (electromechanical lock) per door
- 1 x db Enline unit per row of cabinets



Mounting the Bus Controller

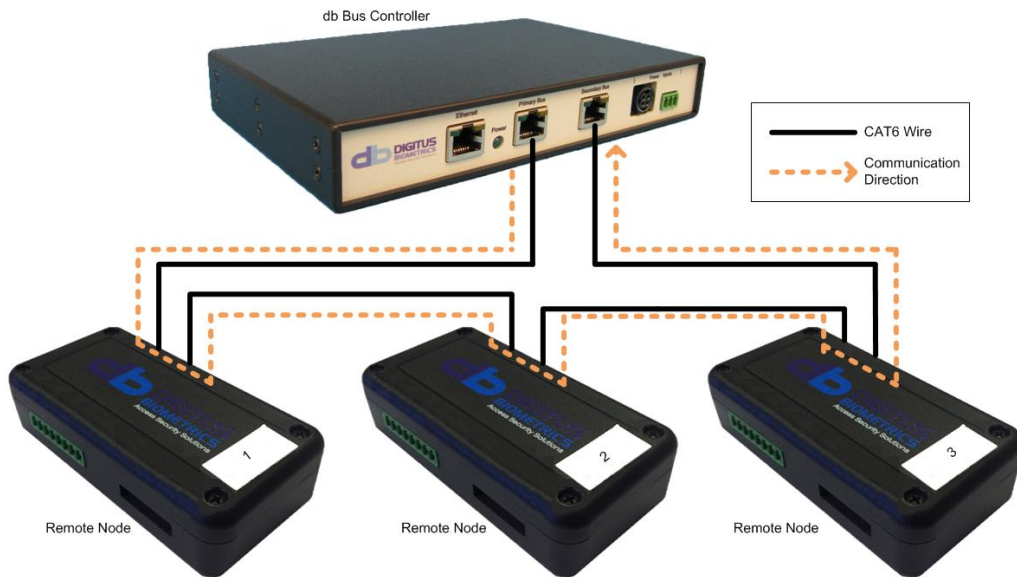
- Mount the db Bus Controller
 - The Control Unit can be attached using the magnetic strips for steel cabinets or VHB strips for aluminum cabinets.
 - Alternatively, the Control Unit can be placed on a cabinet shelf inside any cabinet
- It is preferable to mount the Control Unit near the top of the rack, to ease the running of cables, however this isn't essential.



The Bus Explained

The db Bus Controller is a closed-loop system with Primary and Secondary Bus ports. This provides redundancy in the event the bus cable is broken.

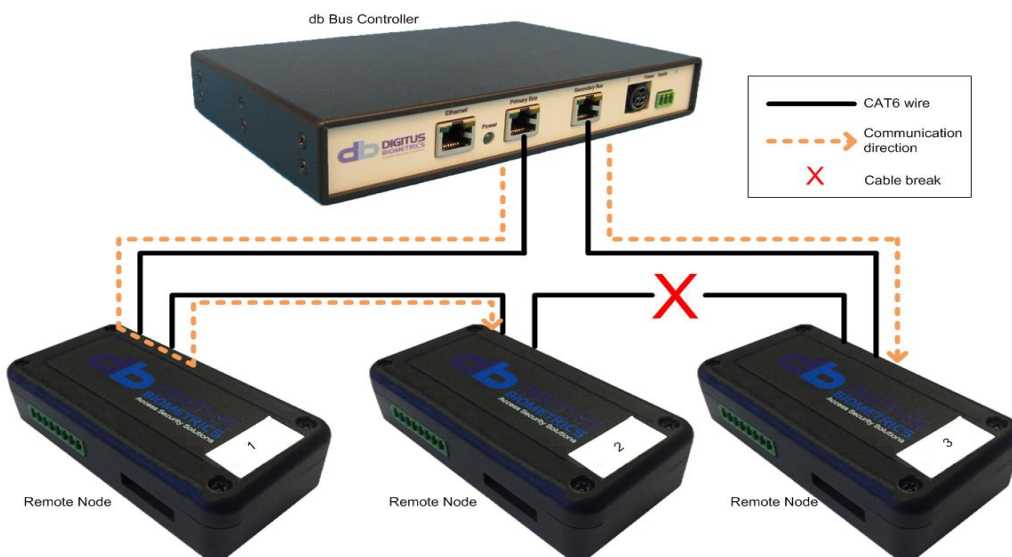
A normal Bus configuration operates as shown below:



Normal Operation

The Bus starts at the "Primary Bus" port on the db Bus Controller and goes to the first Remote Node's "Bus In" port. It then comes out of the first Node's "Bus Out" port and into the second Remote Node's "Bus In" port. The chain continues like this thru all nodes, ending back at the "Secondary Bus" port on the db Bus Controller.

