

4x10G BYPASS TAP

FAIL-SAFE IN-LINE PROTECTION FOR UP TO 4 X 10G NETWORK LINKS

The F4-10G-BP Bypass TAP allows the monitoring of up to 4 in-line 10G links, and keeps the network link operational even when the connected security or monitoring tools become unavailable. It represents a fail-safe solution that actively checks their availability by sending heartbeat packets. If the tools' availability is compromised in any way, the TAP automatically switches to a bypass mode, maintaining the network link up until the issue is fixed.

Similarly, the F4-10G-BP also allows network engineers to manually bypass the in-line tool, to keep the network fully operational during maintenance and troubleshooting.



TECHNICAL SPECIFICATIONS

CONNECTORS

2 x MPO (SM & MM)
2 x QSFP+
2 x RJ45 8 pins
2 x 12 VDC

SPEED

4 x 10 Gbps

WEIGHT

1360 g — 2.99 lb

COMPLIANCE

RoHS — CE

LEDs

8 x Link/Activity
2 x Power
1 x Bypass
1 x Fan

DIMENSIONS (WxDxH)

120 x 315 x 40 mm — 4.7 x 12.4 x 1.6 in

POWER CONSUMPTION

45 W

ACCESSORIES

2 x 100–240 VAC to 12 VDC PSU

FEATURES

- Protects the network link availability
- Up to 3 units in 1U rack space
- Centralized management
- Bidirectional and configurable heartbeats
- Supports link failure propagation (LFP)
- SNMP V2c and SNMP V3 supported
- No point of failure
- Redundant powering
- Secure and completely invisible to the network
- Remote management through SSH, Web Interface (HTTPS) and SNMP Browsers

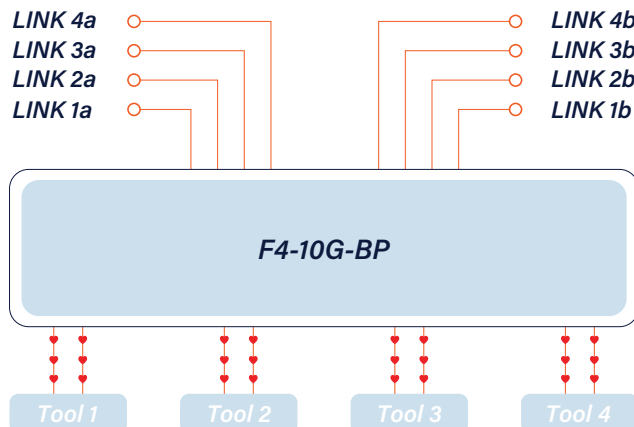
LINK FAILURE PROPAGATION

Profitap Bypass TAPs transmit link failure errors between ports, allowing the network to activate a redundant path, while the TAP stays available for auto-negotiation.

LFP ensures less downtime, and is essential for high availability networks.

ORDER REFERENCES

Single-Mode 9/125 µm:	F4-10G-BP-S
Multi-Mode 50/125 µm:	F4-10G-BP-Z
Rackmount Chassis:	ARKB-1U



CENTRALIZED MANAGEMENT

Device Overview & Administration

The screenshot shows the 'Device Status' page with a sidebar on the left containing navigation icons. The main content area is divided into several sections:

- Information**:
 - Device**: ID (F4-10G-BP), Hardware revision (3), Software version (6.1.6)
 - Date and time**: Date (21/04/2020), Time (13:22:06), Uptime (15M - 46S)
 - Sensors**: Hardware state (OK), FPGA temperature (59.68 °C / 139.42 °F), Fan state (OK), Fan speed (15.562 RPM), PSU 1 state (OK), PSU 2 state (FAILURE)
- Administrator**: Name, Phone, E-mail (fields are empty)
- Network**: DHCP (Enabled), IP (192.168.1.64), Netmask (255.255.255.0), Gateway (192.168.1.1), DNS (192.168.1.242)
- Bypass**: A table showing the status of four bypass modes for Appliance and Bypass.

	Bypass 1	Bypass 2	Bypass 3	Bypass 4
Appliance	OK	OK	OK	OK
Bypass	OFF	OFF	OFF	OFF

Device Configuration

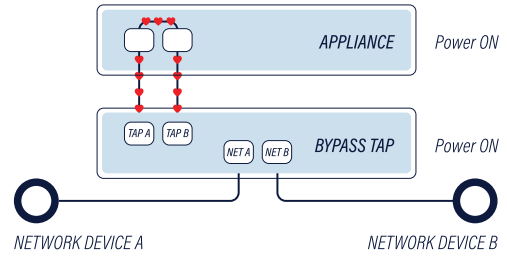
The screenshot shows the 'Bypass Settings' page with a sidebar on the left. The main content area is divided into several sections:

