Using Multi-Site to create a Paxton10 system across separate sites (or subnets)

Overview

A single Paxton10 system is able to be extended outside its immediate network, either over multiple subnets or to completely remote networks. A single Paxton10 server can reach over the internet to any other web connected network and bind to Paxton10 controllers there.

Multi-site vs Multi-subnet

Paxton10 simplifies complex Cloud and networking architecture and provides a very straight forward user interface allowing installers to link controllers from anywhere in the world back to a single server.

If your system will contain controllers on completely separate, unconnected networks, but both have connection to the internet, Paxton10 can link them together via our Cloud gateway – we call this multi-site.

If your controllers are all on a single WAN but installed on multiple subnets (locally or remotely), Paxton10 can link them together with or without the use of the internet – we call this multi-subnet.

No matter the type of network connection you require Paxton10 offers the same simple user interface making the creation of a complicated multi-site system incredibly simple to achieve.

How to create a multi-site/subnet system

Adding a new 'site' (creating system which extends over more than one network or more than one subnet) within a Paxton10 system is achieved by creating a local master controller on the new site which you want to bring into the system.

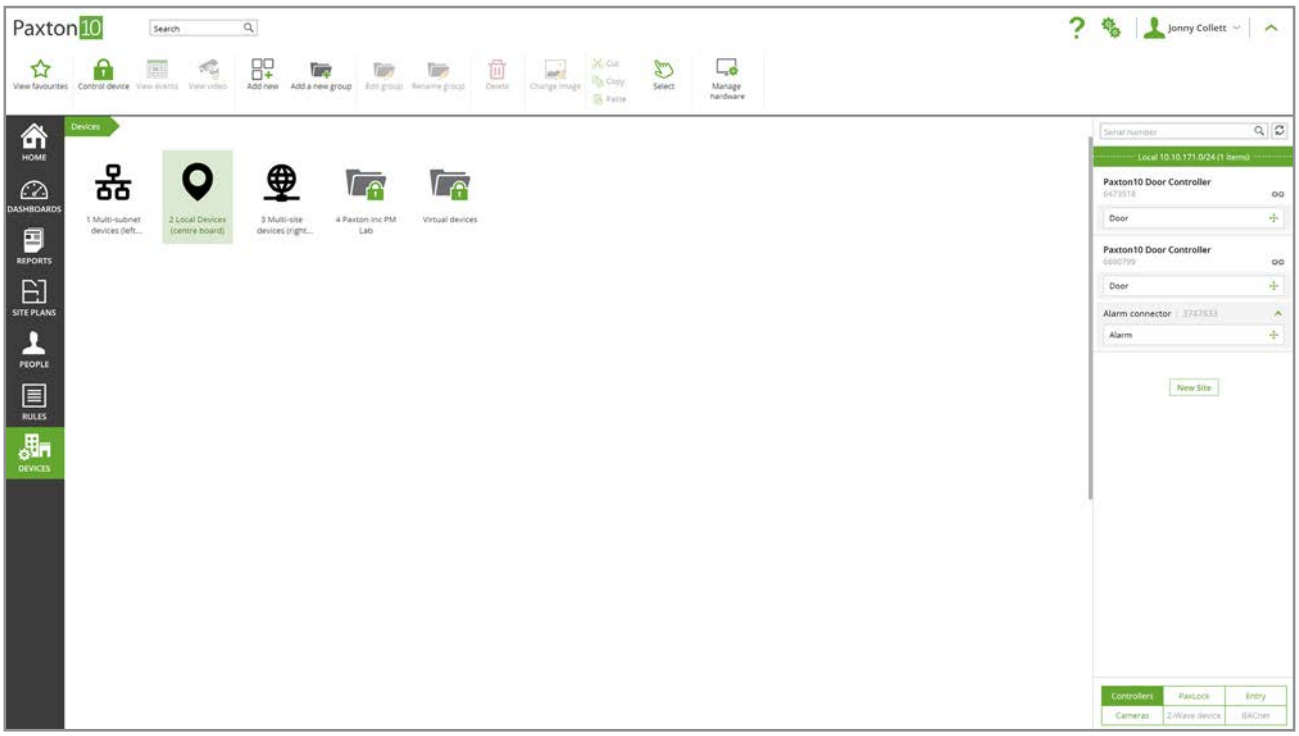
Any Paxton10 controller can become a local master. To do this, the controller must be powered and connected to the internet. It is then added to the system via the 'New Site' button in the device panel (only visible to System Engineers).

