

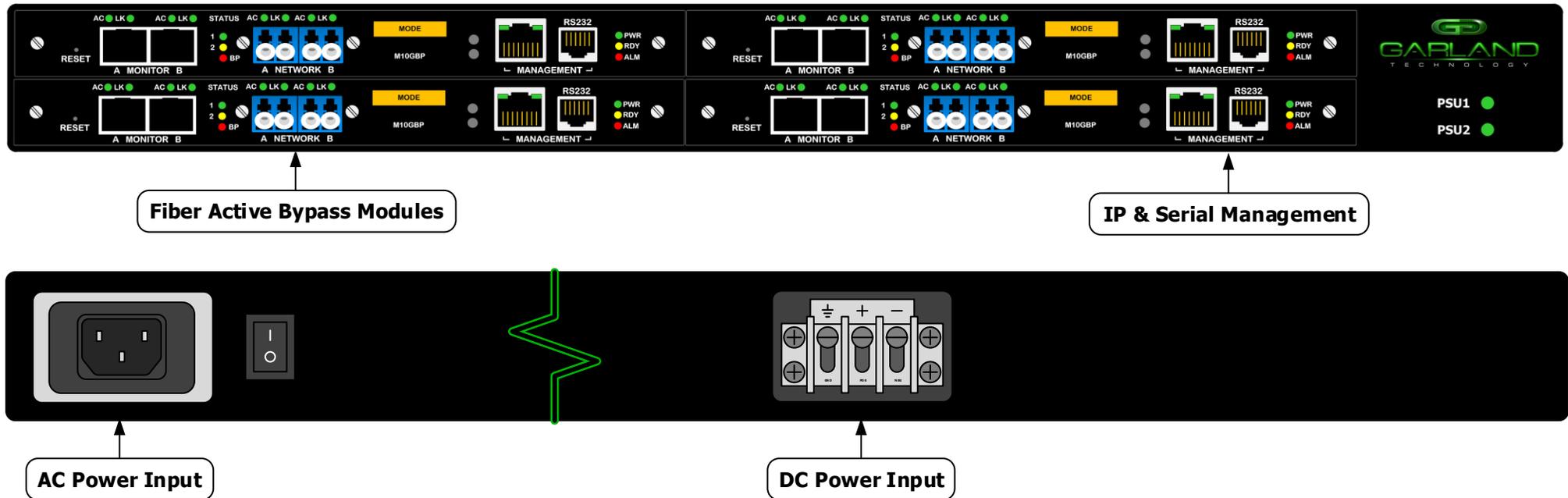
See every bit, byte, and packet®

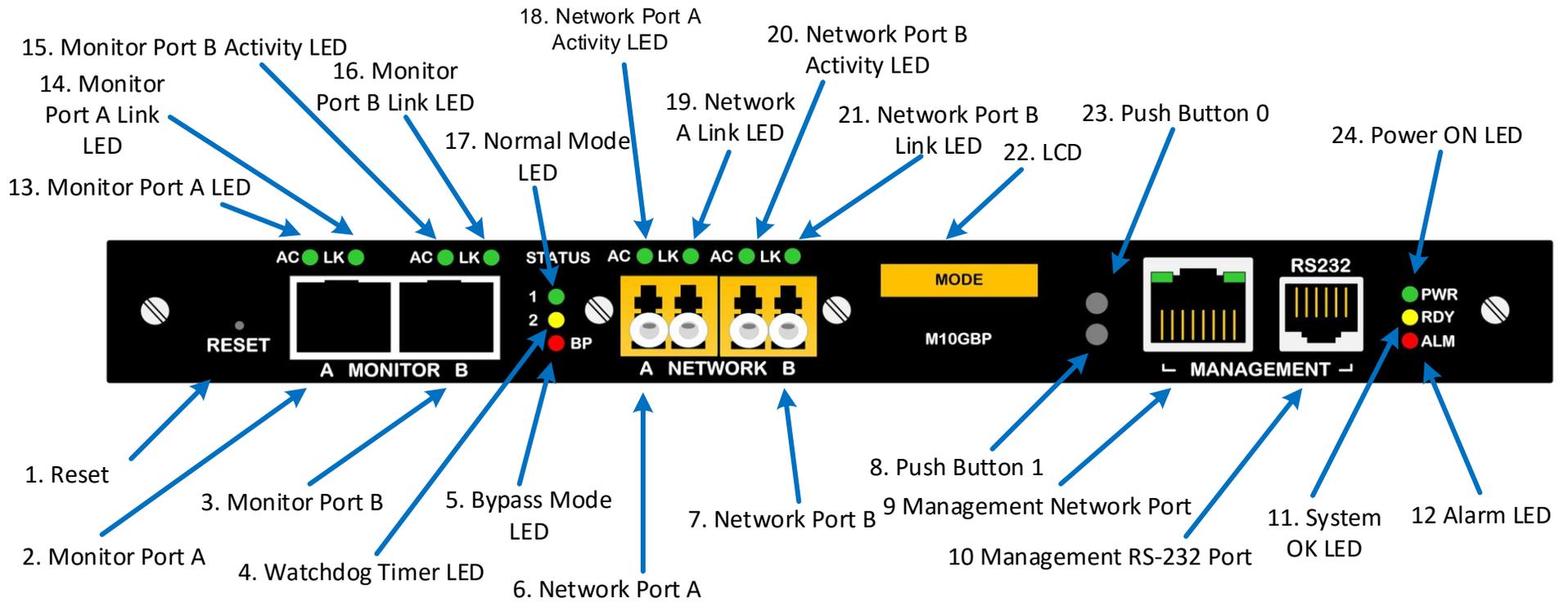
To deploy the M10GxxBP modular tap system into your network, simply:

