



# SINGLE

## CABLE

APPLICATION SOLUTIONS



DESIGN



INSTALL



VERIFY

# Background

Over time security systems continue to grow. Cameras, access control, PoE Lighting and wireless products are all potentials for system additions. In some cases, while the need for these additions may not be matched to the available cable required to transmit and power them. Vigitron offers a variety of single cable solutions capable of transmitting and powering more than one device.

**Which one you need will depend on your application and connected devices. The questions you need to ask are:**

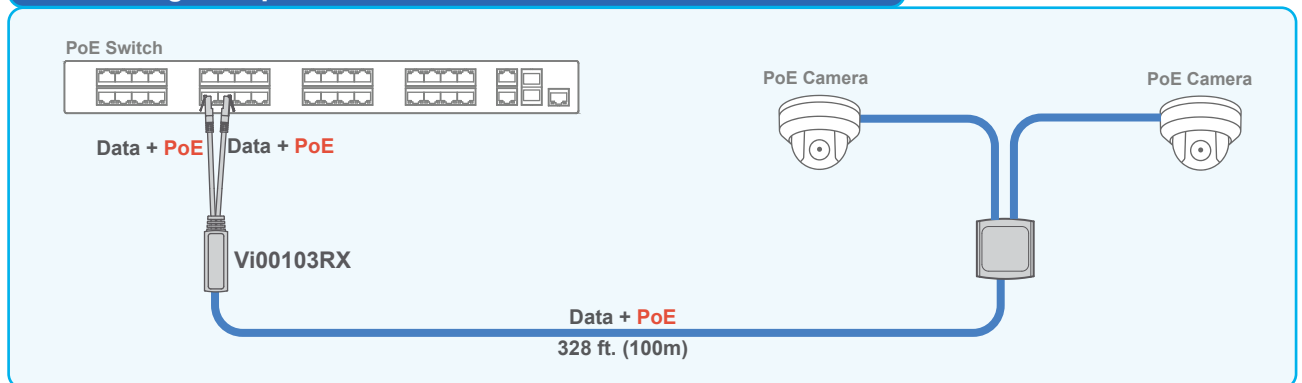
1. What is the available cable?
2. What is the cable distance?
3. Does my connected device require PoE and if so, how much?
4. Do I have local power at the camera location?
5. What power do you have at the headend?

**My customer wants to add a camera to his home security system. I cannot run an additional cable. What's my solution?**

**Answer: The Vi00103**



## Connecting Multiple PoE Cameras at Standard UTP Distances



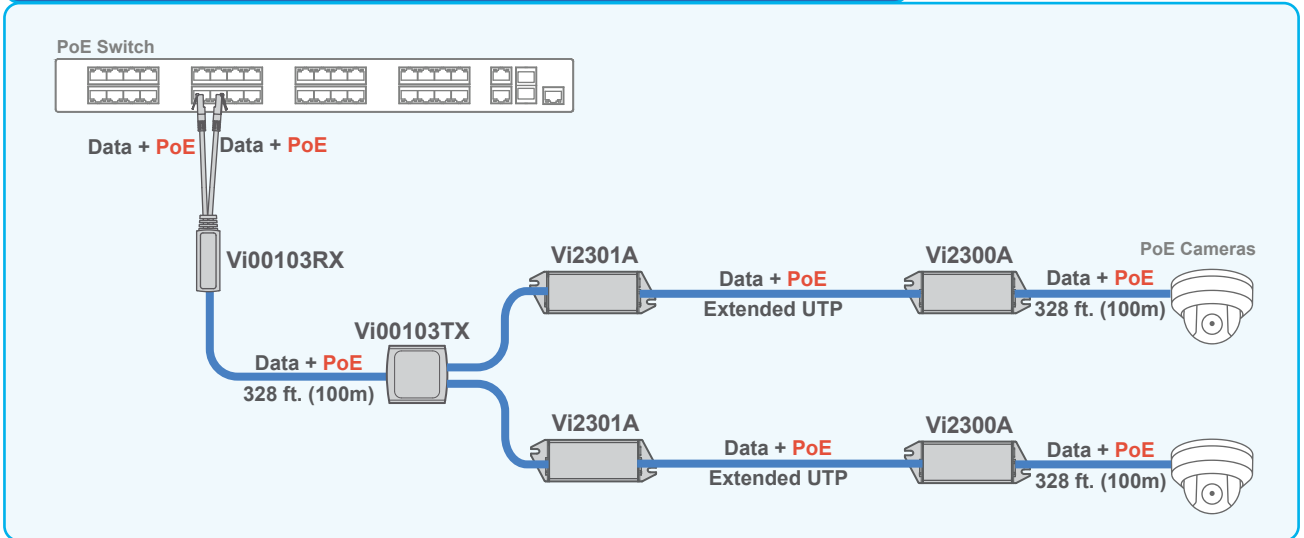
*The NetMux™ Vi00103 can connect two cameras at standard UTP distances over a single cable.*