In the event of a broken cable, the db Bus Controller will automatically re-route communication and power to all Remote Nodes beyond the break via the Secondary Bus.



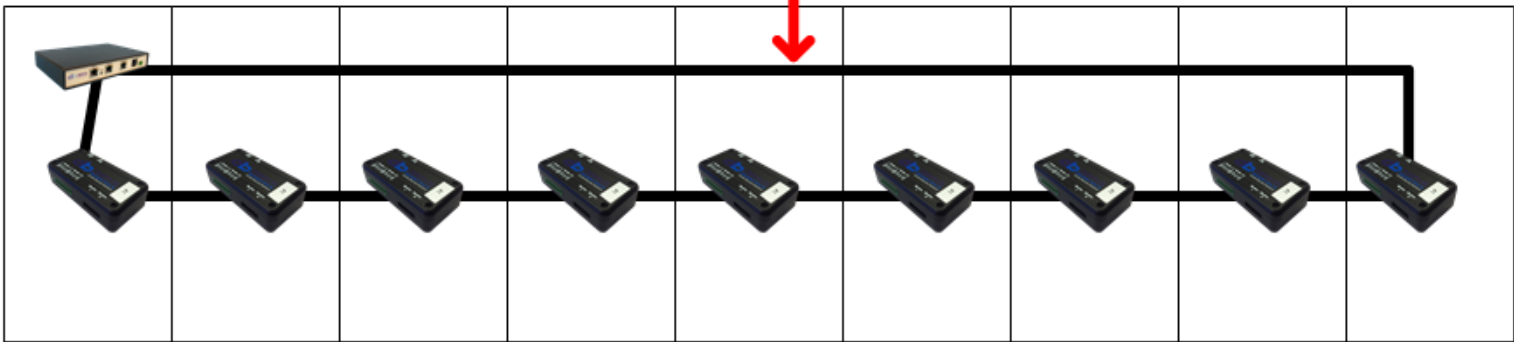
With break in Bus cable

Suggested Wiring Configuration

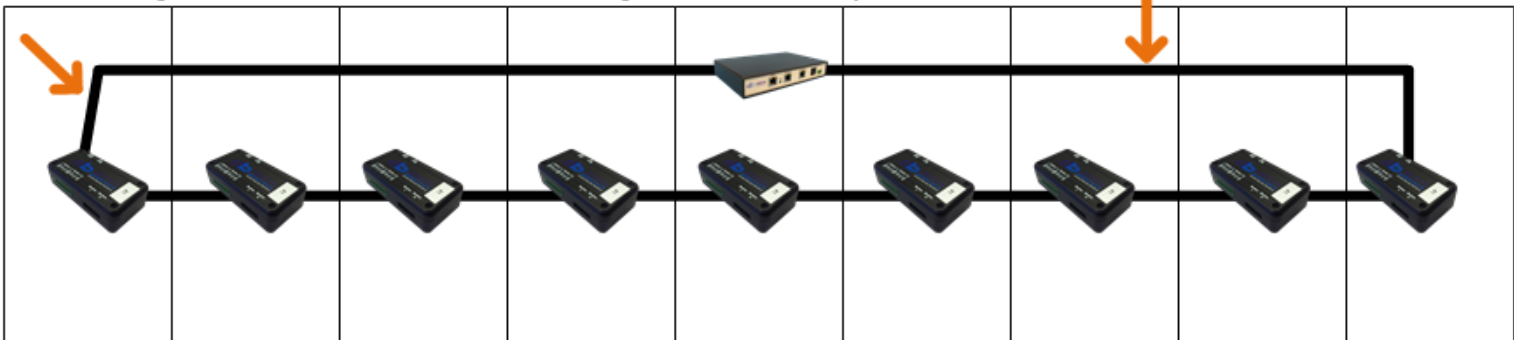
In order to prevent any individual cable-length from being too long, please follow the suggested wiring configuration:

The diagrams below show a top down view of a row of server cabinets.