- Carefully unpack and inspect the tap modules and system chassis.
- Insert and fully seat the M10GxxBP modules into the M10Gxxxx chassis and secure modules using both screws.
- Install the tap and chassis assembly into any available 1U slot of a network rack and secure it with rack mount screws.
- Connect the power supply to the M10GxxBP and plug it into an available power source and turn on the power switch.
- Utilizing the CLI or GUI, configure the M10GxxBP for the operating mode of your choice (default is bypass mode).
- Remove the power supply to the M10Gxxxx chassis temporarily.
- Using standard Ethernet cables, connect **NETWORK** ports [A] and [B] of the M10GxxBP between the two live network devices where you would otherwise deploy an inline appliance or sensor (for example: IPS or DLP). Verify network traffic is flowing, confirming that network cabling is correct.
- Connect **MONITOR** ports [A] and [B] to the inline IPS/DLP appliance or other tools for traditional breakout or aggregated traffic monitoring.
- Connect the power leads to the M10Gxxxx chassis power supplies and plug it into an available power source. Turn on the chassis power switch.

Notes:

- * Fiber is always 10Gbps speed. Other operating modes may be desired for monitoring and may be configured using the CLI or GUI.
- * If you wish to replace one of the modules in a chassis without shutting the power to the entire chassis, you need to remove power to the module that you wish to replace through the CLI using the "power_off" command. See Sub-paragraph 6.56.8 on page 69 of the User Guide.





LFP or Link Failure Propagation: Allows link state to be mirrored to adjacent live network interfaces. When one side of a network loses link on a connecting tap, the link state is propagated to the other interface of the tap and ultimately to the other side of the network. Enabled by default.

LK or Link/Activity: Solid when link is achieved and flashes when data is detected on an interface.

BP or Bypass: A mode that allows active temporary bypass of an inline appliance or sensor type IPS/DLP device. Bypass is based on the operating characteristics of the connected network appliance. When a bypass tap device is not able to detect link or heartbeats from (or through) inline appliance or sensor connecting to the C and D sensor port pair, the appliance is bypassed automatically, keeping link up and networks online and passing data.

Aggregation: Combines data flows for full-duplex monitoring on a single interface. Ideal when monitoring both sides of network traffic simultaneously.

Breakout: Separates data flows for half-duplex directional monitoring. Ideal when utilization is very high and packet loss is not an option.

SPAN or Regenerate: Allows users to multiply one or more inputs into many outputs. BP LED's are not used while this mode is configured.

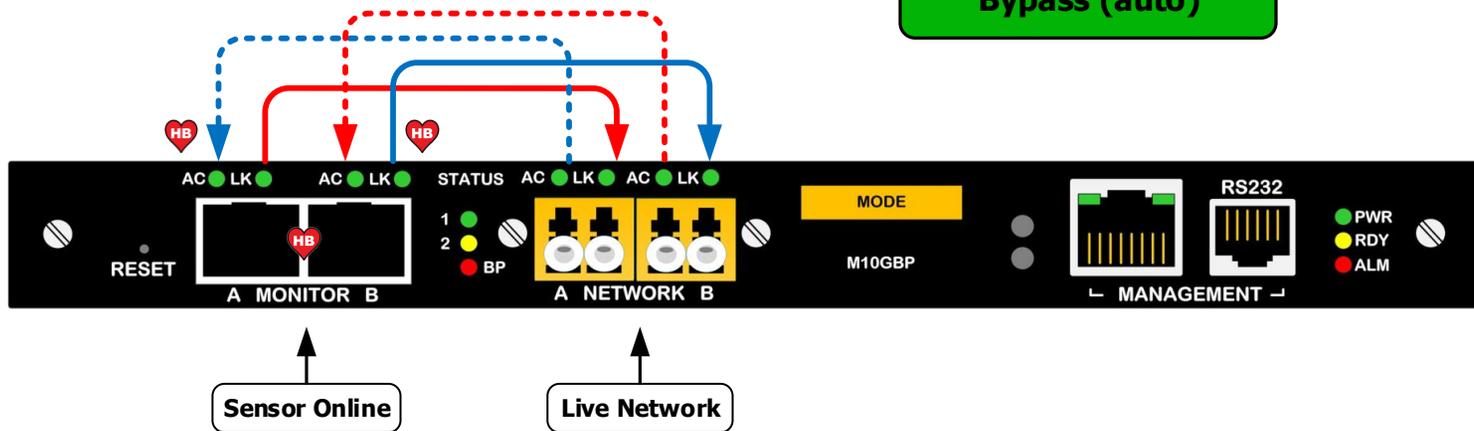
FailSafe: On power loss, live network tap ports re-establish link with each other, resuming traffic flow between critical network devices. Always on.

Reverse Bypass: Disables link on both live network ports if all inline appliances lose link or cannot pass traffic. Disabled by default.