Once a local master controller is created on the new site it will act as a server on its network – automatically discovering all the Paxton10 hardware there and adding it to the device panel for binding in the usual way.

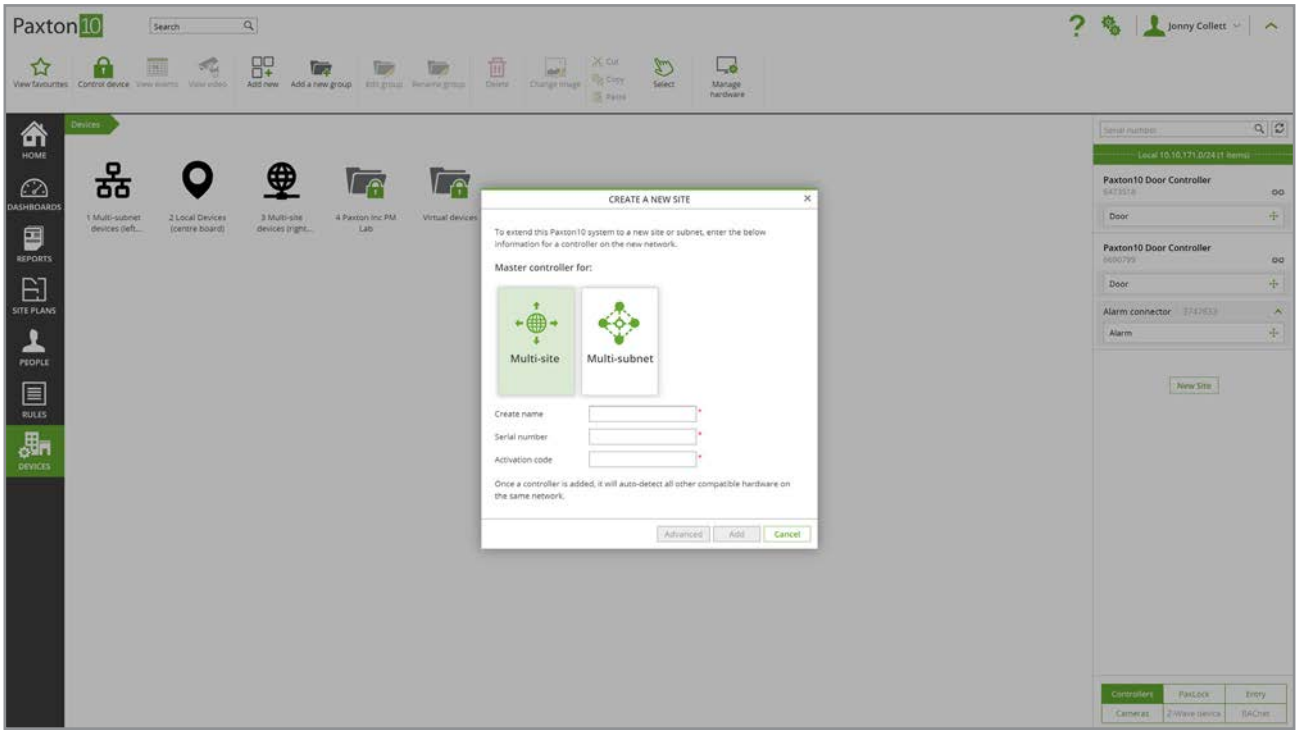
Each new site added to Paxton10 must contain at least one local master controller – Paxton10 will automatically maintain this new network connection once added – monitoring the link and nominating another controller if the initially created local master fails.

