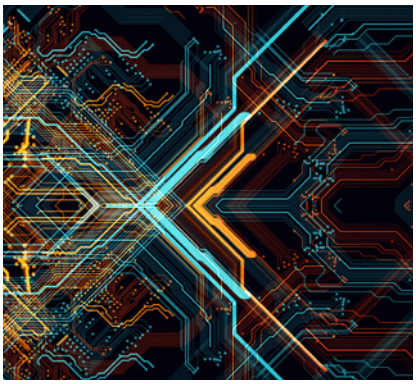


Sandvine Bypass Switch

Carrier-grade, hardware-based bypass solution

KEY FEATURES:

- GE and 10GE, long-range (LX/LR) and short-range (SX/SR) modules
- 1RU host system with up to four bypass modules
- Redundant power supplies
- Programmable heartbeat pulses (10 ms –10 s interval)
- Bypasses when detecting link failure, system failure, loss of light, or when set to bypass for maintenance
- Compatible with any PacketLogic system

PRODUCT OVERVIEW

Sandvine Bypass Switch (SBS) is an active external bypass switch that adds an extra level of resilience to PacketLogic deployments that require exceptional availability. This enables even the most cautious network manager to deploy PacketLogic inline.

The use of configurable heartbeat pulses allows SBS not only to detect a link failure but also a system failure where the heartbeat packet fails to pass. Heartbeat frequency as low as 10 ms allows instant fail-over in case of a failure. With SBS you can also manually switch to bypass mode for systems maintenance.

SBS replicates the internal and external interfaces on the PacketLogic system. Traffic comes in on internal/external and is diverted to a second set of interfaces on the SBS. These interfaces are connected to the PacketLogic unit. SBS adds heartbeat packets and verifies that the heartbeat packets come through to the opposite channel interface. Finally, the packet is sent out on the corresponding internal/external interface of the SBS.

In case of a failure, or if the heartbeat packet does not come through as expected, SBS will bypass the second set of interfaces on the SBS and forward traffic directly to the corresponding internal/external interface without passing through the PacketLogic system. SBS can be configured to automatically detect when the primary packet route is available again and switch back from bypass mode to normal mode. SBS is configured and administered via a serial communication console port. An intuitive web graphical user interface (GUI) makes the setup and administration quick and easy. The SBS can also be administrated via CLI or SNMP and supports SNMP traps for failure notification. The administrator connects to the SBS over a serial (RJ-11) or Ethernet (RJ-45) port.

The physical internal/external network interfaces of the SBS are fixed and can be any kind of single-mode or multi-mode 10 gigabit Ethernet (10GE) fiber. The interfaces connecting to the PacketLogic system are exchangeable SFP+ ports.

The SBS includes double bypass architecture. This means that SBS relies on an architecture with two bypass routing circuitries: an active bypass circuitry and a passive bypass circuitry. The active bypass circuitry detects if the DPI system is forwarding traffic and enables bypass mode in case of failure. The passive bypass circuitry will be enabled in case of power failure to the SBS host system. In case of signal loss to an interface, the corresponding interface will be disabled (loss of signal mitigation).

Deployment

SBS consists of a 1RU host system that can hold up to four 1GE or 10GE SBS bypass modules. This enables one single SBS host system to manage the redundancy for one to four PacketLogic systems mixing 1GE and 10GE in a single chassis. The SBS comes with redundant power supplies and can be ordered with either 48V DC or 90-240V AC.

The standalone and external architecture of SBS enables it to manage installations with any PacketLogic system, from entry-level systems all the way up to the high-end appliances and chassis-based PacketLogic systems.

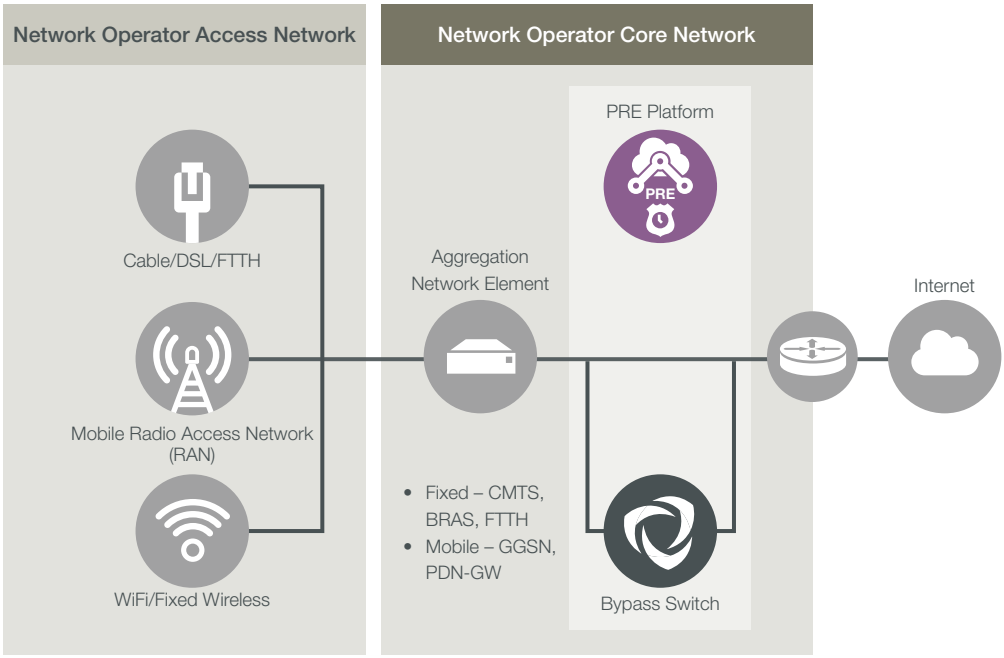
Specifications

SBS Host System	
Physical Dimensions	• 1RU (front holders), 19” rack-mount • 444 mm x 339.3 mm x 44 mm (17.48” x 13.358” x 1.732”)
Power Supply	• Dual redundant power supplies • 48V DC • 90-240V AC
Number of SBS Bypass Modules	• Four per host system
Power Consumption	• Max 148W (with four SBS bypass modules)
Operating Humidity and Temperature	• 0%–90%, non-condensing • 0°C – 50°C (32°F - 122°F)
EMC Certifications	• Class B FCC / CE / VCCI

SBS Bypass Modules	
Physical Dimensions	• 173.3 mm x 164.9 mm x 20 mm (6.822” x 6.73” x 0.787”)
Internal/External Network Interfaces	• 1GE — SX (LC Duplex), 1000Base-SX (850nm) — LX (LC Duplex), 1000Base-LX (1310nm) • 10GE — SR (LC Duplex), 10GBase-SR (850nm) — LR (LC Duplex), 10GBase-LR (1310nm)
Bypass Network Interfaces	• SFP+ modules
Heartbeat Packet Rate	• Programmable, 10 ms-10 s
Management	• RJ-11 Serial Port • RJ-45 Ethernet Port

Figure 1

Typical SBS Deployment



ABOUT SANDVINE

Sandvine helps organizations run world-class networks with Active Network Intelligence, leveraging machine learning analytics and closed-loop automation to identify and adapt to network behavior in real-time. With Sandvine, organizations have the power of a highly automated platform from a single vendor that delivers a deep understanding of their network data to drive faster, better decisions. For more information, visit **sandvine.com** or follow Sandvine on Twitter at **@Sandvine.**

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