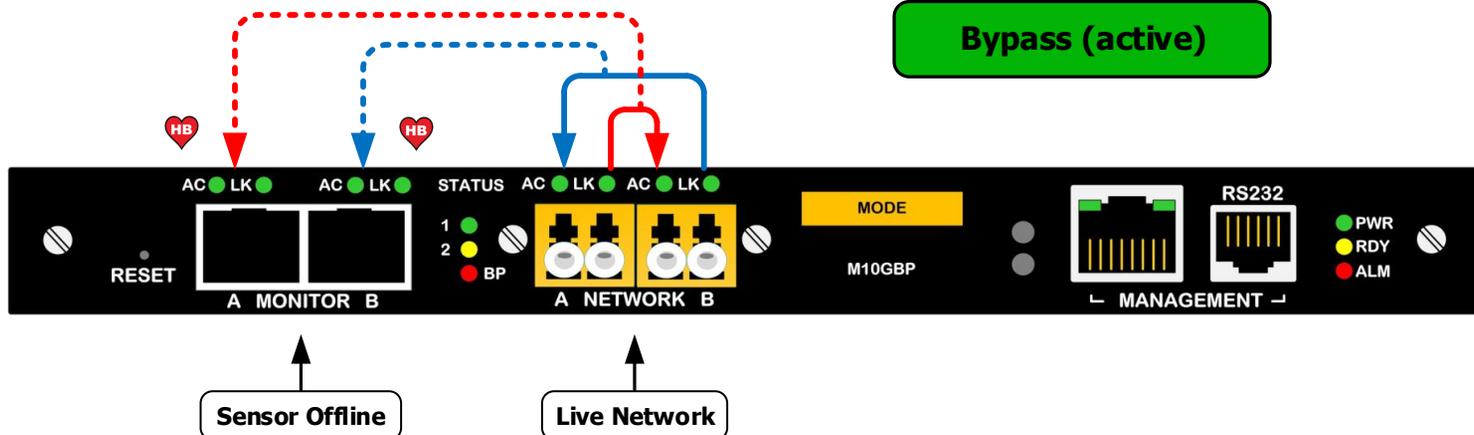
Packet Injection: Allows monitor ports to inject Ethernet frames back into the live network flows.

M10GxxBP Tap Module Operating Modes

Bypass (auto)



Bypass (active)



