

# 4 PORT SWITCH GATORLINK



## The ultimate media conversion and PoE extension terminal

The 4 Port Switch GatorLink is a fiber/copper Ethernet media converter and PoE injector that has 4 RJ45 ports in a compact package. It is designed to be used as a stand alone media converter and/or a PoE injector within an optical network. It can also be used as a component of our Chameleon System to extend PoE to multiple devices thousands of meters from the head end of your system using a single cable for both power and data. GatorLinks can be configured with almost any possible combination of port count, communication speed, fiber type and PoE output. All of this makes the GatorLink an ideal product for any media conversion and/or PoE extension project.

## KEY FEATURES

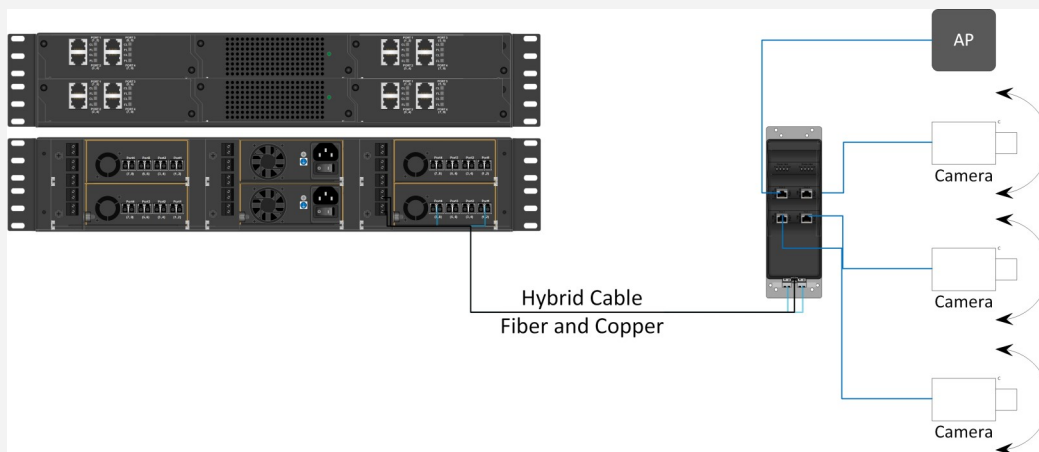
- 100base FX, LX or 1000base SX, LX fiber port options by using appropriate SFP modules
- 10/100/1000base TX copper ports
- Up to 4 SFP ports (typical 2 SFP ports)
- 4 PoE enabled RJ45 ports in a compact footprint
- All SFP and RJ45 ports are linked together as a switch
- PoE levels up to 90W (802.3bt)\*
- use as a stand alone device or with hybrid cabling from the head end of your system
- connection to your PoE device is made using standard category cables
- -40°C to +70°C operating temperature for remote units
- Built in 4kV surge protection

\*total power budget is either 90W or 180W depending on model selected.

## Easy 4 Port Media Conversion & PoE Extension

**4 Port Switch GatorLinks** provide you with the ability to deliver PoE connectivity to small clusters of up to 4 PoE enabled devices anywhere within 100 meters of the GatorLink. See below for “Remote” and “Stand-Alone” configurations.

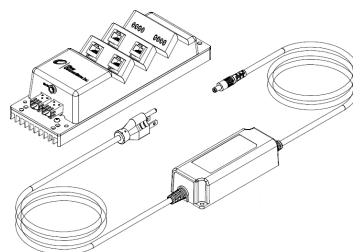
**Remote 4 Port Switch GatorLinks** draw their power directly from the head end of a system, typically via a hybrid (fiber/copper) cable. Separate dedicated fiber and power cables can also be used if preferred. Power can be distributed to the GatorLink from the head end through our Power Patch Panel system or, use your own 56Vdc power supply. This scenario gives you the ability to centrally power and backup all of the PoE devices in your network. It’s a particularly effective way to deliver PoE to locations where local power may not be readily available.



Typical Remote 4 Port Gatorlink Layout

**Stand Alone 4 Port Switch GatorLinks** operate in a similar manner to Remote units except, they come with their own dedicated power supply which is used to provide power to the GatorLink using local power. These devices can be placed anywhere that local power is accessible.