How to add a master controller

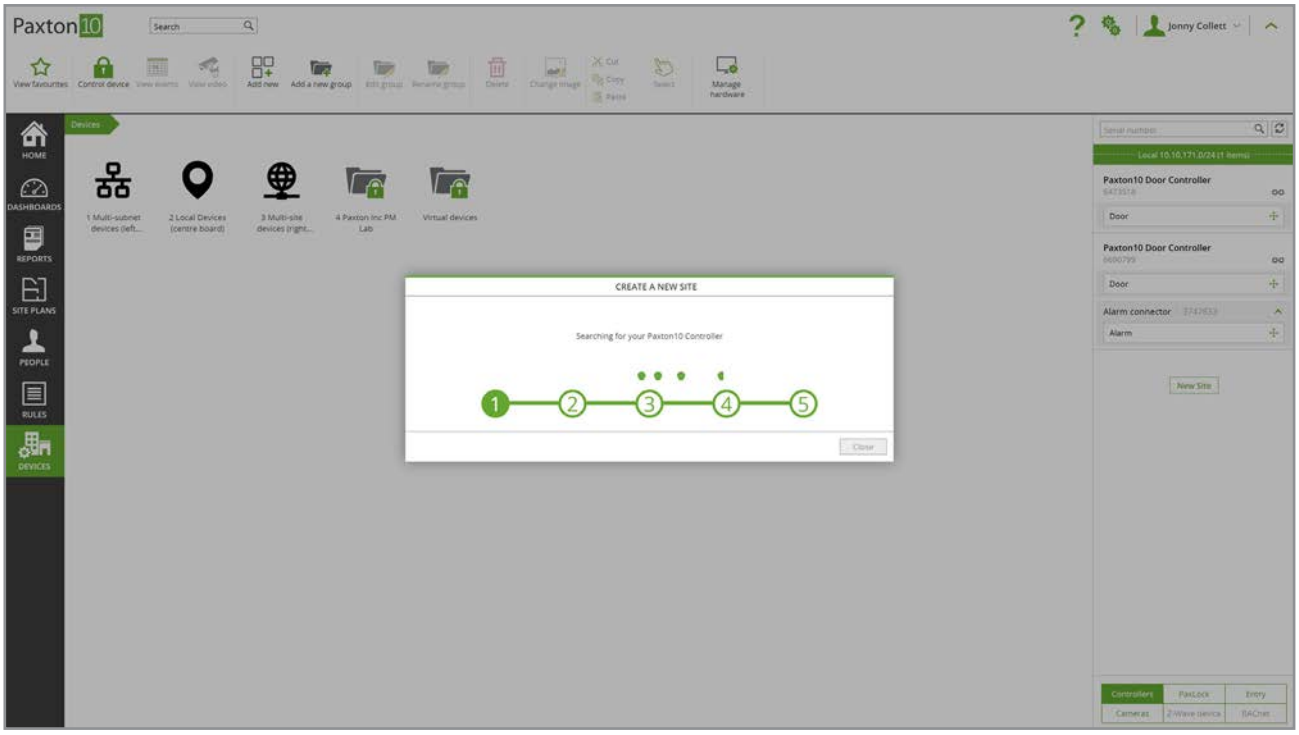
1. In the device panel, scroll to the bottom of the list of controllers and click on 'New Site.'