Bypass Mode Detail

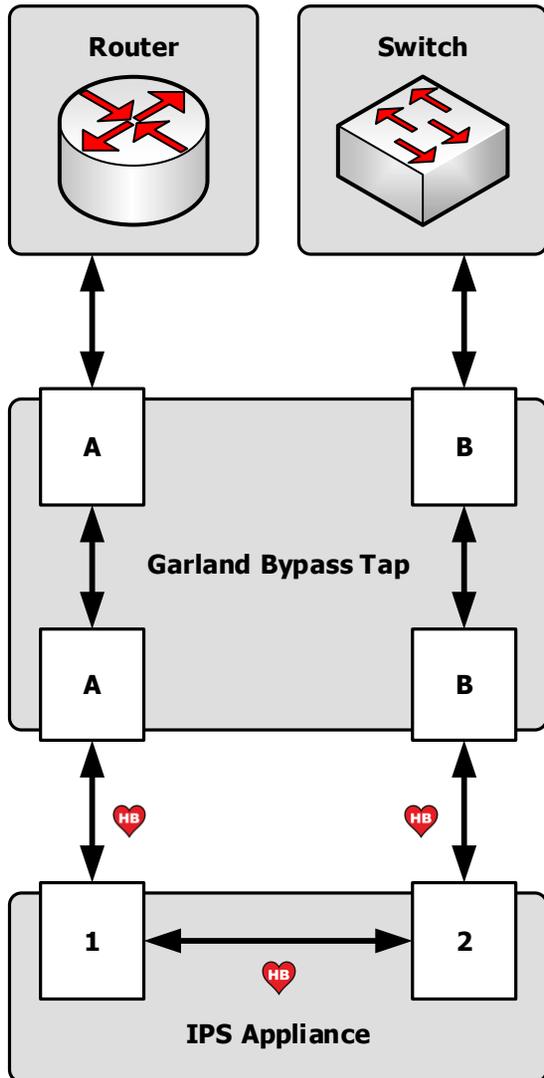


Figure 1: Normal Operation (IPS Online)
All Data Passes Through Sensor Inline

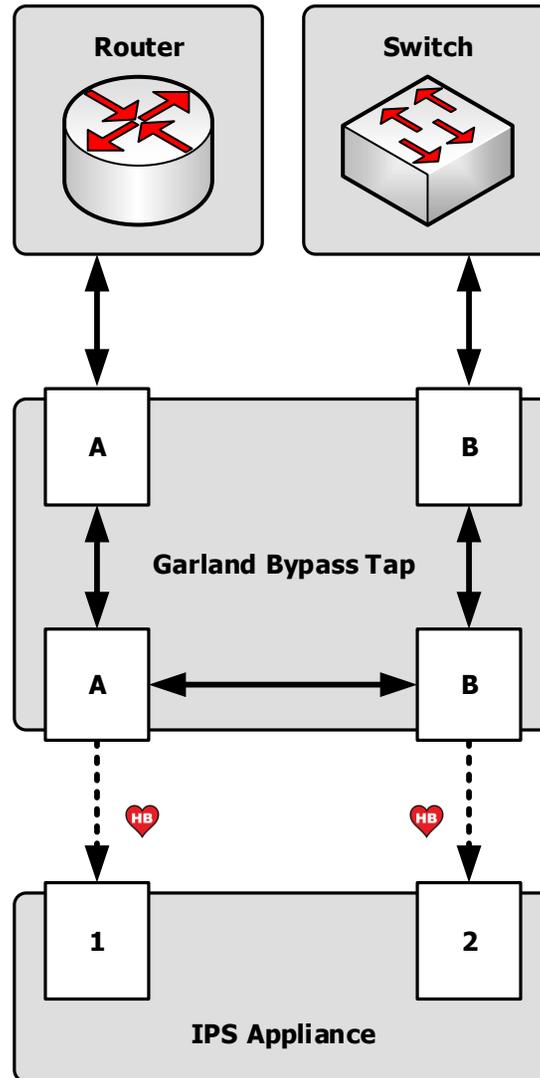


Figure 2: Active Bypass (IPS Offline)
Data and Heartbeats Copied to Sensor

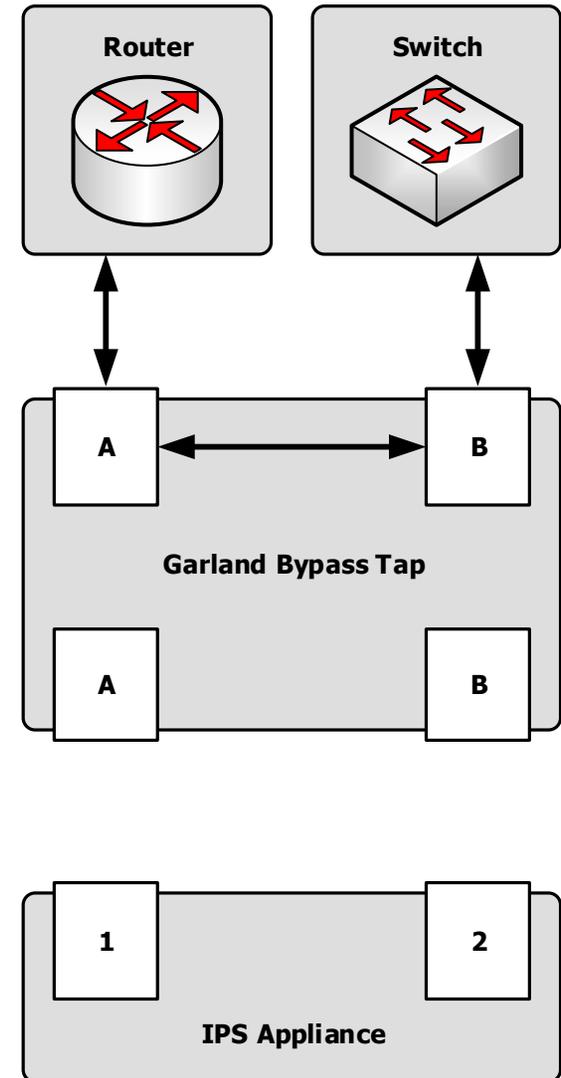
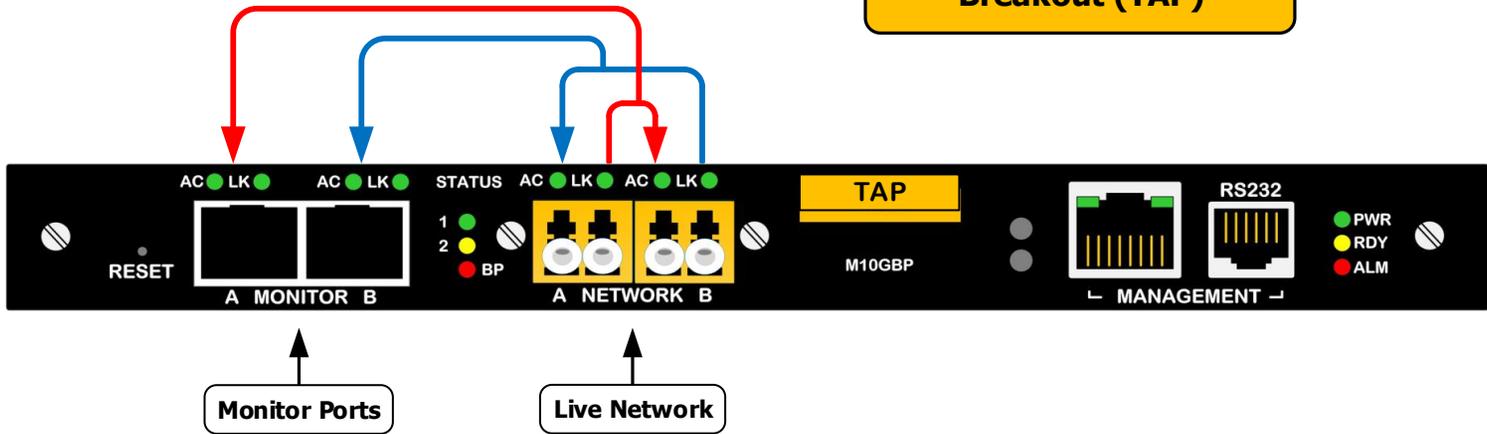


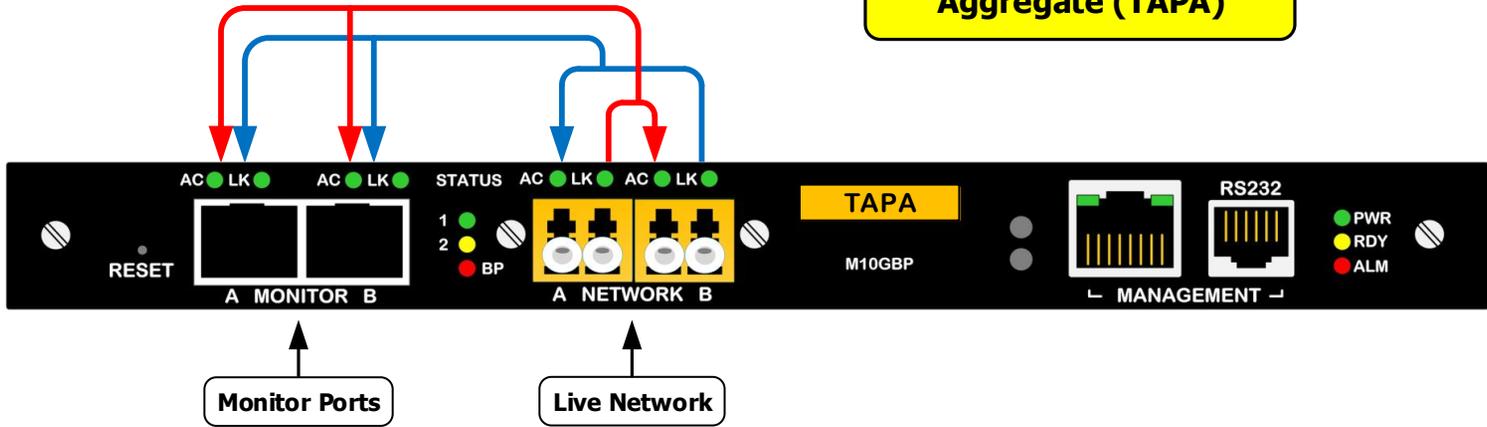
Figure 3: Passive Bypass (Power Failure)
Network Interfaces Renegotiate Resuming Flow

