

P1GCCB Quick Start Guide

The portable network TAP is ideal for 10/100/1000MB copper network monitoring. The innovative design allows this TAP to be easily installed into any copper 10/100/1000 network segment.

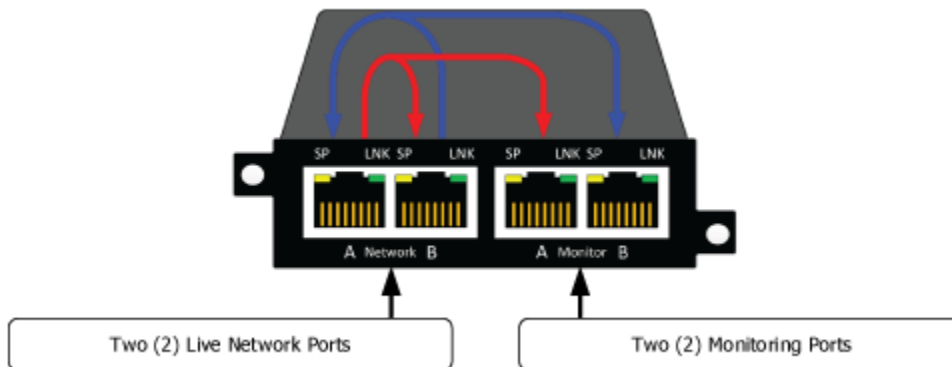
Once installed in your network the 10/100/1000 network TAP will enable you to monitor your network segments quickly and effectively using a network analyzer, security devices, or any monitoring tool. This 10/100/1000 copper TAP allows you to capture full-duplex traffic without dropping any packets.



Traffic Flow

The copper 10/100/1000 copper taps provide a copy of the directional traffic out each monitoring port. Monitor Port A provides you a copy of the A -> B traffic

Monitor Port B provides you a copy of the B -> A traffic



Key Features

- Small portable form factor: 3.942"x1.20"x3.942" (W x H x D)
- Four (4) Copper RJ-45 Ports
- Plug-n-Play design with zero configuration
- Link Speed Synchronization
- Captures Full Duplex Traffic up to 2 Gigabits without dropping any packets
- Supports Jumbo Frames
- Passes physical layer errors
- Rack Shelf supports up to four (4) TAPs in a 1U space

To deploy the P1GCCB Portable Tap into your network, simply:

- Unpack the network TAP
- Configure DIP switches on back of TAP (see next page)
- Install network TAP into the live network

THIS NEEDS TO BE DONE WITH NO POWER CONNECTED TO THE TAP

-Using two (2) straight through Ethernet cables, connect ports **[A]** and **[B]** of the P1GCCB between the two (2) live network devices where monitoring is desired. Again, with **NO POWER** to the TAP verify network traffic is flowing. Traffic will flow with no power to the tap.

-If traffic does not flow, then we need to verify network speeds and duplexing. In 10M and 100M environments, one (1) straight through cable and one (1) crossover cable may be required

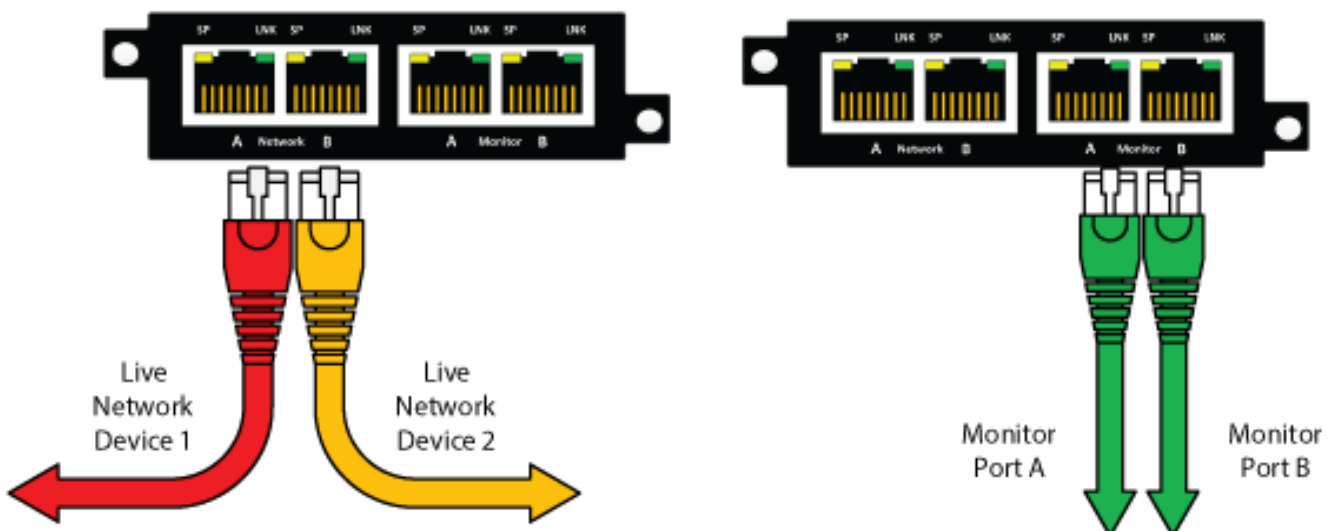
-Verify live network is up and running

-Power up the TAP

-Connect ports **[C]** and **[D]** of the P1GCCB to the monitoring tools for directional network monitoring

Note: Network Cables MDI/MDIX determines direction of monitor output port Anytime the configuration switches are changed the user must remove and then apply power for the changes to take effect.