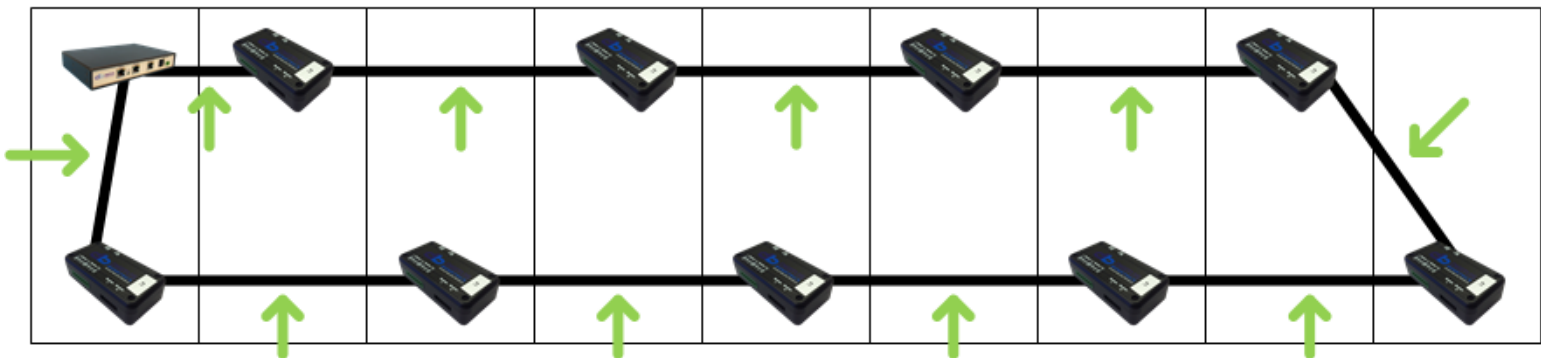
Not recommended – return cable is very long



Better configuration – first and last cables still long, but better than option above



Best configuration – all cables are short



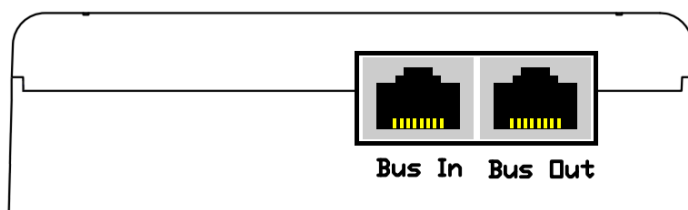
Installing the Remote Nodes

It's important to record the serial number and location of each Remote Node installed. The Remote Node's serial number is used when identifying each door (access point) within the Digitus DAS-SQL software.

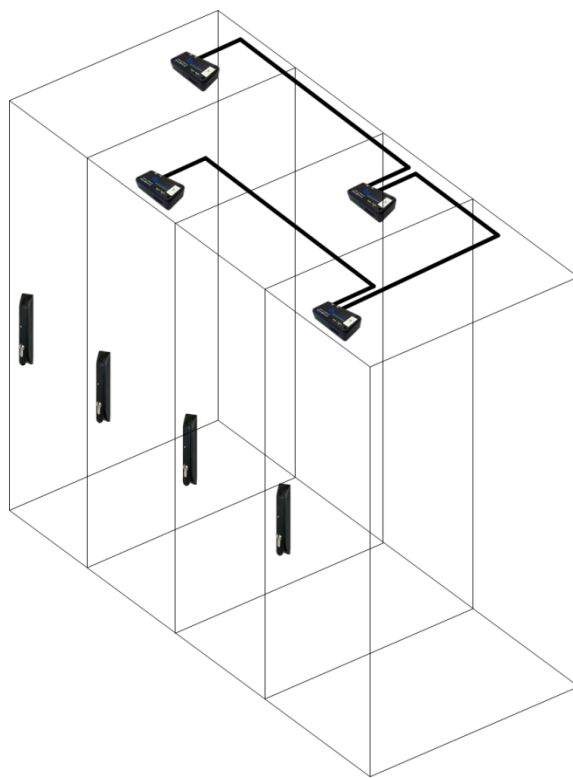
One Remote Node needs to be installed for every two doors (typically the front and back door of a standard cabinet). However, if only a single door is in operation per cabinet, one Remote Node is only needed for every two cabinets.