M10GxxBP Tap Module Operating Modes

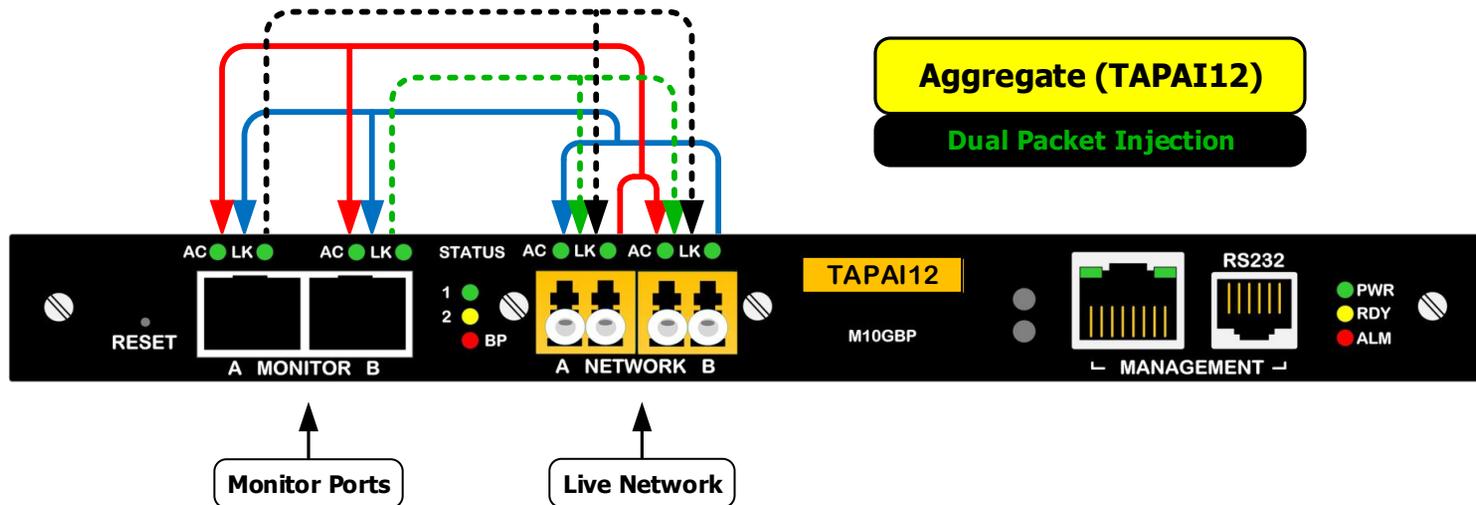
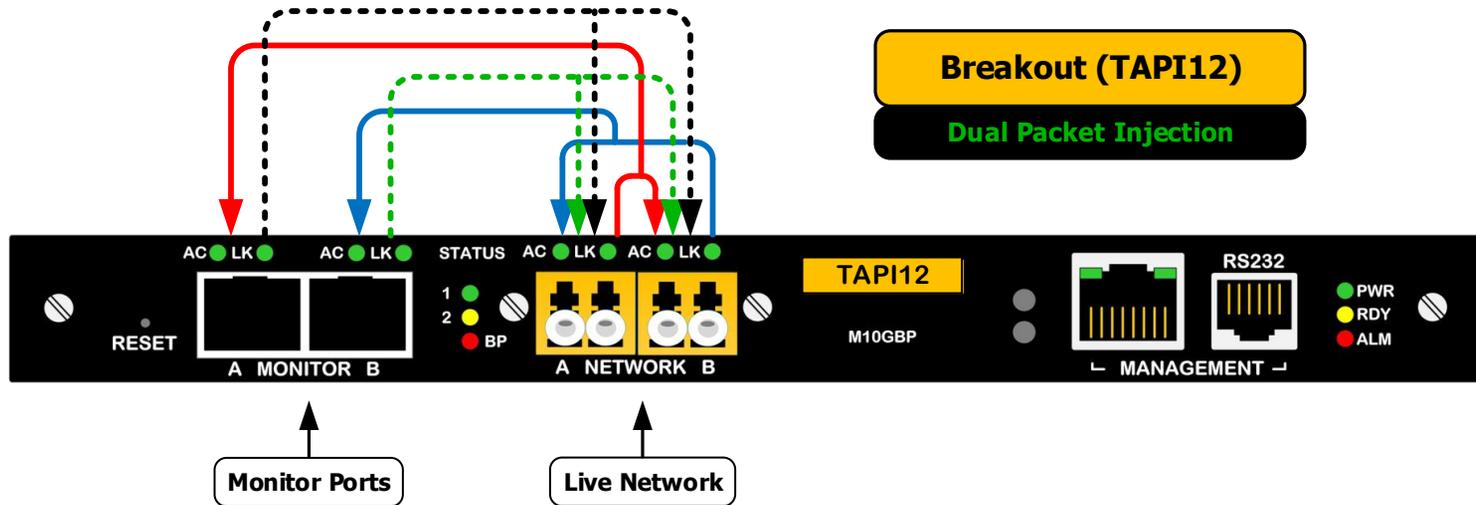
Breakout (TAP)



