Dialogic® DSI Signaling Transfer Point based on Dialogic® DSI G51 Signaling Controller

Dialogic® DSI Signaling Transfer Point (DSI STP) is a compact, cost-effective telecommunications signaling platform, providing core network connectivity and routing between multiple networks using both SS7 over E1/T1 and SIGTRAN over IP. The DSI STP supports comprehensive Screening capabilities in addition to routing at the MTP and SCCP levels and Global Title Translation. The DSI STP features a browser-based graphical user interface (GUI) for all operations, administration, maintenance and provisioning functions. The GUI supports dynamic configuration, status and alarm monitoring, interactive control and a wide range of diagnostic capabilities. A multi-user environment complete with password security, configurable user privileges and full audit trail ensures adherence to chosen security policy. The DSI STP supports multiple protocol variants allowing worldwide deployment in both fixed and mobile networks.

Features	Benefits
Wide range of supported interfaces including E1 / T1, SS7 Low Speed Links (LSL), High Speed Links (HSL); ATM and SIGTRAN (M3UA/M2PA) over IPv4 or IPv6	Supports interworking between wide range of legacy TDM equipment with ability to utilize IP for new connectivity
Worldwide protocol support (ITU-T, ANSI, China, Japan, etc.) for both telephony-based and transaction-based operation with SCCP Global Title Translation	Facilitates global deployments and the ability to configure protocol variants at runtime
Screening and routing based on OPC, DPC, SCCP Called & Calling Address, SSN, MAP Operation Code and others	Puts the operator in control of the way the network is used
Supports both browser and command line interface for OA&M in addition to SNMP and "lights-out" management	Facilitates comprehensive, user-friendly remote management using standard tools
Built-in periodic traffic measurements, event logging and protocol tracing (including PCAP format), backed by fully documented internal interfaces between protocol layers	Provides good visibility of utilization and traffic levels and facilitates fast resolution of network protocol issues
Ability to interwork between different network types including National/International, ETSI/ANSI and support for Alias Point Codes	Resolves basic interworking needs without the need for external protocol conversion
Flexible capacity-based licensing	Allows increased platform capacity to be added over time to match deployment needs

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Resiliency and Scalability

The DSI STP occupies a small (1U) footprint, and offers dual hot-swappable AC power supplies. It can be deployed as a stand-alone unit or in a dual active/active configuration for resilience and high availability. For larger deployments multiple servers can be stacked to provide a distributed STP with no single point of failure.

Multi-Purpose Signaling Gateway

In addition to operation as a pure Signaling Transfer Point, the DSI STP addresses a wide range of interworking needs. As an SCCP Router it provides the Signaling Point Relay (SPR) capability to pass messages between networks, routing based on DPC, SSN or Global Title. It provides Load Balancing, Global Title Translation and Network Topology Hiding. As an STP it provides routing of messages based on any field in the MTP Routing Label and supports policing to prevent unauthorized use of signaling relationships. As a SIGTRAN Gateway it provides high density interworking between TDM and SIGTRAN transport layer protocols with the ability to aggregate or separate traffic flows based on MTP and SCCP routing labels.

Figure 1 provides an example of how the Dialogic® DSI G51 Signaling Controller can be deployed as a Signaling Transfer Point in a typical network configuration.
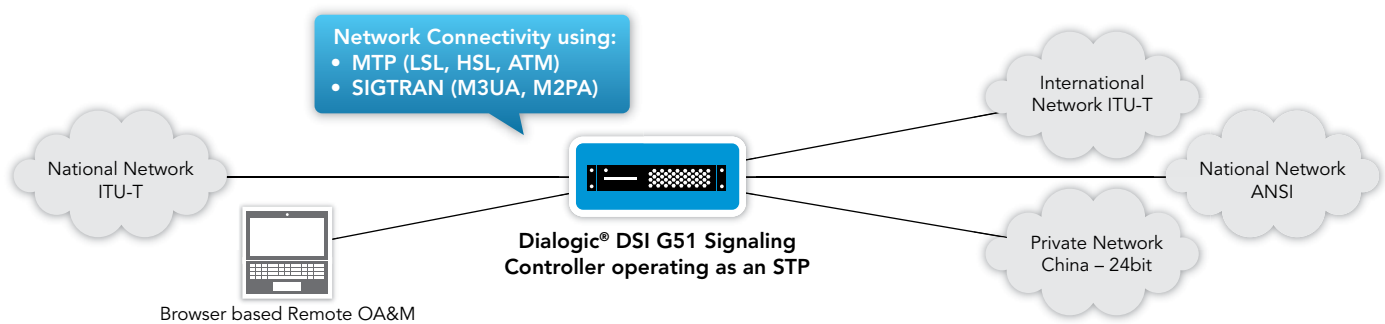

Figure 1. Dialogic® DSI G51 Signaling Controller operating as an STP

Technical Specifications

Configurations	DSI-G51		
Form factor	1U Rack Mount Server		
SS7 T1/E1 interface boards	Can be supplied without signaling boards (DSI-G51A00), with one low density board (DSI-G51AL1), with one high capacity board (DSI-G51AM1) or two high capacity boards (DSI-G51AM2)		
	DSI-G51AL1	**DSI-G51AM1**	**DSI-G51AM2**
T1/E1 ports	4 T1 or 4 E1	4 individually selectable T1/E1	8 individually selectable T1/E1
SS7 Low Speed Links	Up to 16	Up to 124	Up to 248
SS7 High Speed Links (Q.703 Annex A)	N/A	Up to 4	Up to 8
ATM High Speed Links per board.	N/A	Up to 4	Up to 8
Maximum SS7 links per unit	248		
Maximum SS7 link sets per unit	120		
Maximum M2PA links per unit	256		
Maximum number of SS7 routes	4096		
Number of separate network contexts	4		
Maximum number of SIGTRAN associations	256		
10/100/1000Mbit/sec Ethernet interfaces	6		
Throughput (MSU/sec)	60,000		
Global Title Translation throughput (GTT/sec)	10,000		
Global Title Capacity	30,000		
MTBF (Using Telcordia method at 40°C)	191,000 to 367,000 hours, depending on type and number of boards in chassis		

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T1/E1 Interfaces

Pulse mask	T1: ANSI T1.403
	E1: ITU-T G.703
Data rate	T1: 1544 kbps ± 50 ppm
	E1: 2048 kbps ± 50 ppm
Frame format	T1: D4, ESF, and ESF-CRC6
	E1: E1 and E1-CRC4
Line codes	HDB3, AMI, B8ZS
Connector type	RJ-48C

Power

Input voltage	90 VAC to 240 VAC
Input power (fully equipped)	150 W
Frequency range	47 Hz - 63 Hz

Physical Dimensions

Height	1.69 in. (4.3 cm)
Width	17.11 in. (43.5 cm)
Depth	23.92 in. (60.8 cm)
Weight – fully equipped	28.7 lbs (13 kg)

Environmental

Operating temperature	+41˚F (+5˚C) to +104˚F (+40˚C)
Storage temperature	–22˚F (–30˚C) to +140˚F (+60˚C)

Safety and EMC

Global Approvals	For information about product declarations and global approvals: www.dialogic.com/declarations
Hazardous substances	RoHS compliance information: www.dialogic.com/rohs
Country-specific approval information	Global product approvals database: www.dialogic.com/declarations
Warranty	Warranty information: www.dialogic.com/warranties
Service plans	Dialogic® Pro™ Services information: www.dialogic.com/products/services

For More Information

For more information about the product discussed in this datasheet, contact your local Dialogic representative. Worldwide contact information can be found online at www.dialogic.com/contact.

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