



PoE and the ISONAS Reader Controller

PoE

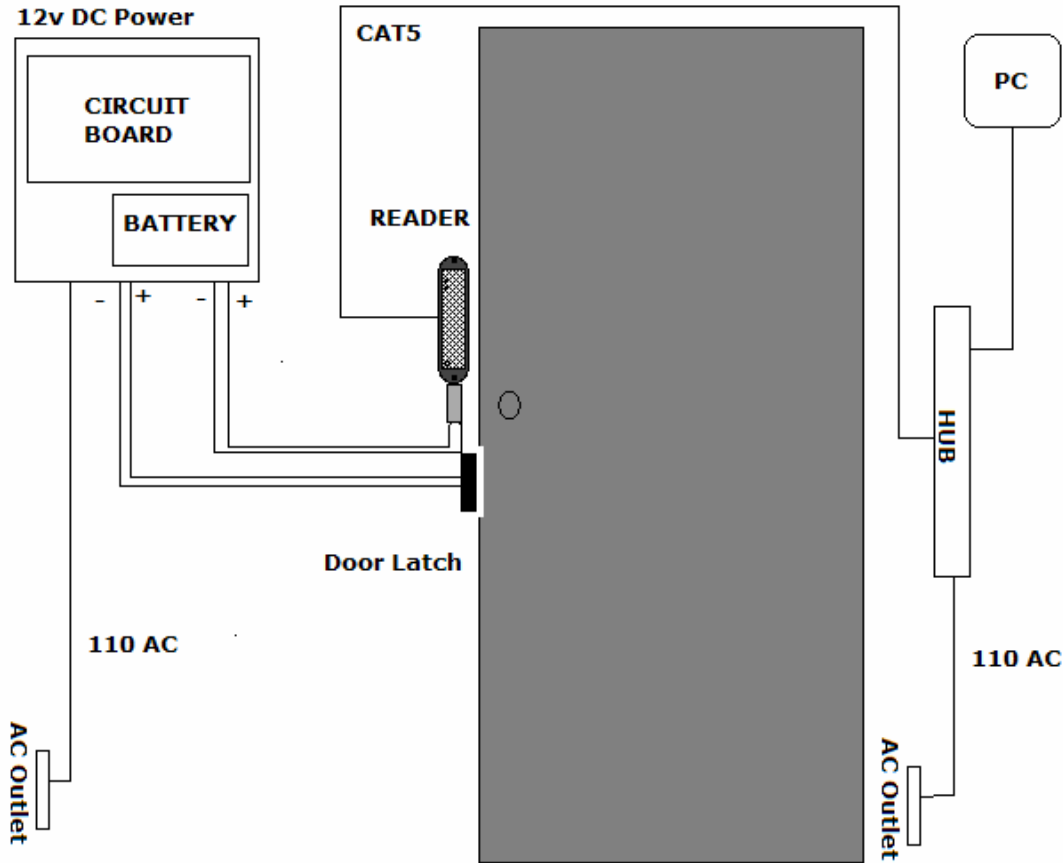
What is PoE? PoE stands for Power over Ethernet and it means almost exactly as the name implies, you can now send electrical power over standard Ethernet cabling (CAT5 cable). This means that IF you have an Internet device, then the same CAT5 cable that supplies the data transmissions to the device can also supply electrical power. The obvious savings here is that you only need to run a single cable to the device. The not so obvious savings is that anybody can run CAT5 cable, which means that anybody can get power to these devices; you do not need an electrician.

Before delving further, let's set the stage here. All Access Control readers require power, all electronic locks require power. In a typical set up prior to PoE, a single access control reader with a single electronic lock would look like this:

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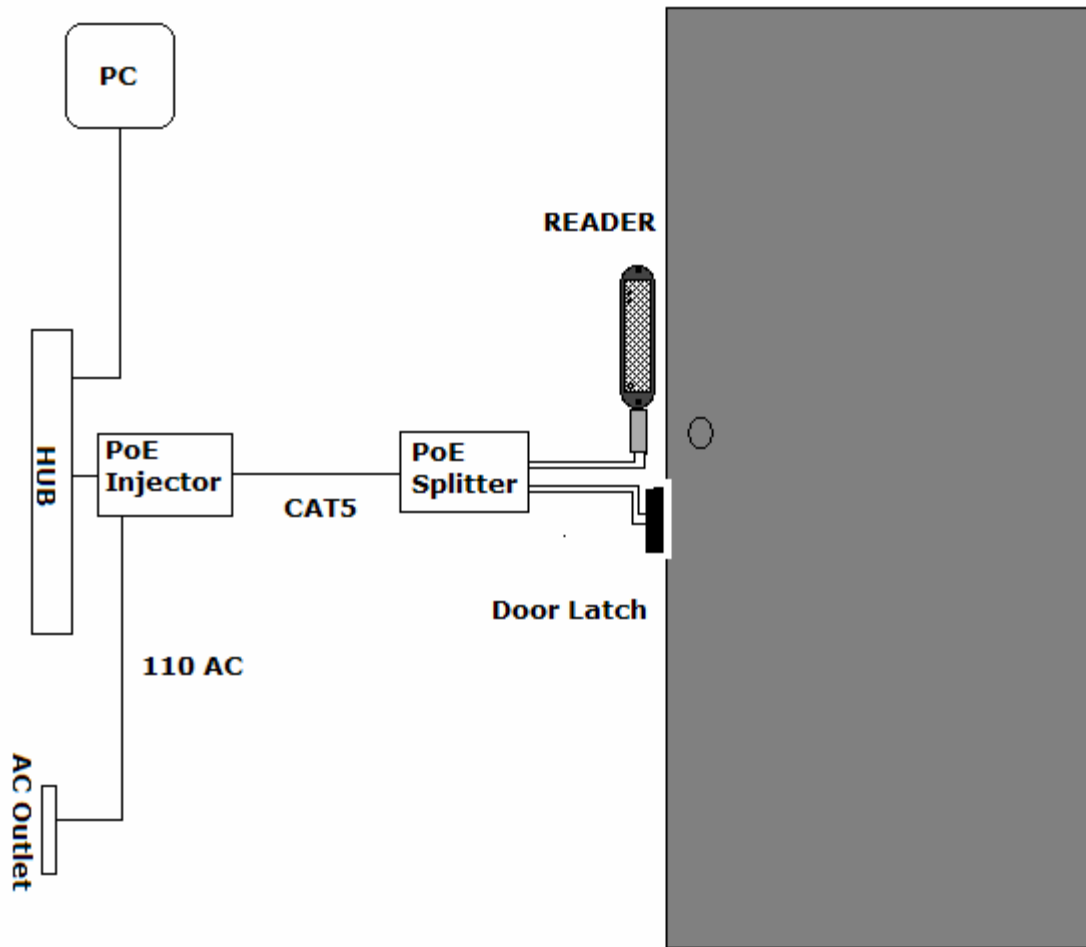
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In the above picture, the 12v DC was almost always a special box mounted someplace in the building. Inside this special box would be a 12v battery backup, a circuit board to control the recharging of the 12v battery, another small circuit to control the outbound power to the readers and locks. In most installations, the power to the locking mechanisms would be isolated from the readers, and so in fact you would have two of these 12v DC boxes mounted in your building. In addition to running power to the doors, you also have needed to get your reader controller connected to the Ethernet so that you could configure and control the reader from a PC; thus for each and every door you have needed to run a set of wires for power and data.

Now let's look at the picture with PoE.



The PoE Injector is normally located right next to your existing hub, and the Injector itself is plugged directly into a standard AC outlet, or for extra security, a battery backup. A standard CAT5 cable is then run between the PoE Injector and the PoE splitter which will be located right next to the door, probably inside the wall for extra security. With one cable, you have now not only provided the required network connection, but you have also provided all the power that will be needed at the door site.

What makes this whole PoE work with ISONAS reader controllers is the fact that each of the ISONAS reader controllers are true internet devices. The ISONAS IP reader controllers all come with a female RJ45 connector which allows you to plug your Ethernet cable directly into one of the PoE splitters, right at the door. There are not any other reader controllers on the market today that would allow you to do this; thus the PoE to the door would simply not be an option.

Additional Resources

ISONAS is not an authority on PoE, in many ways we are a user of the technology just like everyone else. In the Access Control industry, we also happen to be the first adapter of this technology.

There are many excellent papers written on PoE, here is a link to a web site that will certainly have a paper suited to your needs.

<http://www.powerdsine.com/Documentation/WhitePapers/WhitePapers.asp>

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