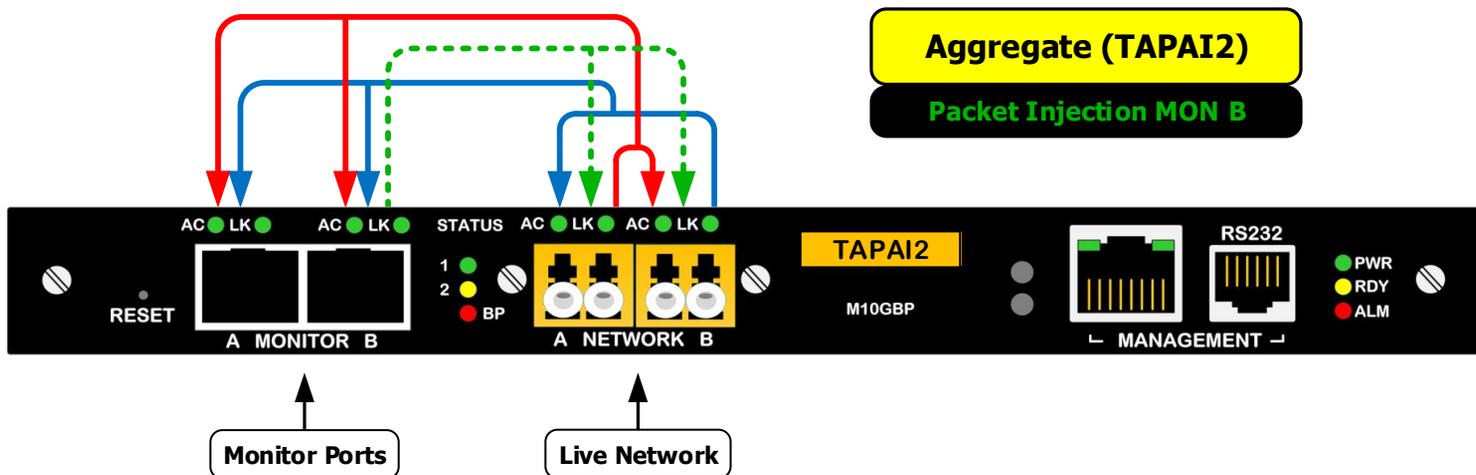
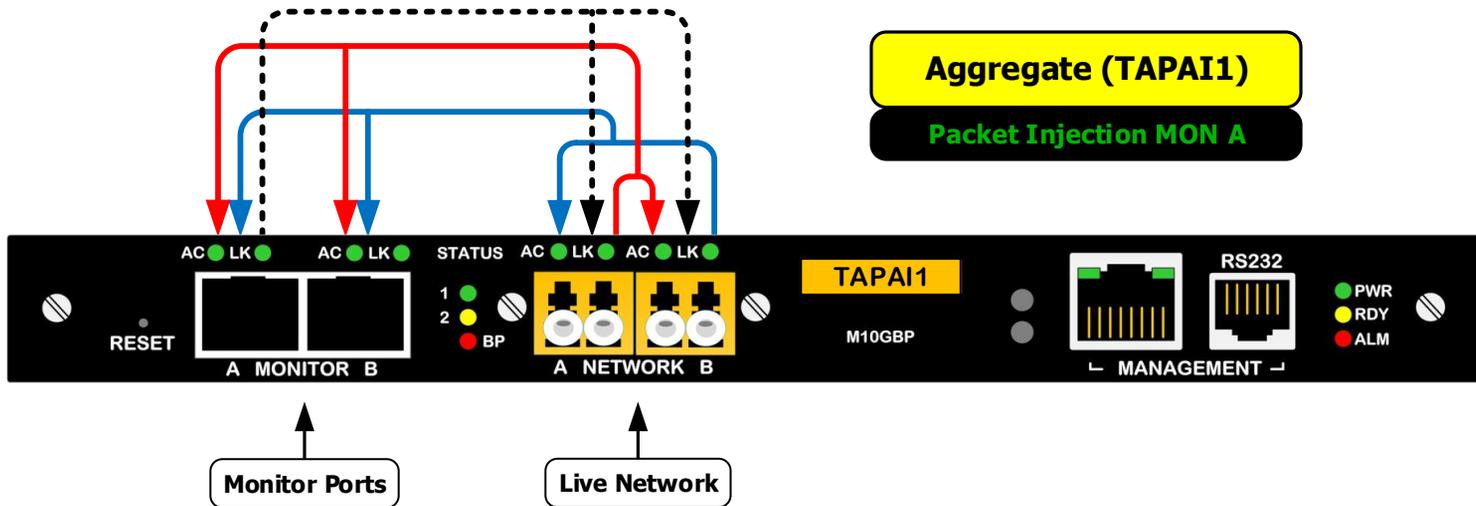
Aggregate (TAPA)



