RJ45 Connector Crimping Guide
Once you have your CAT5(e) cable run from camera location to the PoE (Power over Ethernet) switch location, the next step is to attach the RJ-45 connectors to that cable. This guide will explain crimping your connectors to the CAT5(e) cable.

This can be done with one, simple to use, tool known as RJ-45 crimping tool. It is recommended to use the 3-in-1 tool so that you can strip, cut, and crimp all with the same tool. You may need to use a standard wire cutter to get the proper length of cable at the camera end. You want just enough slack so the cable is not too tight but does not have too much excess hanging down either.

**Step 1: Outer Sheathe Stripping**

After cutting the cable to proper length, the first step is to unsheathe the cable. Using the stripper on your crimping tool, strip the cable back 1” (inch) from the end. Insert the cable into the stripper portion of the crimping tool and squeeze it tight. While squeezed, rotate the crimp tool around the cable a full 360°. Pull away and the sheathing will come off.

**IMPORTANT** Do not cut the twisted pair wires under the outer sheath. This may result in a decrease in or no data transfer.

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Step 2: Wire Untwisting and 568B Scheme Arrangement

After stripping the wire, the next step is to untwist the smaller wires and arrange them into the proper wiring scheme for the RJ-45 connector. The recommended scheme for the wiring is 568B. The scheme is as follows:

- Pin 1 – Orange/White
- Pin 2 – Orange
- Pin 3 – Green/White
- Pin 4 – Blue
- Pin 5 – Blue/White
- Pin 6 – Green
- Pin 7 – Brown/White
- Pin 8 – Brown

Step 3: Wire Preparation for RJ-45 Connector

Once the wire is arranged to the 568B scheme, it needs to be cut down to fit in the connector. This is easily done with the cutting tool on the 3-in-1 crimping tool. Bring the wires tighter together and cut them down, in an even line, to \( \frac{1}{2} \) inch from the cut of the sheathing.
Step 4: Inserting Wires into RJ-45 Connector

With the wires cut to proper length for the RJ-45 connector, the wires are ready to be inserted into the connector. With the RJ-45 connector facing up (securing clip on the underside),

*This side up*

insert the wires into the connector. Each wire will fit into each of the eight grooves in the connector.

The wires should be inserted until the sheathing is inside the connector, just beyond the crimp portion of the connector. See the image below for proper insertion.
**IMPORTANT** Make sure that each of the wires is pushed in all the way into the connector. The wires should be easily visible looking into the end of the connector. Improper insertion may result in improper crimping of the pins to the wire.

**Step 5: Crimping and Testing Proper Crimp**

Finally, the RJ-45 connector needs to be crimped onto the wire. When this happens, the eight pins (at the end of the connector) are pushed down into the wires below. Insert the connector into the crimping portion of the crimping tool until the connector cannot go in any further.

Squeeze the crimping tool very tightly and release. Squeeze the crimping tool a second time to make sure that all of the pins are pushed down on the connector. When crimping is complete, remove the wire (now with the connector crimped) from the tool and check the pins to make sure that they are all down.
If the pins are all crimped down, give the connector a slight tug to make sure that it is securely attached to the wire. Connect the RJ-45 to the camera and then repeat these steps for the cable end at the switch.