The Remote Node is very small and compact in size, measuring just 4" x 2" x 1" (10.2cm x 5.1cm x 2.6cm). The Remote node can be installed anywhere in the cabinet and can be attached to the cabinet using the VHB tape strip on the back of the node.

The CAT5 bus cable attaches to the Remote Nodes using the Bus In and Bus Out ports as show below.



Side View of Remote Node

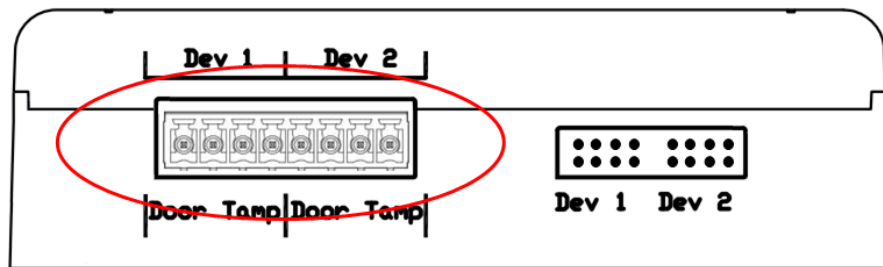


Recommended installation of Remote Nodes

Installing the Door Contacts – (Connects to Remote Node)

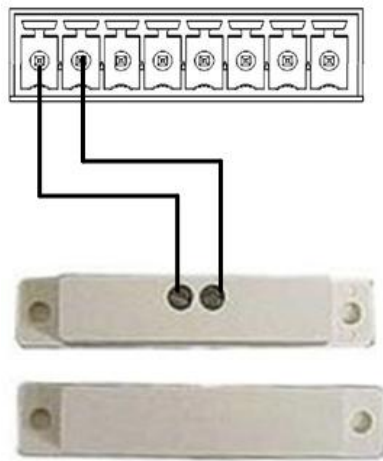
- For each device (Dev 1/Dev 2) on a Remote Node, a set of Door Contacts can be installed. The Door Contacts will allow the position of the door (open/closed) to be monitored.
- **Use the supplied Door Contacts only.**

Do not use ordinary reed switches as these will cause the device to go into an alarm condition.

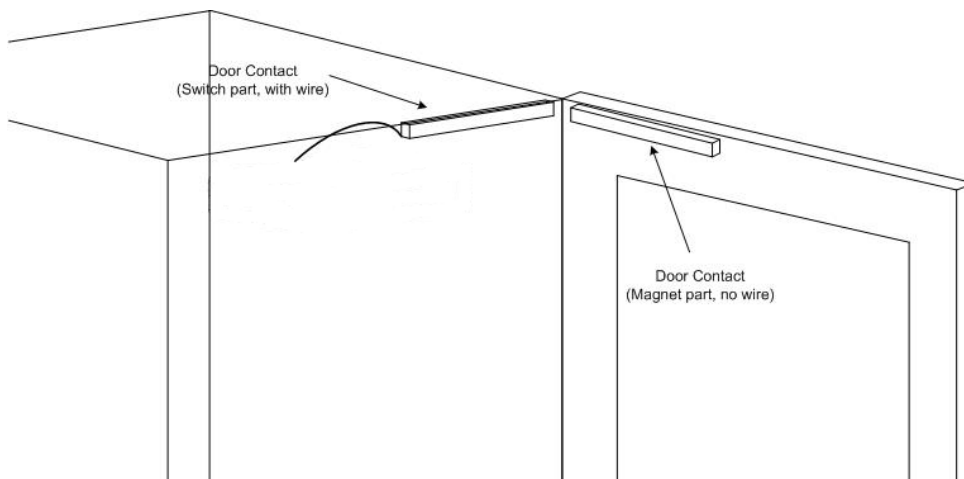
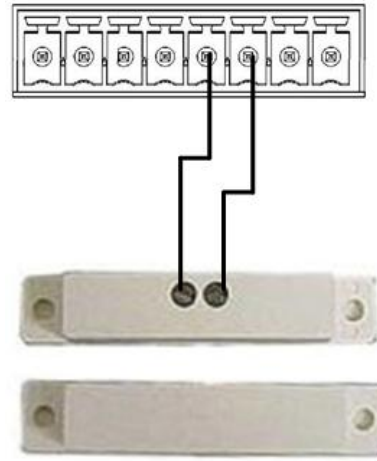


