CUBRO

NETWORK VISIBILITY

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CUBRO ADVANCED OPTICAL BYPASS 100/40GBIT

DATA SHEET

Bypass
At a glance

Definition

A bypass switch (or bypass TAP) is a hardware device that provides a fail-safe access port for fiber links. A closed optical switch creates a path for light to flow unimpeded through the device when power is absent.

Advantages of Cubro Optical Bypass

- Increased reliability on critical network links
- High-speed optical switching with minimal insertion loss
- Fail-safe inline protection
- Safeguards the network against unanticipated downtime
- Link Loss Carry Forward function
- Simple management via CLI and WebUI

Product Overview

The advanced 100/40Gbit Bypass (EX400) solution meets the increasing demand of high-speed network. The new Advanced Bypass is a better solution based on its Network Packet Broker technology and its affordable price. The new Bypass comes with self-generating heartbeat packets and therefore no driver or management port is required to generate pulses. The device supports up to two 100G Bypass segments in a 1U chassis.

Functions / Benefits:

- The Cubro 1 Link Optical Bypass offers trouble free access ports to support inline network security and monitoring devices.
- Self-generating heartbeat packets - No driver or management port is required to generate pulses.
- Sets to Bypass mode when inline system failure is detected
- Sets to Bypass mode when inline system link failure is detected
- Sets to Bypass mode when inline software application system hang is detected
- Sets to Bypass mode in case of power failure
- Sets to Inline mode when inline system recovery is detected
- Software programmable timeout interval
- Supports up to two 100G Bypass segments in a 1U chassis
- SSH management interface via network management port
- Web GUI management interface via network management port
- Two AC redundant power supplies or two 48V DC power supplies
- Make live link A down when Live link B is down. (= Link Loss Carry Forward function)

Product Capabilities / Features

Supported link types	40/100G LR4 Singlemode 40/100G PSM4 Singlemode 40/100G SR4 Multimode
Rugged 19" Housing	The EX400 is delivered in a rugged housing with precise connector labeling on the front panel.
Optical Parameters	Insertion Loss 1 - 2 dB Crosstalk 75 dB Return loss 55 dB Polarization Dependent Loss 0.03 dB Switching Time 0.4 ms Durability cycles No Wear
Options to activate the bypass	Manually via SSH or HTTP 2) Power fail 3) Link Loss 4) Ping / REST API 5) Heartbeat
Jumbo Frame Support	The Bypass supports jumbo Ethernet frames with a size of up to 12000 bytes
Configuration / Communication	Web GUI, CLI via SSH or Telnet, REST API, SNMP, RADIUS
Aggregation latency	Average < 700 ns for 64-byte frames
Rugged 19" Housing	The EX400 is delivered in a rugged housing with precise connector labeling on the front panel.
MTBF	196,750 hours
Packet Buffer	12MB
Different Power Versions	100-230 VAC in single and dual power supply versions available DC Power modules available

Technical Data / Specifications

Operating specifications:

Operating Temperature: 0ºC to 45ºC
Storage Temperature: -10ºC to 70ºC
Relative Humidity: 10% min, 95% max (non-condensing)

Mechanical specifications:

Dimension (WxDxH): 220 x 400 x 44 mm
Weight: 3,86 kg
Airflow: Front-back

Electrical specifications:

Input Power: 100-240V, 2A, 47-63 Hz (AC version)
Maximum Power Consumption: 150W

Certifications:

Fully RoHS compliant
CE compliant
Safety - UL 60950-1 / CSA C22.2 60950-1-07 / IEC 60950-1 (2005) EN 60950-1 (2006)

Ports

4 x 40/100 Gbps full duplex ports for any kind of QSFP/QSFP28
* Each port can be input and / or output depending on the application and configuration
*All QSFP/ QSFP 28 ports support breakout cables to 4x10G or 4x25G interfaces

Management

Management Port: (1) RJ45 10/100/1000 Mbit
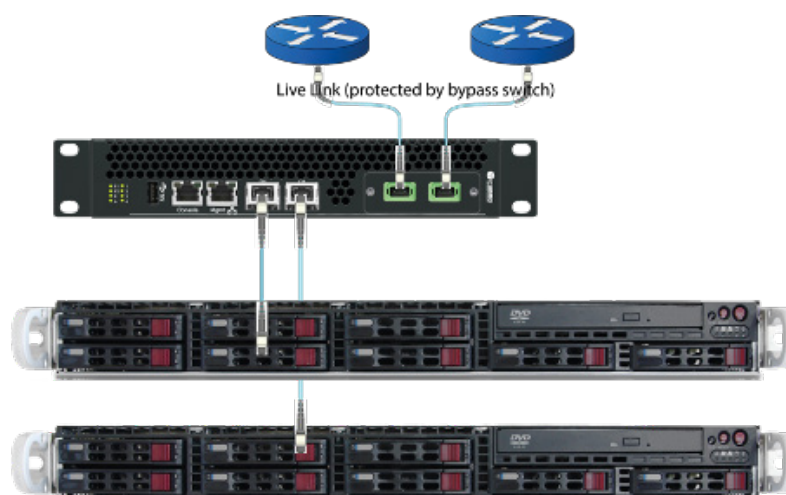Configuration (CLI) Port: (1) RS-232 CISCO/Yost