### Typical Stand Alone 4 Port Switch GatorLink with AC Power



## ORDERING INFORMATION & TECHNICAL SPECIFICATIONS

### Step 1: Select your Switch GatorLink

Part Number	Description
GR40YPBYE0B-002-SW	Remote 2xSFP + 4xRJ45 Ports Switch GatorLink (SFP's not included) 1 power circuit (2 conductor cable)
GR40YPBYE0B-003-SW	Remote 2xSFP + 4xRJ45 Ports Switch GatorLink (SFP's not included) 2 power circuit (4 conductor cable)
GA40YPBYENB-002-SW	Stand Alone 2xSFP + 4xRJ45 Ports Switch GatorLink (SFP's not included)

Add suffix **-DN** to part number for DIN rail clip to be installed at factory.

### Step 2: Select SFP's for your Switch GatorLink

Part Number	Description
SFP13728LCMM100	Multimode 100BaseFX LC SFP
SFP13728LCMM1000	Multimode 1000BaseSX LC SFP
SFP13728LCSM100	Single mode 100BaseLX LC SFP
SFP13728LCSM1000	Single mode 1000BaseLX LC SFP

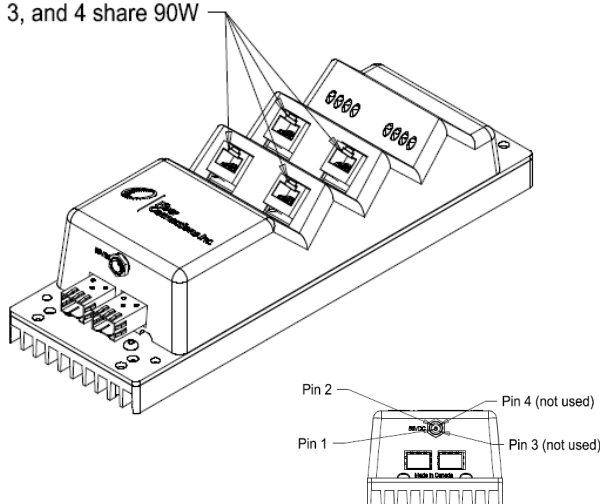
Note that all power delivered to a 4 Port Remote GatorLink must be shared between the ports being fed by a particular power circuit. The 4 port Remote GatorLink is offered in both single and dual circuit configurations in order to provide maximum flexibility.

All power delivered to the single circuit Remote GatorLink (GR40YPBYE0B-002) is shared between all 4 ports. Power is typically delivered by a dual conductor hybrid cable. When used with a Chameleon System (class 2 compliant  $\leq 100W$ ) power source such as the Power Patch Panel, the maximum PoE budget for all 4 ports is 90W. For example 2 ports could support PoE (15W/each) and 2 ports could support PoE+ (30W/each) for a total of 90W.

The dual circuit GatorLink (GR40YPBF0B-003) is typically powered by 2 separate circuits using a 4 conductor hybrid cable (1 pair per circuit). This allows 2 of the ports to share 90w from 1 circuit and the other 2 ports to share another 90W from a completely separate power circuit.

#### 1 Circuit 4 Port GatorLink

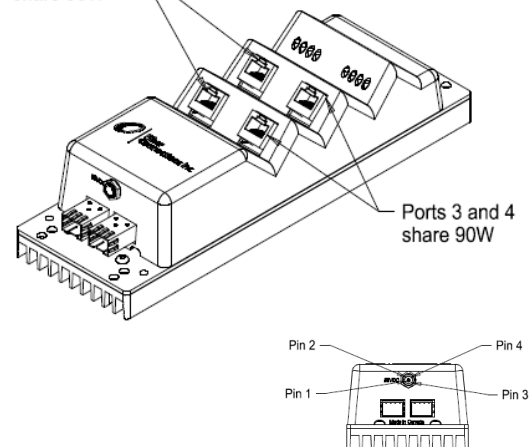
1, 2, 3, and 4 share 90W



#### 2 Circuit 4 Port GatorLink

Port 1 and 2 share 90W

Ports 3 and 4 share 90W



## ORDERING INFORMATION & TECHNICAL SPECIFICATIONS

### 4 Port (single circuit) Remote Switch GatorLink Hybrid Cable Distance Limitations

Maximum composite cable limits are determined by considering:

- the max length of fiber based on fiber type and Ethernet speed, AND
- the max length of copper required based on wire gauge and power levels  
**whichever is less.**

Distances in table below do NOT include the length of Ethernet cord. With Ethernet cord included, distances could be extended up to an additional 100 meters.