- Manual Bypass**:
 - ON (radio button selected)
 - OFF (radio button)
- In case the Manual Bypass is ON**:
 - TAP Mode ON (radio button selected)
 - TAP Mode OFF (radio button)
- In case of power failure**:
 - Physical Bypass ON (fail open) (radio button selected)
 - Physical Bypass OFF (fail close) (radio button)
- In case of heartbeat failure (timeout)**:
 - Bypass ON (radio button selected)
 - Bypass OFF (radio button)
- In case the TAP link is DOWN**:
 - Bypass ON (radio button selected)
 - Bypass OFF (radio button)
- Heartbeat A**:
 - Source MAC: 54:10:EC:6D:21:07
 - Destination MAC: 54:10:EC:6D:19:AC
 - Editing custom packet (checked)
 - Load packet, Import raw binary, Save packet, Export raw binary buttons
 - Hex view: 41 70 72 20 30 36 20 32 30 32 30 20 30 38 3a 35, 32 3a 35 34 20 46 31 5f 31 30 47 20 64 61 65 6d, ef 6e 2d 62 70 3a 20 20 68 61 72 64 77 61 72 65
 - ASCII view: Apr. 06. 2020. 08: 52: 54. Fl_10g_daem, on-bp...hardware
 - Offset: 0x0, Payload size: 48
- Heartbeat B**:
 - Source MAC: 54:10:EC:6D:19:AC
 - Destination MAC: 54:10:EC:6D:21:07
 - Editing custom packet (checked)
 - Load packet, Import raw binary, Save packet, Export raw binary buttons
 - Hex view: 88 64 11 00 18 b2 00 0a c0 21 09 00 00 08 57 dd, e3 00 00 00 00 00 00 00 00 00 00 00 00 00 00, 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
 - ASCII view: #d...l!...W, #.....
 - Offset: 0x0, Payload size: 48
- Heartbeat rate**: 10 microseconds
- Heartbeat failure timeout**: 15 microseconds
- Heartbeat recovery after (number of packets)**: 5
- Apply changes** button

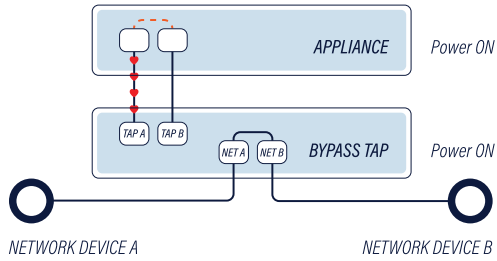
OPERATION USE CASES

The following cases depict all possible functional states in which F4-10G-BP can operate, depending on the environment changes and its configuration.

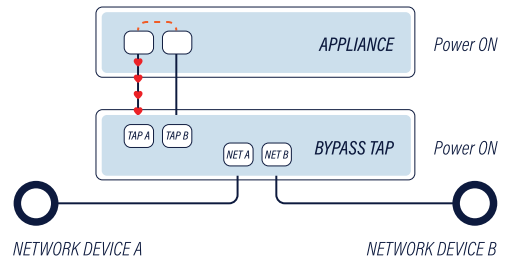
Case 1: Normal operation



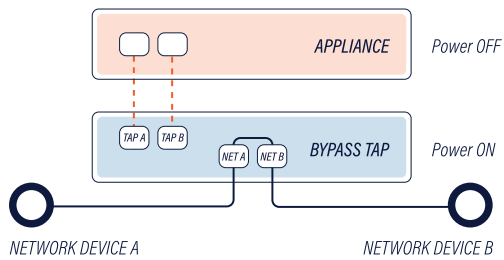
Case 2: Heartbeat failure, Bypass on



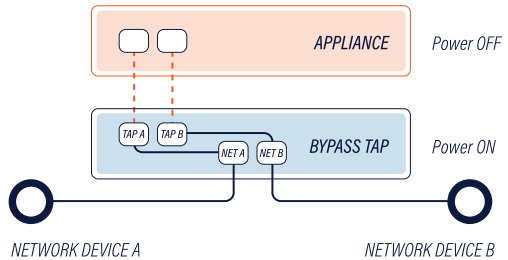
Case 3: Heartbeat failure, Bypass off



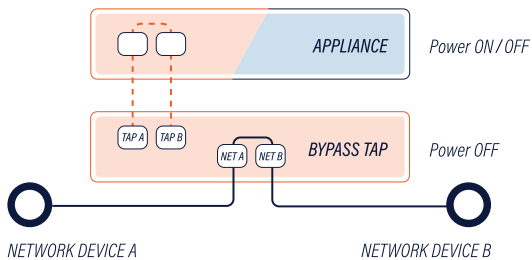
Case 4: Appliance link down, Bypass on



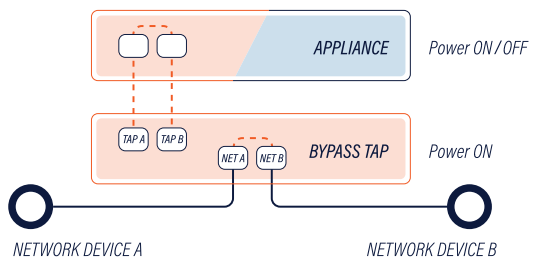
Case 5: Appliance link down, Bypass off



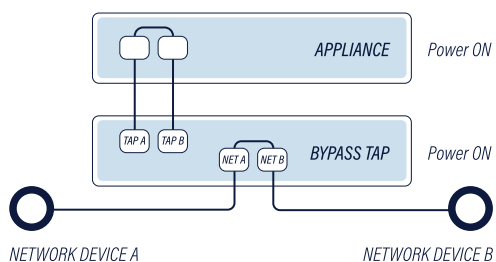
Case 6: Power failure, Bypass on



Case 7: Power failure, Bypass off



Case 8: Manual Bypass, TAP on



Case 9: Manual Bypass, TAP off

