

Chameleon FAQ Sheet

What is Chamleon?

Chameleon is an integrated system that provides Ethernet media conversion, fiber distribution and PoE injection and extension. Chameleon is the only system on the market that can provide power over Ethernet up to 1173 meters, without a local power source.

The Chameleon System includes all the Engineering design, hardware and software required for your secure communication network installation. Chameleon systems are best suited for Power over Ethernet and any network requiring fiber/copper media conversion. Chameleon includes all the optical and electrical hardware components to meet your specific internet network needs – for LAN and FTTD needs, security camera installations, connecting wireless access points, industrial controls and much more.

A Chameleon system includes a Power Patch Panel, special hybrid (copper/fiber) cabling, remote GatorLink units (media converters/PoE) and sometimes Zone Distribution Boxes and trunk cables as well. Having fiber optic equipment provides added distance capabilities and added network security. We can also include our LinkMap monitoring software for added security and network management features.

What is a GatorLink?

GatorLink is a key component in the Chameleon system. It is a compact, easy to install unit that brings media conversion and power over Ethernet to your remote devices. GatorLinks can be customized with any combination of fiber and copper ports to bring PoE and/or fiber to peripheral equipment such as VoIP phones, security cameras, wireless access points, LAN connections, access controls, etc. The patented GatorLink eliminates the clutter of numerous patch cords and ‘wall-warts’ and can be configured with up to 6 ports (12 fibers) per unit.

Can I use a GatorLink without all the other components in the Chameleon system?

Yes, the GatorLink can be installed anywhere fiber-copper media conversion is needed and powered locally with an AC power supply. We can supply the point-to-point hardware with the required cabling – copper(power) and fiber(data) all in one cable.

What is the Power Patch Panel (PPP)?

The Chameleon system begins with the Power Patch Panel in the equipment room/closet. It provides the power supply to run the system as well as the media converters required to transmit data out to your remote locations. This technology allows this data to reach previously unattainable distances. The PPP provides slots for:

- Media Converters
- Power for local and remote units
- Fiber Distribution (if required)

The PPP is available as a 4U or 2U, 19” rack mount panel that can be configured with the power supply module and media converter modules suited for your specific application.

What is a Zone Box and when is it needed?

A Zone Box is a consolidation point that takes the power from the PPP and distributes it to GatorLink modules via hybrid fiber/copper cabling. It can also be powered locally or with a UPS. The Zone Box can also serve as a cross-connect for fiber distribution. It is needed when added fiber management is helpful or when distances to remote device locations require it. A Zone Box is also convenient for applications that involve many future moves, adds and changes.

Can the Chameleon System be used with a powered Ethernet switch?

Chameleon provides mid-span power injection per the IEEE 802.3af specification. Therefore, it will work with both powered and non-powered switches. In this instance, the powered switch is acting only as a switch, and will not provide power to the device. The Power Patch Panel is still needed.

What is a hybrid cable? Is there an advantage to using this?

A hybrid cable includes copper conductors and optical fiber together under 1 cable sheath. This allows for both power and data transmission supported within a jacketed cable and allows for a single cable pull for installation. Cables come with 12AWG or 18AWG stranded conductors and either loose tube or tight buffered fibers – depending on the application. They are typically factory terminated with M8 and LC connectors (or with an MTP for 4+ fibers) and ready to pull, plug-in and play. Using this cable design also reduces your conduit requirements by half - saving cost of material and installation. It also enables distribution of power from a central location and eliminates power supplies at individual workstations.

What is the maximum distance to my powered device (IP camera, access point, etc.)

The maximum distance to the single channel, remote PoE Port (GatorLink) is 1173 meters (3850 feet). From here, an additional 100 meters (330 feet) of UTP cable can be installed to the device. So, the maximum distance to the device is 1274 meters (4180 feet) for 1 port. Other configurations require distance calculations based on the remote device power requirements, the number of devices and the distances.

How do I handle surge suppression on the copper conductors?