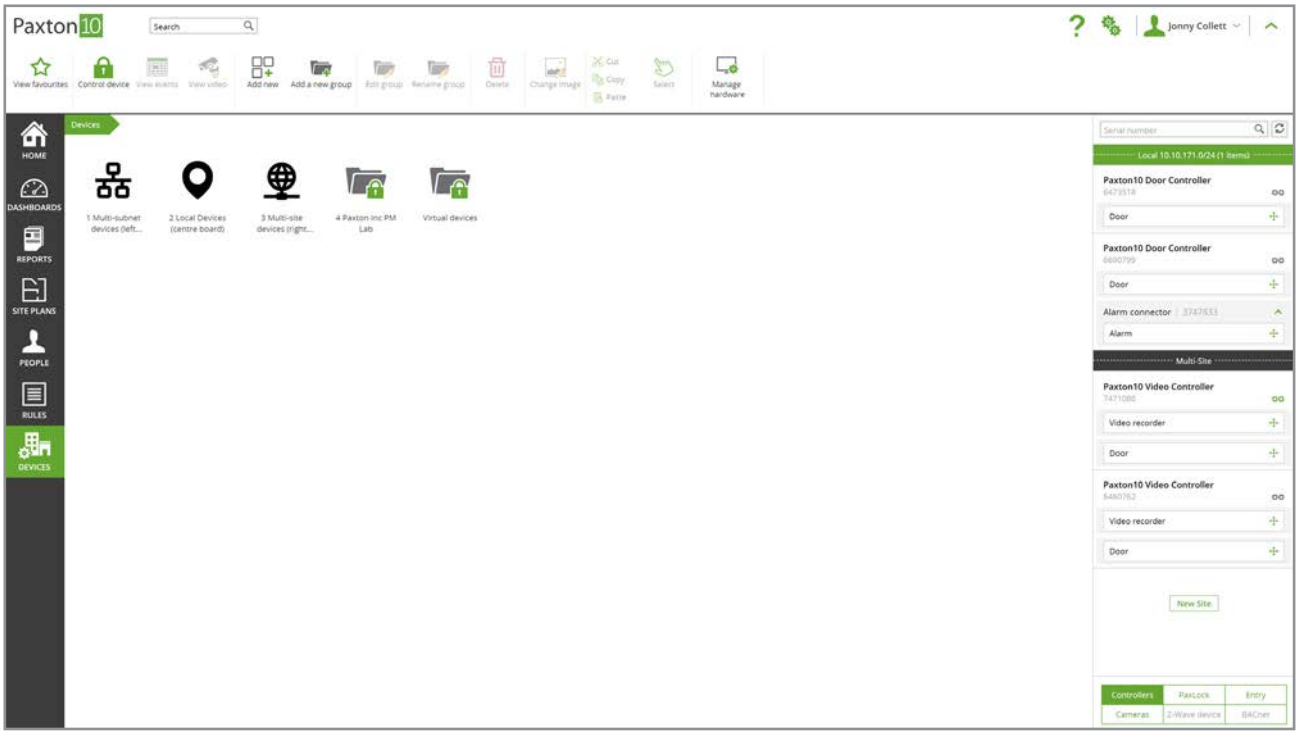
2. Choose which method you are using - Multi-Site or Multi-Subnet. Type in the Serial number (excluding the letters at the end) and Activation code, this can be found on the label of any controller. You can also enter a friendly name to easily identify your site within the "Manage Hardware" section of the system later.



3. A progress modal will appear, showing the steps Paxton10 is taking to get the controller online. You must wait for the process to complete before you close the modal and add any more controllers to the system. It can take up to 15 minutes to create a local master and bring it online.