Side View of Remote Node

Device 1 Door Contacts



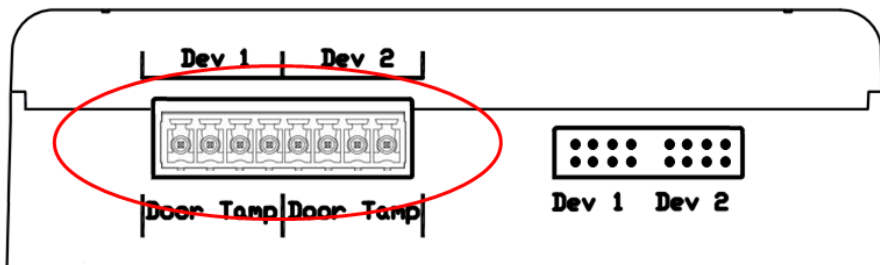
Device 2 Door Contacts



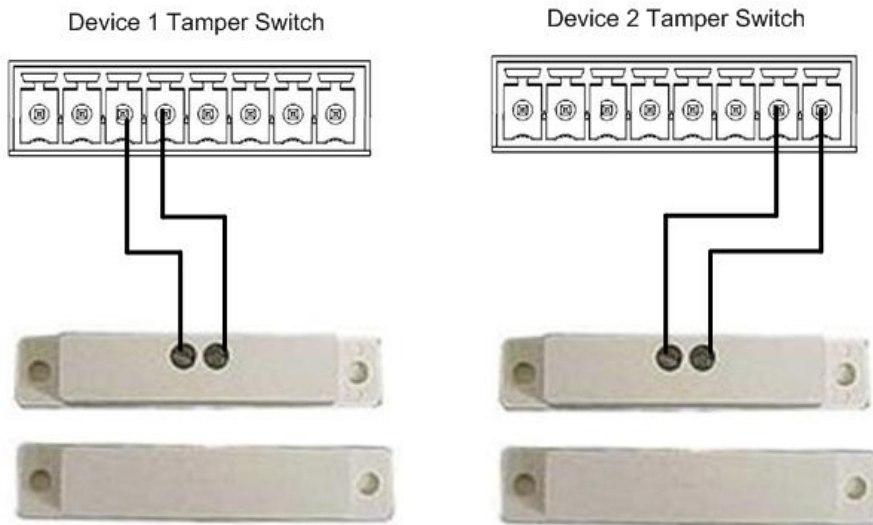
Installing the Tamper Inputs – (Connects to Remote Node)

- For each device (Dev 1/Dev 2) on a Remote Node, a set of Tamper Switches can be installed. The Tamper Switches can be used on side/top panels of a cabinet. If the tamper switch opens, it will create an immediate alarm.
- Use the supplied Tamper Switches only.**

Do not use ordinary reed switches as these will cause the device to go into an alarm condition.



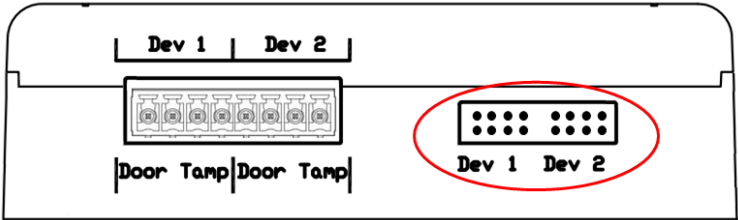
Side View of Remote Node



Attaching Device to the Remote Node

Devices are connected to the Remote Node using the sockets circled in the diagram below.

Each Remote Node has two device inputs, Dev 1 and Dev 2.



Side View of Remote Node

Instructions for installing devices are included with each device.

Connecting the Bus Controller to a Network

Connect a CAT6 cable from your network, to the port shown below.



Attach network cable to the Bus Controller

Connecting the Power Supply to the Bus Controller

Attach the power supply to the Bus Controller before plugging the power supply into a power source.



When powering the Bus Controller down, unplug the power cord from either the power source or the power supply. Do not disconnect the power supply from the Bus Controller.



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Specifications subject to change without notice.