Network Cabling:

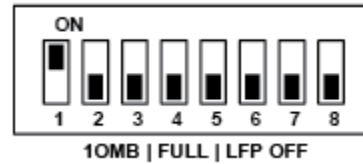
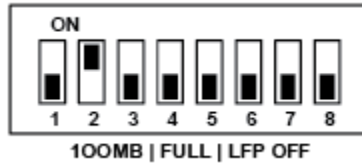


DIP Switch settings defined with examples

| Mode | Switch 1 (Speed_1) | Switch 2 (Speed_2) | Switch 3 Duplex | Switch 4 LFP | Switch 5 | Switch 6 | Switch 7 | Switch 8 |
|--|-----------------------|-----------------------|--|---|--|----------|----------|----------|
| Sync Mode | OFF | OFF | Sync Mode Forces AUTO ON Switch has no effect | Sync Mode Forces LFP ON Switch has no effect | Switches 5, 6, 7, and 8 for future use | | | |
| Garland Technology's unique Synchronization Mode provides you a plug-n-play zero configuration design. Network ports [A] and [B] will synchronize to determine the highest supported network speed, drop link across all ports, and then only advertise and link to the highest supported common network speed on all ports. See LED section for how you know what speed the TAP connects at. | | | | | | | | |
| 1Gbps | ON | ON | ON = AUTO OFF = FULL | ON = LFP ON OFF = LFP OFF | | | | |
| 100Mbps | OFF | ON | ON = AUTO OFF = FULL | ON = LFP ON OFF = LFP OFF | | | | |
| 10Mbps | ON | OFF | ON = AUTO OFF = FULL | ON = LFP ON OFF = LFP OFF | | | | |



Configuration Examples



Definitions

Synchronization Mode: DIP Switch 1 and 2 in OFF position. When in Synchronization Mode, all ports of the P1GCCB TAP are Auto MDI/MDIX, Auto Speed and Auto Duplex automatically. The TAP will synchronize to determine the highest supported network speed, drop link across all ports, and then only advertise and link to the highest supported common speed on all ports. Place the TAP in full auto mode.

1G, 100M or 10M Speed Mode: (See table for Switch positions) When one of the Speed Settings are selected then you have the option to select the Duplex (AUTO or FULL) and whether to have LFP turned on or not.

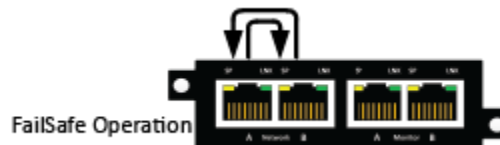
Link Failure Propagation (LFP): Used mostly for HA designed networks. It can sense a network failure and reflect the failure to the other side of the network allowing the network's failover mechanism to switch over to the secondary network path.

Duplex: AUTO setting (Switch 3 in ON position default) lets the port negotiate the duplex mode with the link pair (only in copper connections).

FULL setting forces the link to full duplex mode

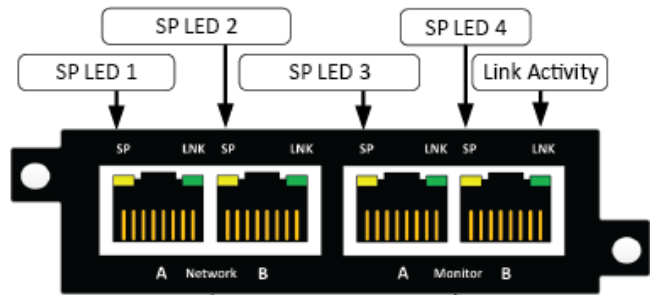
Breakout: An operating mode that allows monitoring of separate traffic streams, one for each direction of network traffic.

FailSafe: On power loss, live network tap ports re-establish link with each other, resuming traffic flow between critical network devices.



LED Labeling

When in the Synchronization Mode the SP LEDs will show you what speed has been synchronized for the link. Below is a diagram and chart showing the LED operations.



| LED Indicators based on Speed Settings | Switch 1 | Switch 2 | SP LED 1 | SP LED 2 | SP LED 3 | SP LED 4 |
|--|----------|----------|---|---|---------------|-----------------------|
| 1Gbps | ON | ON | Indicates Lost Link. If Amber – lost link on Port A | Indicates Lost Link. If Amber – lost link on Port B | ON | ON |
| 100Mbps | OFF | ON | | | ON | OFF |
| 10Mbps | ON | OFF | | | OFF | ON |
| Sync Mode | OFF | OFF | Indicates 1G | Indicates 100M | Indicates 10M | Indicates Negotiation |

SP or S (Speed): When in Sync Mode only, indicates the highest established common speed across all ports of a tap. LED s indicate the following established speeds: [1st SPD 1G] – [2nd SPD 100M] – [3rd SPD 10M] – [4th SPD Negotiating]

LNK or L (Link/Activity): Solid when link is achieved and flashes when Ethernet activity is detected on a particular interface.

Optional Rack Mount



For questions, please contact Garland Technology Support at:
8AM-9PM (CST) Monday - Friday (Except for observed US Holidays)
Tel: 716.242.8500 Online: www.garlandtechnology.com/support