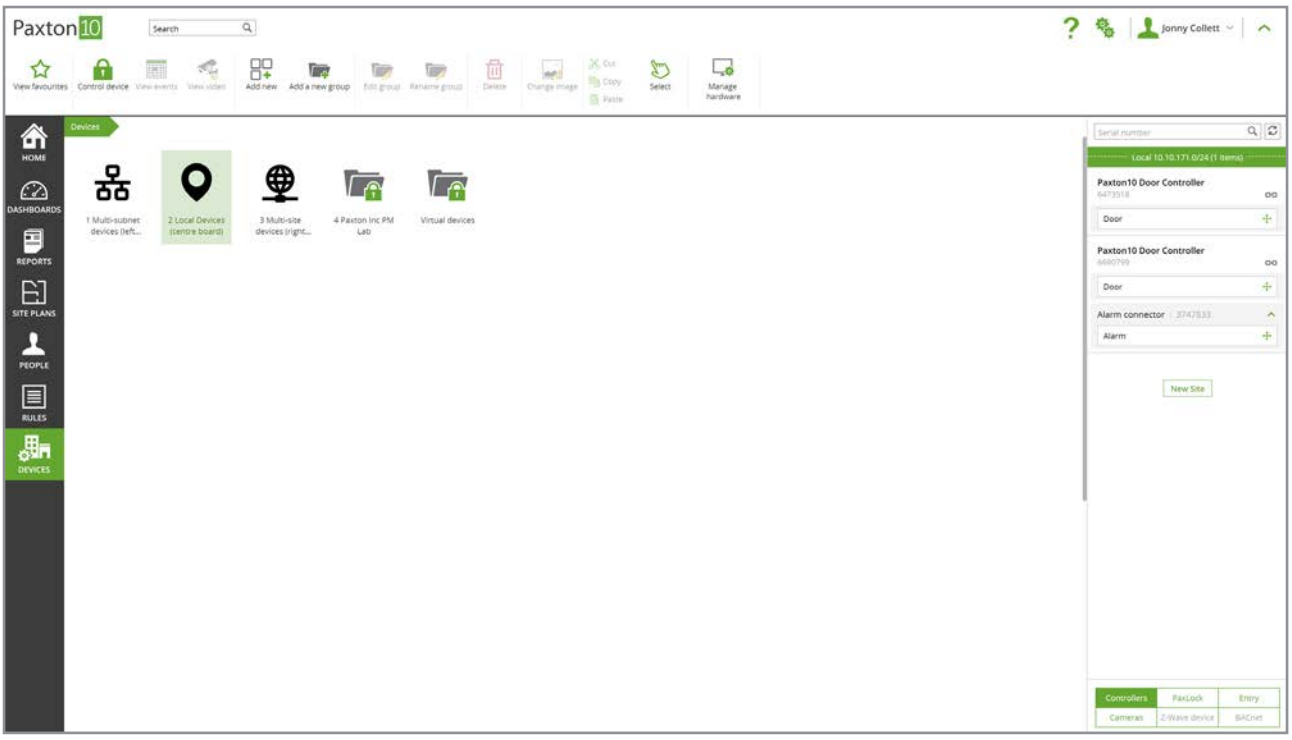


4. Once the local master comes online, all other Paxton10 hardware on the new site (the local subnet to which the local master is connected) will be detected by the master controller. These devices will appear in the device panel on the right-hand side, ready to be bound in the usual way.