GatorLinks and the Power Patch Panels have transient voltage suppression. Both devices meet IEC 1000-4-5 for surge suppression. We recommend the use of available add-on surge protection on remote end copper ports for applications in lightning prone areas. See our grounding instructions document for more details.

For each fully loaded Power Patch Panel, what is the maximum number of PoE remote devices that can be supported?

The number of remote devices supported by a fully loaded Power Patch Panel can vary based on the configuration of the remote ports. Depending on the GatorLink configurations and the power requirements of remote devices, up to 32 remote PoE devices can be supported from each fully loaded 4U PPP. More devices may be able to be supported when not all devices require PoE.

I have several different remote devices in my network design. Can Chameleon handle this effectively?

This is where Chameleon shines. Since the GatorLinks are highly configurable and offer combinations of PoE, media conversion and fiber distribution options, these products provide the most compact, easy to install solution for this type of network.

What transmission data rates do you support?

Currently, we support 10/100Mb/s or 1Gb/s. Plans for a tri-speed 10/100/1000Mb/s option are currently in development.

Does the system support auto-sensing?

On the copper side of the Power Patch Panel (PPP) and GatorLink devices, Ethernet connectivity is automatically detected. Also on the copper side, both auto-negotiate connection speed and full/half duplex. On the fiber side, the optical link is automatically detected.

Are the media converters UL-listed?

The Chameleon system complies with FCC Part 15 Class A for commercial products. The system also complies with CE EMC/EMI directive EN55024 and EN55022 including Electrostatic Discharge (IEC 1000-4-2) and Surge (IEC 1000-4-5). The Power Patch Panel's and the GatorLink's AC power supply are UL-listed.

Does Chameleon support any standards outside the USA? Can the system be deployed in Canada, CALA (Caribbean and Latin America), EMEA (Europe, Middle East, Africa)?

The media converters are CE certified, and are therefore approved for use in many regions. The cable listing should be checked for compliance to local codes.

What is your warranty on a Chameleon system?

A Chameleon system, designed by Fiber Connections and installed by a certified installer, comes with a 15 year warranty. See our Warranty Information document for details.

What types of fiber and connectors are available in a Chameleon system?

We support all standard multimode and single mode fiber types and can equip our Power Patch Panels and GatorLinks with any combination of MTP, LC or SC adapters and connectors.

Does Chameleon support PoE+?

PoE+ will be available in September, 2011 and will be fully compliant to IEEE 802.3at.

What does the LinkMap software do?

LinkMap is the feature that ties everything in the Chameleon system together and makes this such a unique solution. This network mapping feature makes it easy to locate any port in your system. It displays your complex network in a simple graphical tree view. It can be configured to alarm when equipment is removed or added to your network – providing an added layer of

security. The software also allows you to switch PoE power on and off – for instance, a wireless network could be shut off at the end of the business day.

Each multi-port GatorLink is equipped with a manual ‘locate’ button for each port, which can be used with or without LinkMap software.

Can I add the software later?

Right now, LinkMap must be ordered with the original order of the Power Patch Panel. The software connects to the PPP via a USB port and will soon be able to be networked as well.

What are the benefits of Chameleon?

The most commonly cited benefits are:

- PoE eliminates the need for costly installation of remote power outlets
- Hybrid cable allows for a simple, single pull installation and a common pathway for fiber and Class 3 power supply
- Able to support PoE equipment distances well beyond 100 meters – up to 1173 meters
- Pre-terminated, factory tested cables make for easier installations
- Designs allow for mix and match of fiber and copper ports to suit exact configurations required
- Faster, lower cost for the network installation
- For a fiber to the workstation application, Chameleon eliminates the unsightly mess of cabling and ‘wall-warts’. Less cabling around a work station can eliminate failure points and significantly reduce ‘trouble tickets’.
- Provides added network security for critical data applications and sensitive information
- LinkMap is a critical plus for choosing this network solution