**Power distance limits when mated with a compatible 100W power source**

Remote Switch GatorLink Configuration	Remote Switch GatorLink Part Numbers	Cable with 4X 12awg conductors		Cable with 2X 12awg conductors		Cable with 2X 16awg conductors	
		Max distance if Ethernet cord is ≤20 meters	Max distance if Ethernet cord is 100 meters	Max distance if Ethernet cord is ≤20 meters	Max distance if Ethernet cord is 100 meters	Max distance if Ethernet cord is ≤20 meters	Max distance if Ethernet cord is 100 meters
4 PoE (4x15W loads)	GR40YPBYE0B-002-SW	1930	1290	960	650	380	250
2 PoE & 2 PoE+ (2x15W & 2x30W load)		630	0	310	0	125	0
1 PoEbt & 3 no-PoE (1x90W & 3x2w load)		850	0	420	0	160	0

#### Fiber Distance Limits

	Comm Protocol	Fiber Type	Distance (m)
Standard based fiber max distances (Meters)	100BaseFx	50/125 OM3	2000
	100BaseFx	50/125 OM4	2000
	100BaseLx	SM	5000
	1000Base Sx	50/125 OM3	550
	1000Base Sx	50/125 OM4	1100
	1000Base Lx	SM	5000

## ORDERING INFORMATION & TECHNICAL SPECIFICATIONS

### 4 Port (dual circuit) Remote Switch GatorLink Hybrid Cable Distance Limitations

Maximum composite cable limits are determined by considering:

- the max length of fiber based on fiber type and Ethernet speed, AND
  - the max length of copper required based on wire gauge and power levels
- whichever is less.**

Distances in table below do NOT include the length of Ethernet cord. With Ethernet cord included, distances could be extended up to an additional 100 meters.

**Power distance limits when mated with a compatible dual output 100W source**

#### Cable with 4X 12awg conductors

Remote Switch GatorLink Configuration	Remote Switch GatorLink Part Numbers	Max distance if Ethernet cord is ≤20 meters	Max distance if Ethernet cord is 100 meters
		Distance Meters	Distance Meters
4 PoE (circuit 1 = 2x15W / circuit 2 = 2x15W)	GR40YPBYE0B-003-SW	1830	1550
4 PoE+ (circuit 1 = 2x30W / circuit 2 = 2x30W)		770	350
2 PoE+ / 2 PoE++ (circuit 1 = 1x30W+1x60W / circuit 2 = 1x30W+1x60W)		330	0
2 PoEbt & 2 no-PoE (circuit 1 = 1x90W+1x2W / circuit 2 = 1x90W+1x2W)		540	100

#### Fiber Distance Limits

	Comm Protocol	Fiber Type	Distance (m)
Standard based fiber max distances (Meters)	100BaseFx	50/125 OM3	2000
	100BaseFx	50/125 OM4	2000
	100BaseLx	SM	5000
	1000Base Sx	50/125 OM3	550
	1000Base Sx	50/125 OM4	1100
	1000Base Lx	SM	5000