The Vi00103 transmits both IP and PoE over a single cable connected between the transmitter and receiver connected to two ports of a network switch providing PoE. The total distance between the switch ports and cameras can be no more than 328 feet. The bandwidth is cannot be greater than 100Mbps

**What if my distance is from switch port to connected devices is greater than 328 feet?**

**Answer:** Add Vigitron's Vi23xx extenders to the Vi00103

**Connecting Multiple PoE Cameras at Extended UTP Distances**



*The NetMux™ Vi00103 along with Vi2300 series can connect two cameras at extended UTP distances.*

You can connect our Vi23xxx series UTP extenders to the transmitter side of the Vi00103. However please be aware of power requirements for both the Vi23xxx extenders and connected device.

**Can I use the Vi00103 if my connected devices do not require PoE?**

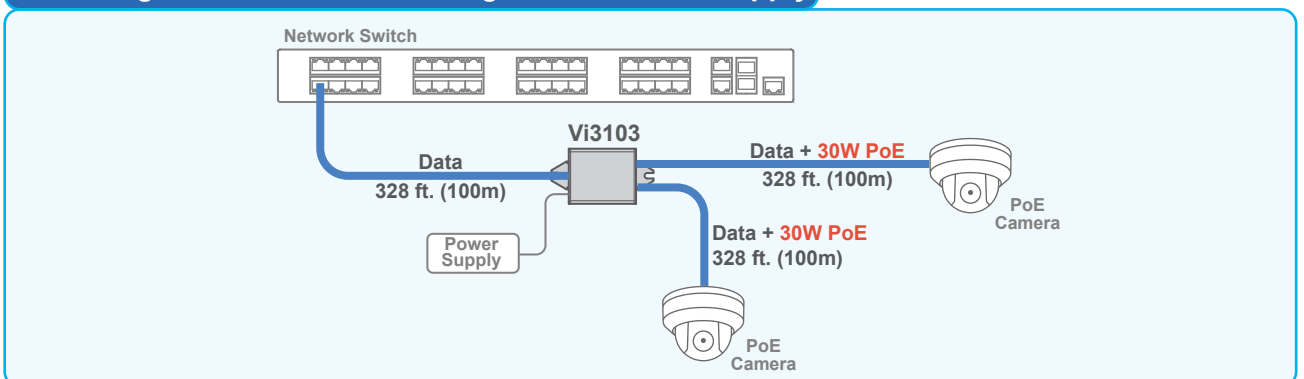
**Answer:** Yes the Vi00130 can be use to connect non – PoE powered devices

**What if I need more power or bandwidth than the Vi00103 is capable of providing?**

**Answer:** Vigitron's extensive line of combiner/repeaters

Vigitron has several solutions determine on PoE and Bandwidth requirements.

**Providing PoE to 2 Cameras using a Local Power Supply**



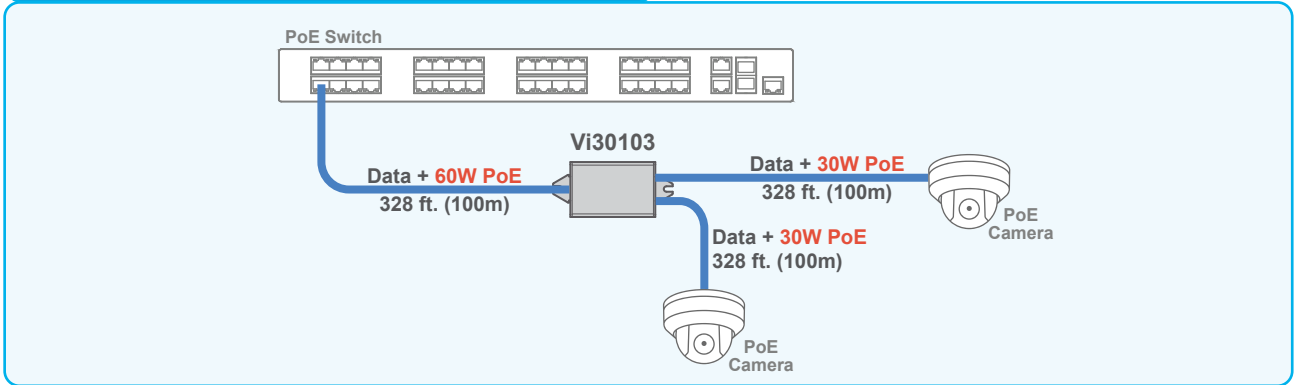
*Vi3103 allows for the transmission of two cameras over a single cable run or adding a new camera close to an existing camera.*