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Applications / Solutions

Most common 100 Gbit Bypass Application
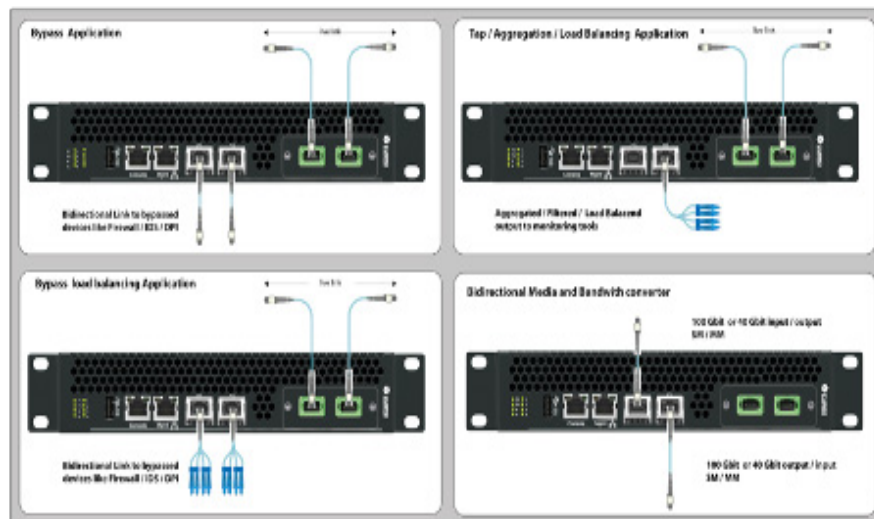
100 Gbit Bypass application for bypassing an inline firewall in case of any failure.

## High availability & service chaining Bypass Application

In this use case the EX400 acts in two roles.

First as Bypass for the live link in a power outage scenario and second to support service chaining to a hot standby appliance in the case of a software issue on the running unit.

Bypass Application & Load Balancing

In some cases, the inline device cannot support 100 Gbit because of performance issues. In this case the bypass can support L3 load balancing on the device ports. As output, 10 Gbit and 25 Gbit is supported.
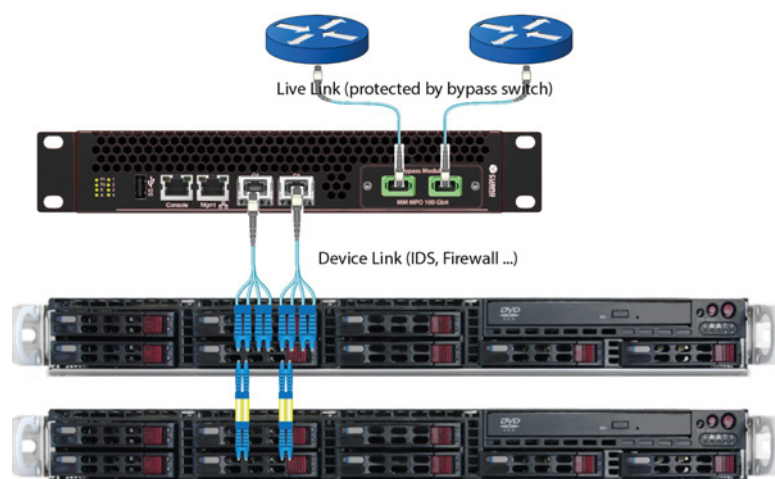
The output for the inline device load balanced is 4 x 25 Gbit or 4 x 10 Gbit.

Ordering Information

Product Type & Number	Description
CUB.EX400-BY-M-SR4-AC	EX400 Bypass, Multimode, 100G SR4, MPO connector, redundant AC power
CUB.EX400-BY-M-SR4-DC	EX400 Bypass, Multimode, 100G SR4, MPO connector, redundant DC power
CUB.EX400-BY-S-LR4-AC	EX400 Bypass 100G-LR4, LC connector, redundant AC power
CUB.EX400-BY-S-LR4-DC	EX400 Bypass 100G-LR4, LC connector, redundant DC power
CUB.EX400-BY-S-PSM4-AC	EX400, Bypass 100G-PSM4, MPO connector, redundant AC power supply
CUB.EX400-BY-S-PSM4-DC	EX400, Bypass 100G-PSM4, MPO connector, redundant DC power supply

For more information please check our website www.cubro.com