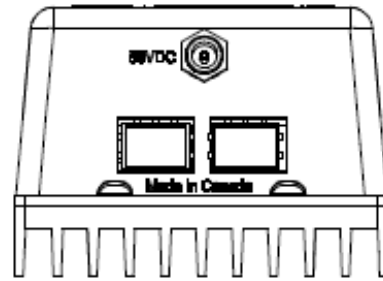
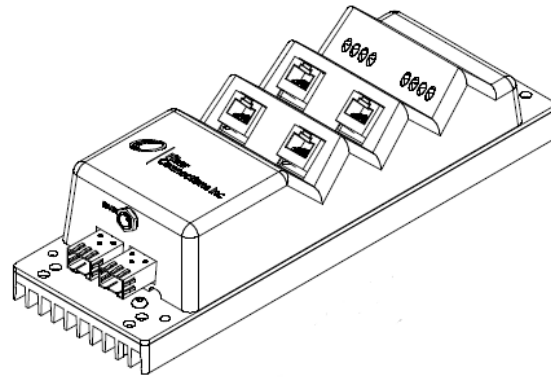
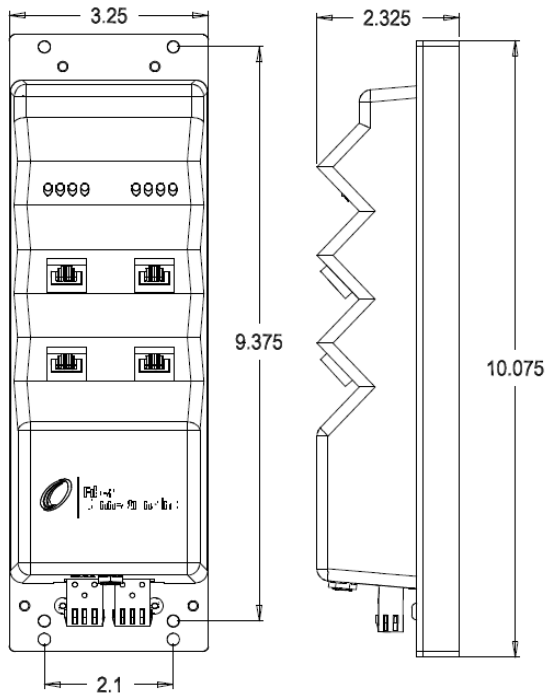
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Standards	Ethernet IEEE Std. 802.3i/u/ab/z, Power Over Ethernet IEEE 802.3 af/at/bt	
Controls	Automatic operation	
Housing	ABS/Acrylic plastic stepped shell mounted to a metal base plate. Primary fiber and low voltage DC power enters the device on the end face and copper ports are mounted on the step face. Size is 10.1" x 3.25" x 2.33"	
Power Source	Remote configurations require 56VDC power through an M8 power connector. Stand Alone configurations are supplied with an external 100W 56VDC AC power supply. Each GatorLink draws at least 2 watts of power per Ethernet port for media conversion plus whatever power is required to support the devices that are connected to it.	
Fiber Optic Ports	Primary Fiber Optic Port	4 x SFP: LC duplex
	Fiber Type	62.5/125 (OM1), 50/125um (OM2/OM3/OM4) or Single Mode
	Wavelength	MM 850nm or 1300nm, Singlemode 1310nm
	Fiber Tx/Rx Speed	100Mb/s or 1Gb/s
	Mode	Full Duplex
	Distance (fiber only)	MM:100mb/s-2 km 1gb/s-600m or SM(1310nm):5km
	Optical Loss Budget	MM: 100mb/s 10-15dB 1Gb/s 6-8dB SM: 16 to 29dB depending on configuration
Copper Ports	Copper Port Interconnection	4 x 8P8C (RJ-45) Modular Socket connectors
	Copper Rx/Tx Speed	10/100/1000 BaseT
	Mode	Half/full duplex auto negotiated
	Distance	100M (330 ft) cat 5/6
	POE	44-57VDC(PoE) 50-57VDC(PoE+/PoE bt type 3) 52-57VDC(PoE bt type 4)
	RX/TX Cross-over	Auto MDI, MDIx configuration
Indicators	Power on: LED on Fiber Link/Activity: LED on/flash Copper Link/Activity: LED on/flash PoE Active: LED on  Refer to installation guide for detailed LED indicator breakdown	
Weight	4 Port Configurations: 4.5-6 lbs depending on model	
Temperature	-40 to +70 Celsius *power supply for Stand Alone units is rated for 0 to +40 Celsius	
Environment	0 -90% non-condensing humidity, 0-10,000 ft altitude	
Compliance	Safety: ANSI/UL 60950-1 when supplied with a class 2 power source. Radiation: CFR FCC Part 15 Subpart B	

4 Port GatorLinks are UL listed and class 2 compliant when used as part of the Chameleon System.

## SCHEMATICS

### 4 Port Remote Switch GatorLink GR40YPBYE0B-002-SW / GR40YPBYE0B-003-SW



### 4 Port Stand Alone Switch GatorLink GA40YPBYENB-002-SW