The Vi3103 can accept up to 30W PoE to provide up to 15W port . If an external PoE compliant DC source is used each port can provide up to 30W. The bandwidth is 10/100Mbps

**What if need port PoE power greater than 15W and only have source PoE power?**

**Answer: Vi30103**

**Providing PoE to 2 Cameras using input PoE**



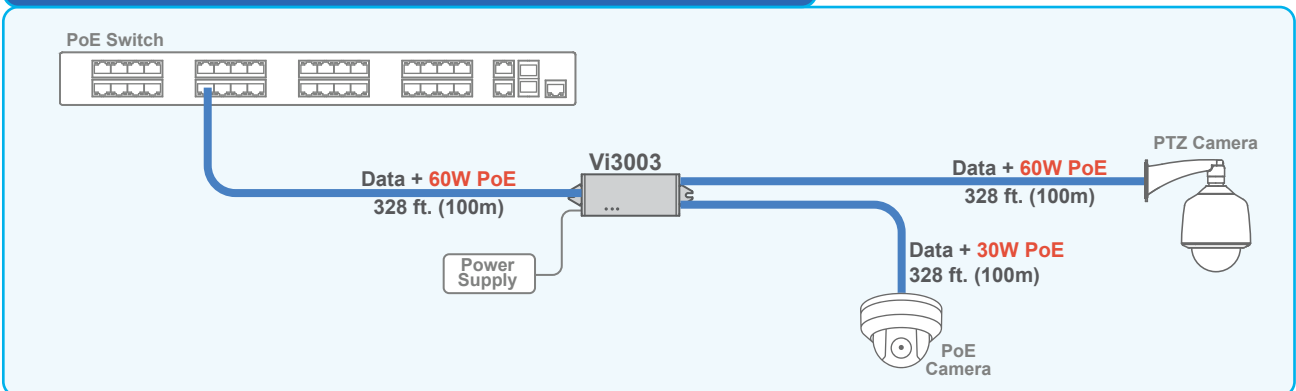
*Vi30103 allows for the transmission of two cameras over a single cable run or adding a new camera close to an existing camera. The PoE Midspan provides power to the Vi30103 and both cameras.*

The Vi30103 can accept a PoE source up to 60W providing up to 30W per ports. Power can also be provided with a PoE compliant DC power supply. The Vi301033 is also an extender providing an addition 328 feet of transmission distance

**For my application one camera requires 60W and the other 30W along with cameras that require 1G bandwidth do you have a solution?**