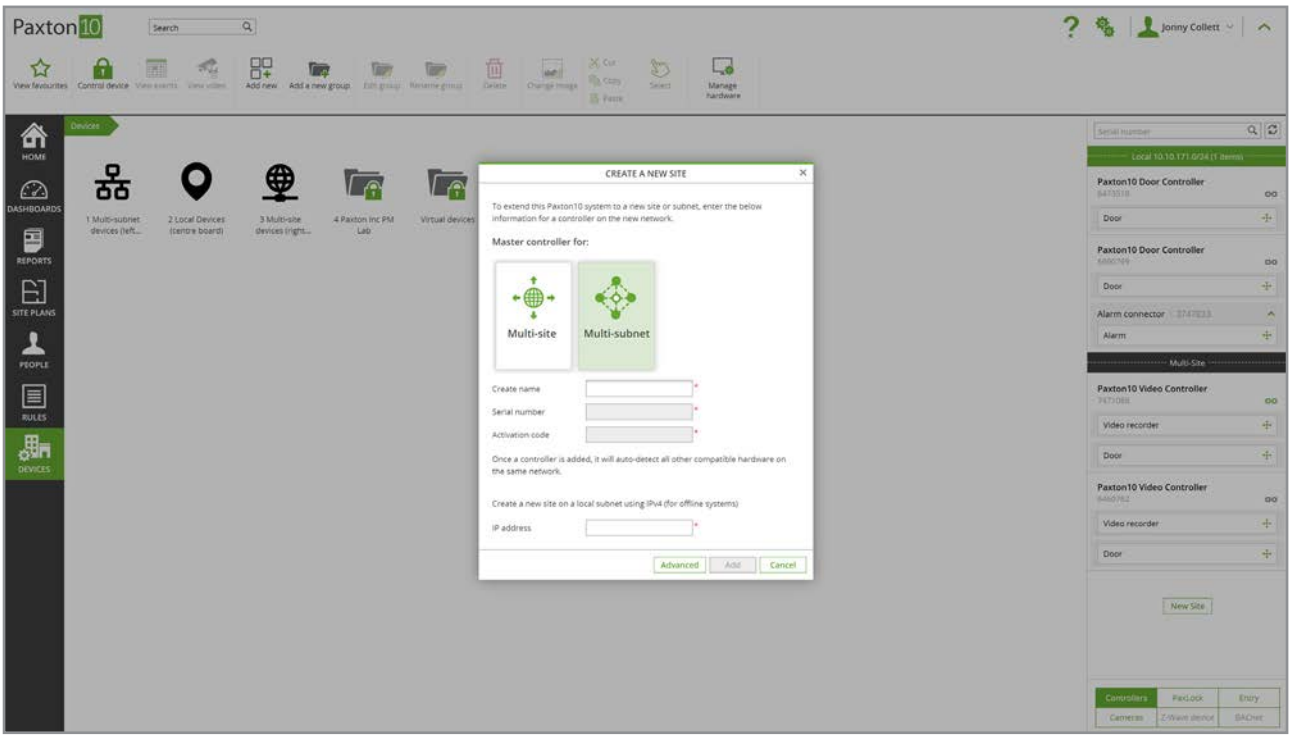
Advanced – adding a local master with no internet connection

1. In the case where a non-internet connected network exists, containing multiple subnets. Paxton10 can support this too. In the device panel, scroll to the bottom of the controllers section and click on 'New site.'