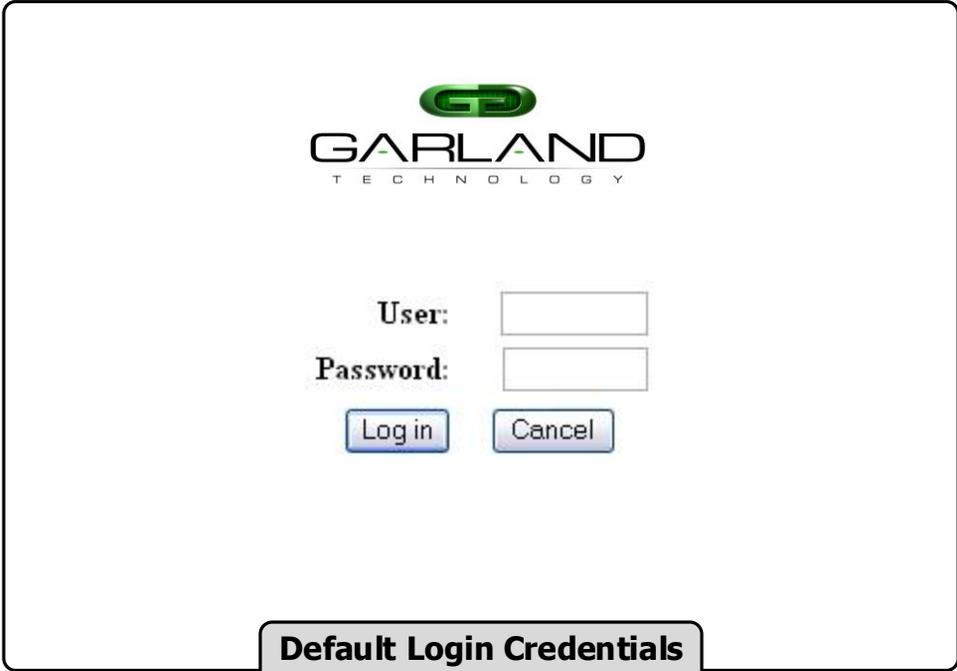
M10GxxBP Tap Module Operating Modes



M10GxxBP Tap Module Operating Modes



Web Interface Orientation



Default Login Credentials
admin | gtadmin1

Web Interface Orientation

Device info:

```
hardware version: 0.2.0.0
firmware version: 0.2.0.2
software version: 1.0.2.60
u-boot version:   U-Boot 1.3.0,
kernel version:  2.6.23-S-001,
tracking number: C164301300011
```

Link info:

```
Monitor port 0: Down
Monitor port 1: Down
Network port 0: Down
Network port 1: Down
rs232 port: connected
```

Error info:

```
First error:
Last error:
```

Active state: **bypass.** Passive state: **inline.** Appl state: **unknown.**

Statistics

	SUM	Mon0	Mon1	Net0
RxOctets:	0	0	0	0
TxOctets:	12564160	12564160	0	0
RxPktGood:	0	0	0	0
RxUnicastPkts:	0	0	0	0
RxMulticastPkts:	0	0	0	0
RxBroadcastPkts:	0	0	0	0
TxPktGood:	196322	196322	0	0
TxUnicastPkts:	196323	196323	0	0
TxMulticastPkts:	0	0	0	0
TxBroadcastPkts:	0	0	0	0
RxDiscards:	0	0	0	0
RxErrors:	0	0	0	0
TxDiscards:	0	0	0	0
TxErrors:	0	0	0	0

Web Interface Orientation

Bypass configuration

HB active mode	HB active mode lock	HB active restore	HB interval	HB hold time
<input type="button" value="on"/> ▾	<input type="button" value="off"/> ▾	<input type="button" value="on"/> ▾	<input type="text" value="5"/>	<input type="text" value="20"/>

Active bypass	HB active expire
<input type="button" value="inline"/> ▾	<input type="button" value="bypass"/> ▾

- 1 BYPASS Bypass mode
- 2 INLINE Appliance Inline mode
- 3 TAP TAP Mode (Directional Monitoring)
- 4 LINKDROP Failed Appliance Disables Live Link
- 5 TAPI12 TAP Mode with Injection
- 6 TAPA Aggregate Mode (Combined Monitoring)
- 7 TAPAI1 Aggregate Mode with Dual Injection from Mon0
- 8 TAPAI2 Aggregate Mode with Dual Injection from Mon1
- 9 TAPAI12 Aggregate Mode with Dual Injection from Mon0 and Mon1

Advanced features

2 port link	Who am I	HB tx dir	HB fail
<input type="button" value="off"/> ▾	<input type="button" value="off"/> ▾	<input type="button" value="mon0"/> ▾	<input type="button" value="unidir"/> ▾

Web Interface Orientation

System				
Unit name	Telnet	Configuration		
<input type="text"/>	<input type="checkbox"/> on	<input type="text"/>		

TACACS			
TACACS state	TACACS server ip	TACACS secret key	Multi users
<input type="checkbox"/> off	<input type="text" value="192.168.0.6"/>	<input type="text"/>	<input type="checkbox"/> off

Time			
Sun Apr 8 07:12:00 2012	DayLight	Timezone group	Timezone
<input type="text"/>	<input type="checkbox"/> off	<input type="text" value="Etc"/>	<input type="text" value="UTC"/>

NTP	
NTP	NTP server ip
<input type="checkbox"/> off	<input type="text" value="192.168.0.6"/>

Ethernet management port			Permitted Network IP list	
System IP	Netmask	Default Gateway	Operations	Permitted IP
<input type="text" value="192.168.0.100"/>	<input type="text" value="255.255.255.0"/>	<input type="text" value="192.168.0.1"/>	<input type="text" value="view"/>	<input type="text" value="all"/>

Web Interface Orientation

User account

Interface	Name	Old Password	New Password	Confirm new Password	WEB session timeout (sec)
web ▼	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text" value="900"/>

SNMP

Version	Server IP
1 ▼	<input type="text" value="192.168.0.6"/>

SNMP trap account

Operations	Trap account
view ▼	Main SNMP server ▼

SNMP trap control

Appl fail	Bypass	Mon link	Net link	Terminal	Error	Log size	Update
<input type="checkbox"/>							

