

DURAstream™ DS-G4C4C4S

1G Copper Hybrid Bypass Switch with Service Chaining and Tap Monitor Ports

Combine In-line Tool Protection and Visibility for Monitoring

In-line monitoring devices such as Deep Packet Inspection tools (DPI) and Intrusion Prevention Systems (IPS) introduce a potential point of failure to critical links. Bypass switches provide a way to overcome this risk, but historically do not provide visibility for out-of-band tools (e.g. packet sniffers, IDS, etc.) Adding Network Taps to these same links is costly and increases complexity.

The DS-G4C4C4S bypass switch - popularly known as the "DS-G4" - ensures that critical data still passes, even when in-line devices do not function correctly. It also provides four SFP+ Monitor ports, allowing out-of band Monitoring tools to monitor and/or capture copies of the data passing through these same links.

Both 100 Mbps and 1G copper links and in-line tools are supported. Bypass feature alleviates potential issues affecting link behavior caused by the in-line tools. Bypass can also be activated manually, allowing maintenance and upgrades of in-line tools firmware or hardware without network downtime or loss of protection (requires setup in High Availability mode.) The DS-G4 provides an easy-to-manage external active bypass.

Service Chaining Mode

Also known as "tool chaining," this feature allows multiple in-line tool types to be used in a single link. If any single tool in the link is automatically bypassed due to tool failure, or manually bypassed for maintenance reasons, the remaining tool(s) in the link are not affected.

Heartbeat Mode and Passive Bypass

The DS-G4 monitors the health of in-line appliances by sending and receiving heartbeat packets through the tools. If the received heartbeats fall below the user specified interval, failover automatically occurs and the in-line tool is bypassed, using an optical bypass mechanism. In the event of power loss, the DS-G4 uses the same passive bypass mechanism to keep the link up.

High Availability Mode

In High Availability mode, two sets of primary and secondary appliances can be installed on the DS-G4. It will swap between the primary and secondary appliances in the event of a loss or slow passage of heartbeats. This allows the services provided by the appliances to be maintained even in the event of an appliance failure.

LINKprotect

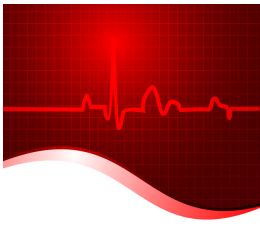
LINKprotect allows the bypass switch to go into a passive bypass mode in the event that an endpoint device fails at either end of the link. This action is performed with passive copper relays, providing rapid and seamless failover. The user can specify auto recovery, meaning the bypass switch will continue checking for restored link status at specified intervals, or can instead place the bypass switch in manual recovery mode. This mode keeps the DS-G4 in passive bypass mode until the user connects to the device and chooses to return it to the active state. The Dual LINKprotect feature is designed for use in active passive or dynamically link pairs. It allows all traffic that has been passing through the first pair of network ports on the bypass switch to now be forced over to pass through the second pair. Combining this with the High Availability feature means that if either link goes down, integrity of data traffic is maintained with full protection.

Highlights

- Optimize protection for critical links
- Support High Availability with active-passive in-line tool configurations
- use multiple in-line tools in a single link
- Increase application availability
- Upgrade, maintain, or replace in-line devices without interrupting operations
- Capture data from the protected links
- Use 1G or 10G tools on SFP+ Monitor ports

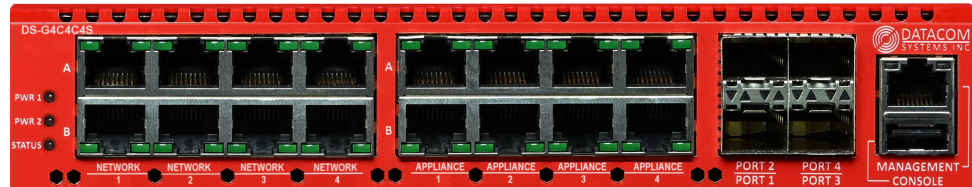
Features

- Passive bypass maintains network integrity during power loss
- Active switching if in-line tool fails-prevents network interruptions
- User configurable Heartbeat Mode monitors link status and health of in-line appliances
- Supports 100/1000 copper in-line tools
- Allows out-of-band tools to capture data
- SFP+ Monitor ports support all media types
- E-mail notifications on user-defined events
- NTP Support



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Operational Modes

- **Simple:** Protect four separate links - each link with its own dedicated in-line tool
- **High Availability (HA):** Protect two separate links - each with its own active and standby in-line tools
- **Service Chaining:** Protect a single link with up to four different in-line tools, or two links with two tools per link
- **Data Capture:** Operates independently of and simultaneously with other modes; individual or aggregated copies of bi-directional data from any or all of up to four protected links can be sent to as many as four monitoring tools
- **Hardware based filtering:** Optional filtering feature allows the data copies set to Monitor ports to be filtered by IP Addresses, MAC Addresses, TCP Port numbers etc. - to maximize sustained throughput capacity of the attached tools

Technical Specifications

Ports

Four 10/100 copper Network Port pairs (8 ports)
Four 10/100 copper Appliance Port pairs (8 ports)
Four (4) SFP+ Tap Monitor ports
Management Port: RJ45
Console Port: USB Device Mode

Dimensions (HxWxD)

1.58" x 8.25" x 11.93" (4.01 x 20.96 x 30.30 cm)

Weight: 4.75 lbs (2.2 Kg)

Environmental

Operating Temperature: 32°F to 131°F (0°C to 55°C)
Storage Temperature: -22°F to 149°F (-30°C to 65°C)
Humidity: 5% to 95% non-condensing

Power Requirements:

Two (2) External AC Adapters Redundant Hot Swappable Power Supplies (Included)
Individual Power Supply Rating: 100-240V 50-60Hz 1.3A
Maximum Power Consumption: 60 Watts or less

Warranty

One Year Hardware and Software support included.

Safety: CB IEC 62368-1

Emissions: FCC, EN, ICES-003

Standards:

FCC 47CFR PT 15 SPT B:2017

ICES-003 Issue 6:2016

CENELEC EN 55032:2012

Certifications: CE, RoHS

ORDER INFORMATION

Product

DS-G4C4C4S Copper 100/1000 Bypass switch - supports up to 4 links, 4 in-line appliances, and 4 100Mbps, 1G, or 10G out-of-band tools

Optional Equipment

SFP-RJ45 10/100/1000BT copper SFP transceiver module
SFP-RJ45-10G 10G copper SFP+ transceiver module
SFP+SR/SX 10G/1G SFP+ transceiver module (50 or 62.5 micron 300m)
SFP+ LR/LX 10G/1G SFP+ transceiver module (9 micron 10km)
SFP+DAC(2M) 10G SFP+ 2 meter direct attach passive cable

Other transceivers and DAC cable lengths available on request

RMC-2G Rack mount chassis - fits two units into 1RU