**Answer: Vi3003**

**Providing PoE to 2 Cameras using a Local Power Supply**

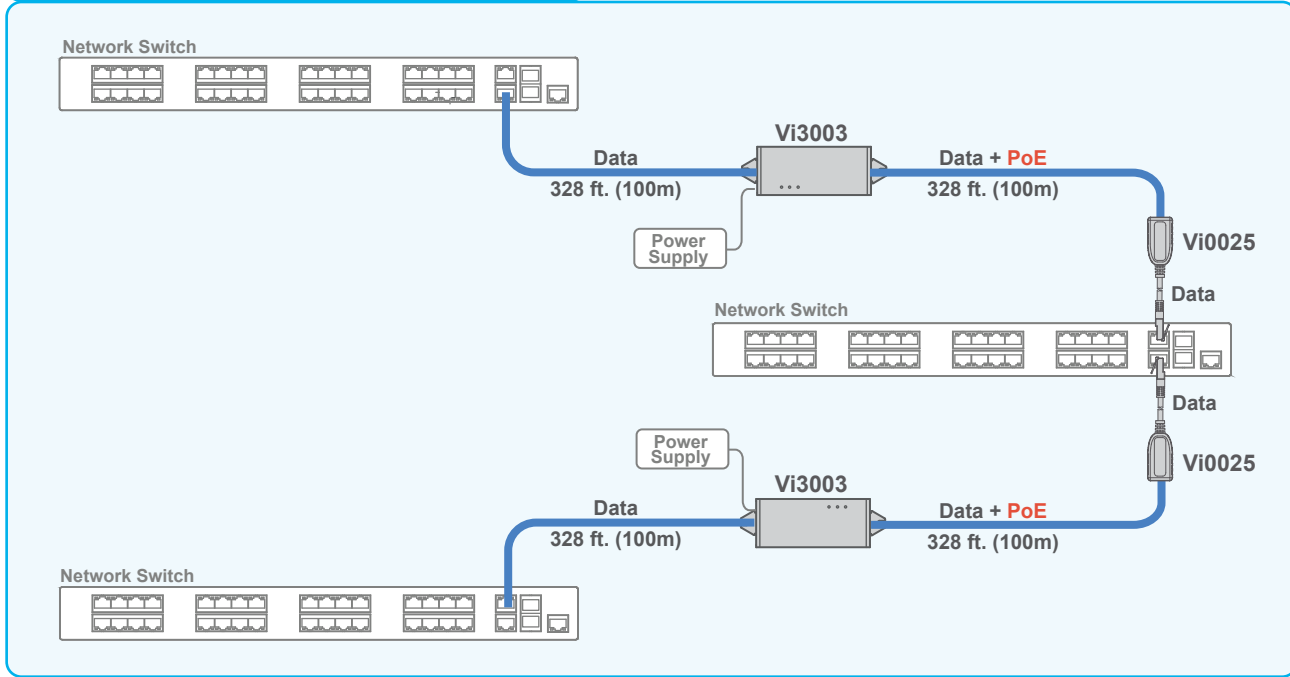


*Vi3003 allows for the transmission of two cameras over a single cable run or adding a new camera close to an existing camera.*

The Vi3003 using an external PoE compliant DC power supply the Vi3003 can provide up to 60W to one camera and 30W to the other. The Vi3003 is also a repeater providing an additional transmission distance of 328 feet.

What do I need to connect more than one network switch over extended distances on a single cable?

**1G Extended Connection between Networks**



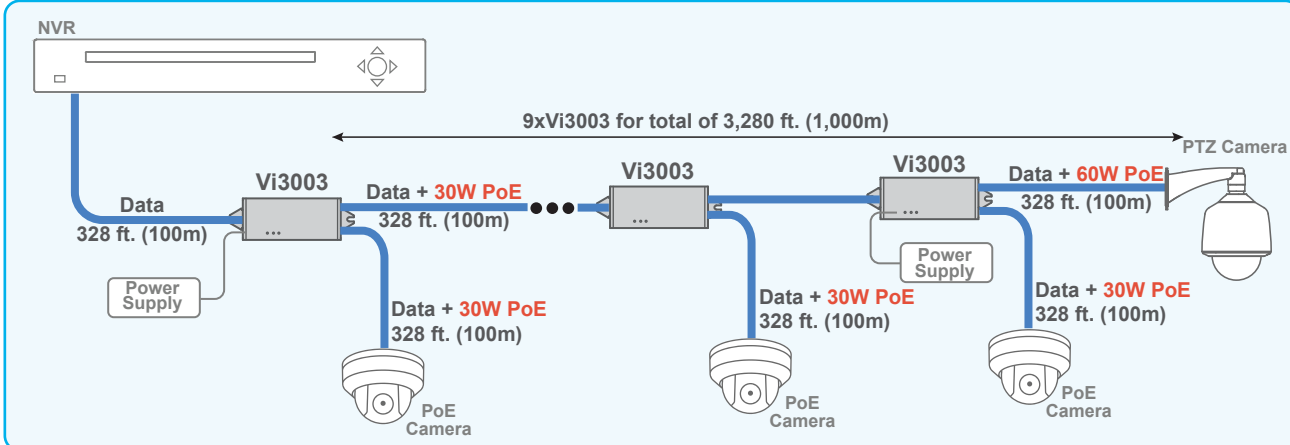
Vi3003 enables extending 1G connection between networks.

Network switches require at least 1G port to uplink. The Vi3003 locally powered provides 1G transmission while doubling the transmission distance between connected devices to 656 feet.

**My application requires transmitting more than two devices over a single cable/connection. What is my solution?**

**Answer: Vigitron's Repeater + Combiner Products**

**Drop and Insert Application**



A total of 9 IP addresses can be accessed on a single cable run eliminating the need for network switches.

The Vi3103, Vi30103 and Vi3003 are also repeaters providing extended distance up to an additional 328 feet from each device. These models are also min- Layer 2 network switches connecting up to Eight connected IP devices routed to a single network switch port

### What if I need more help?

#### Answer: Vigitron's Design Center Service

Vigitron offers free and without obligation network design services with the goal of providing you with the most reliable and cost-effective solution designed specifically for your application.

Vigitron's Design Center is staffed by trained engineers who will work with your company to assure you are provided with the best solution. With hundreds of network products designed to address the unique requirements of security applications we can usually offer more than one solution and explain the differences allowing you to make the most educational choice.

[Vigitron's Design Center →](#)

Vigitron is a leading global manufacturer of innovative and complete infrastructure transmission solutions for IP CCTV systems. Vigitron performance is supported by complete certified testing along with integration with world-leading IP-based security products. We offer free and without obligation Infrastructure Design Services staffed by experienced system engineers.

Vigitron provides the industry's longest warranty. Vigitron is based in San Diego with sales and manufacturing facilities worldwide.

[www.vigitron.com](http://www.vigitron.com) | [support@vigitron.com](mailto:support@vigitron.com)



### HeadOffice

7810 Trade Street, Suite 100,  
San Diego, CA 92121  
United States

858 484 5209  
[info@vigitron.com](mailto:info@vigitron.com)  
[www.vigitron.com](http://www.vigitron.com)