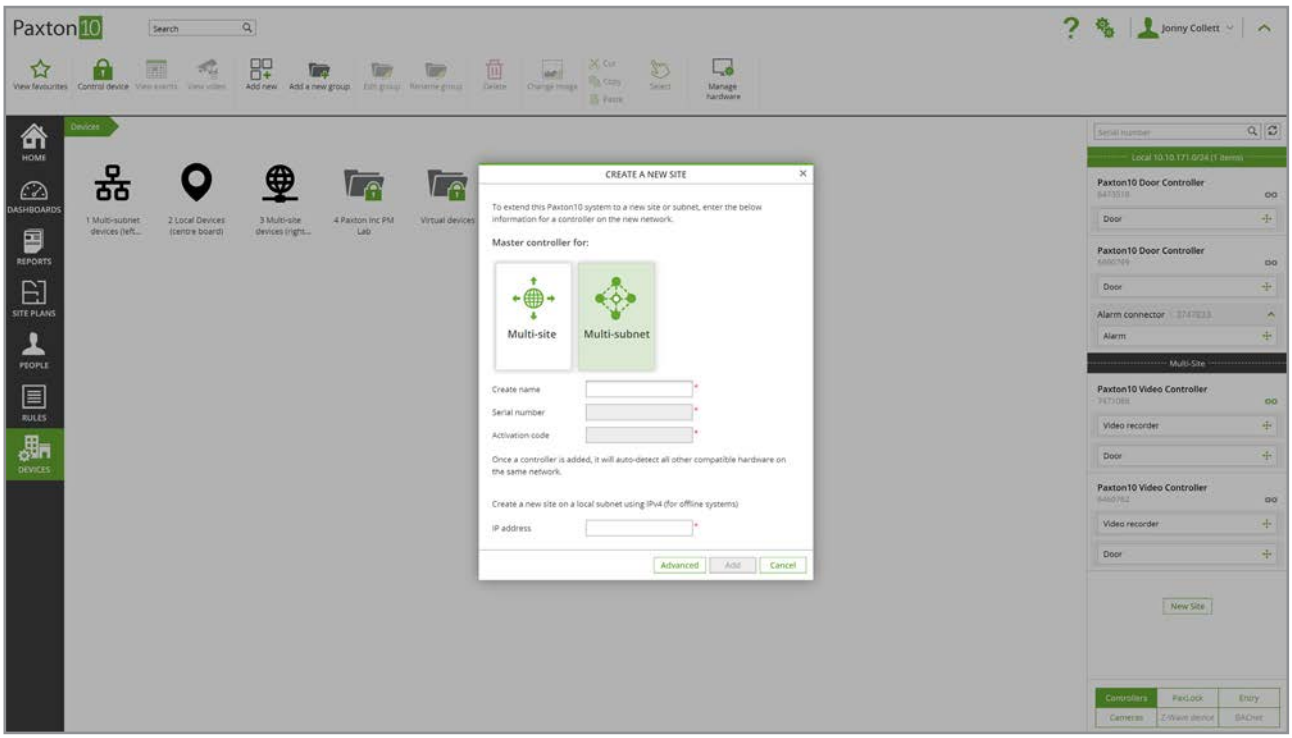


2. Choose Multi-Subnet as your method., click on 'Advanced' and enter the IPv4 address of the controller you wish to nominate as a local master and click add. If you do not know the IPv4 address, consult the local network admin and provide them the MAC address from the controller label.

Note: It must be possible to 'ping' the IP address of the new local master from the server for it to be added in this way – ie they must be on the same network with connectivity between the subnets.



3. A progress modal will appear showing the steps to bring the Paxton10 local master controller online.



4. Once the process completes, the newly created local master will start discovering other Paxton10 hardware on its local subnet. These devices will appear in the device panel on the right-hand side, ready to be bound in the usual way.

Managing a system over multiple site

Once the system is set-up and local master controllers have been created, these will appear in the "Manage Hardware" screen in Paxton10 (only visible to those with System Engineer permissions).

Within the "Controllers" tab, local master controllers are identified with an "M" and any allocated Friendly names will be listed. Controllers which are managed by each local master are listed below it and indented to show which site they are a part of.

In this same location, the multi-network method in use will be visible under the Site/Subnet column.

FAQ

How many different sites can you add to one Paxton10 system?

You can add 100 sites.

What kind of controller can I use to be the master controller?

We recommend using a Single Door Controller as the master controller, a Video Door Controller may not be suitable if it's being utilized to also record and process multiple third-party camera's footage.

How many different subnets can you add to one Paxton10 system?

You can add 100 subnets.

How many devices can I have on a subnet or site?

You can have 100 devices per different subnet or site to the main server.

Do I have to be on the same site or subnet as the server to create local master controllers?

No, the remote link can be used to carry out this work.

What is the bit rate for the SSL encryption between the server/multisite?

We use TLS 1.2 for Multi-Site which uses SHA-256 which is 256 bit encryption.

What are the bandwidth requirements when using Paxton10 across multi-site?

- Any internet connection involved with Paxton10 is recommended to be 20Mbps Down and 10Mbps Up.
- For each primary stream of the camera being viewed, each network connection involved is recommended to have an additional 6Mbps Down and 2Mbps Up.
- For each secondary stream of the camera being viewed, each network is recommended to have an additional 3Mbps Down and 1Mbps Up.

If the recommended bandwidth requirements aren't met, you may experience performance issues when using Paxton10, this may include an increased buffering time when viewing live or archive video footage and increased load times when navigating the system.

Can a multi-site master controller be added to any Paxton10 software version?

No. To add a multi-site master controller to a Paxton10 system, the system software must be on version 4.7 SR8 or higher.

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