Web Interface Orientation

Log file view

```

Mon port 0: link down   Sun Mar 28 05:23:25 2010
Mon port 0: link down   Sun Mar 28 05:24:12 2010
Mon port 0: link up     Sun Mar 28 05:25:33 2010
Appliance recovered:   Sun Mar 28 05:25:34 2010
Mon port 1: link down   Sun Mar 28 05:25:50 2010
Mon port 1: link up     Sun Mar 28 05:26:11 2010
Appliance recovered:   Sun Mar 28 05:26:11 2010
Passive bypass on:     Sun Mar 28 05:30:25 2010
swdaemon: Log closed:   Sun Mar 28 05:30:26 2010

swdaemon (version 1.0.2.60) started: Sun Mar 28 05:31:35 2010
Link dropped off:       Sun Mar 28 05:31:41 2010
Passive inline on:     Sun Mar 28 05:31:42 2010

```

swdaemon ▾
|<
<<
>>
>|

Swdaemon log file control

Log file Reset log file Log file size status:
flash ▾ within bound

Remote log file control

Remote log Remote log ip
off ▾

Apply **Status:**

Web Interface Orientation

Heartbeat packet

Current heartbeat packet content

```
000: 00 e0 ed 13 24 ff 00 e0   ed 13 24 fe 81 00 00 04
010: 81 37 ff ff 00 30 00 00   00 00 40 04 ec a2 c6 13
020: 01 02 c6 13 01 01 00 00   00 00 00 00 00 00 00 00
030: 00 00 00 00 00 00 00 00   00 00 00 00 00 00 00 00
040: a0 07 37 99
```

Select new heartbeat packet

Web Interface Orientation

Device firmware update

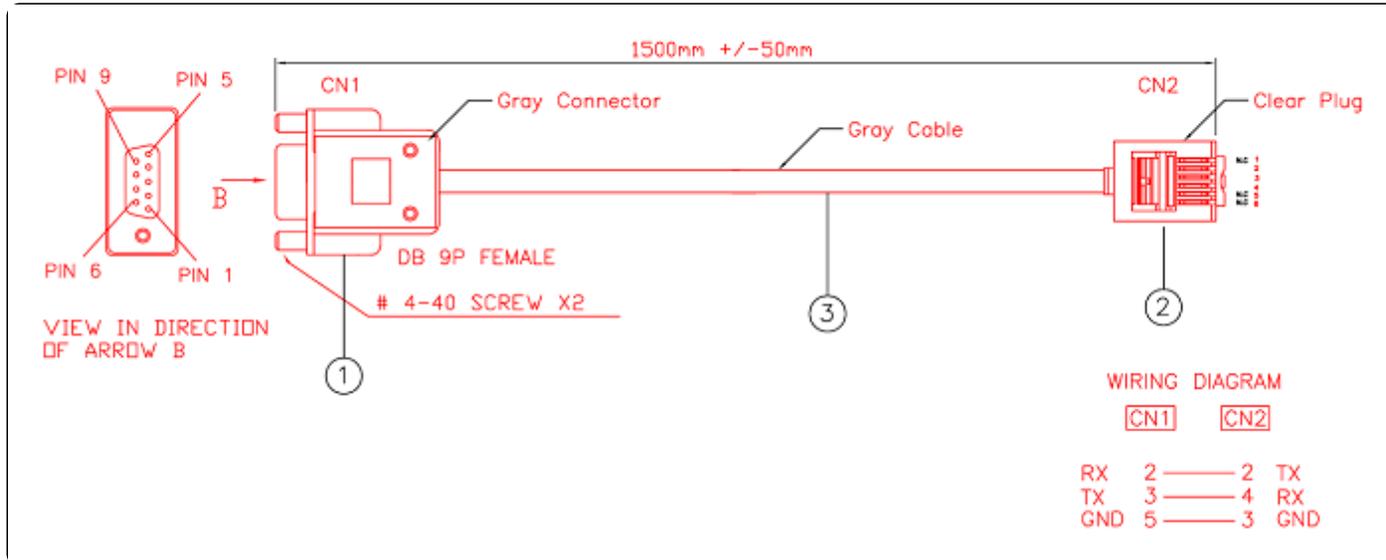
Обзор... Force

```
New firmware will take effect after rebooting.  
Reboot the device only after you have successfully finished all parts of  
update, otherwise device might malfunction.
```

System restore

Set default
 Reset errors
 Reboot

Serial Console Cable Pinout



I. Serial Console Settings

M10GxxBP administrators may gain access to the command line interface environment using a serial terminal emulator console using the settings below:

Bits per second: 115200
Data bits: 8
Parity: None
Stop: 1
Flow Control: None

II. Login Credentials

The "admin" account grants full access and permission to a device. The default password for admin is "gtadmin1". Administrators may change the default login credentials by issuing the following commands:

Set_usr Changes the user account login name
Set_psw Changes the user account password

III. Command Help

M10GxxBP allows commands for configuring each module independently. Command help may be issued by executing the following commands:

Help Provides a list of all **show** and **set** type commands
Help full Provides a list of all **show** and **set** commands including a detailed description of each command and its usage
Exit Logs out and exits the command line interface

IV. IP Management Interface

M10GxxBP system administrators may choose to manage the device via the provided Ethernet port. The default IP address parameters are:

Address: 10.10.10.200
Netmask: 255.255.0.0
Gateway: 0.0.0.0

M10GxxBP system administrators may set the Ethernet management port's IP address parameters with the following commands:

Set_ip Configures an IPv4 address
Set_netmask Configures an IPv4 subnet mask
Set_gateway Configures an IPv4 default network gateway

V. Web Interface Login

M10GxxBP system administrators may choose to configure and manage devices via web or graphical user interface. After changing the management port's IP address, you have the option to access the graphical user interface using a web browser application, such as Google Chrome or Mozilla Firefox. Simply browse to your devices assigned IP address and login using the login credentials:

Address: http://10.10.10.200
Username: admin
Password: gtadmin1

***For product support and inquiries visit: www.garlandtechnology.com**