

Dialogic® DSI Signaling Interface Unit Based on Dialogic® DSI SS7G41 Signaling Servers

Datasheet

Dialogic® DSI Signaling Interface Unit (DSI SIU) is a scalable, high performance telecommunications signaling platform, providing connectivity between the core SS7/SIGTRAN network and multiple distributed application servers. The DSI SIU can enable application developers to deliver high throughput signaling applications to market quickly and cost-effectively using standard IP connectivity. The DSI SIU also supports a wide range of call control and transaction-based signaling protocols, allowing worldwide deployment in both fixed and mobile networks.



Features

Scales from 8 Low Speed Links (LSL) up to 248 LSL or 8 High Speed Links (HSL); HSL can be Q.703 Annex A or ATM

SIGTRAN capacity (M3UA/M2PA) scales from 8 to 256 TDM link equivalents using flexible throughput-based licensing

Worldwide protocol support (ITU-T, ANSI, China, Japan, etc.); wide range of protocols for both telephony-based (ISUP and BICC) and transaction-based operation (SCCP, TCAP, MAP, ANSI-41, INAP, and CAMEL) as well as Global Title Translation and SS7 protocol monitoring

Compact 1U form factor with dual AC or DC power supply capability

Supports both browser and command line interface for OA&M in addition to SNMP and “lights-out” management

Built-in traffic measurement, event logging, and protocol tracing (including PCAP format), backed by fully documented internal interfaces between protocol layers

Event-driven asynchronous message-based Application Programming Interface that works seamlessly with other Dialogic® Distributed Signaling Interface (DSI) Components

Benefits

Allows cost-effective use of a common platform across a wide range of deployments; allows scaling of platform capacity over time

Lets provisioned capacity match deployment needs at installation

Facilitates global deployments and the ability to configure protocol variants at runtime

Permits excellent link density in a small footprint for required deployment options and carrier-ready resilience

Facilitates comprehensive, user-friendly remote management using standard tools

Provides good visibility of utilization and traffic levels and facilitates fast resolution of network protocol issues

Provides user access to low-level protocol parameters, allowing flexibility for application development under Linux, Solaris, or Windows

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Enables Broad Range of Applications

Applications which can be deployed with DSI SIU include standard network elements, such as SMS gateways, SMSC, SMS Routers, USSD gateways, GMLC, SCCP Routers, and EIR in addition to customized applications such as Lawful Intercept, Welcome Roamer, or Missed Call Alerts. The DSI SIU can also be integrated into solutions with Dialogic® PowerMedia™ Software Products.

Figure 1 provides an example of how an SIU based on Dialogic® DSI SS7G41 Signaling Server can be deployed in a service provider network.

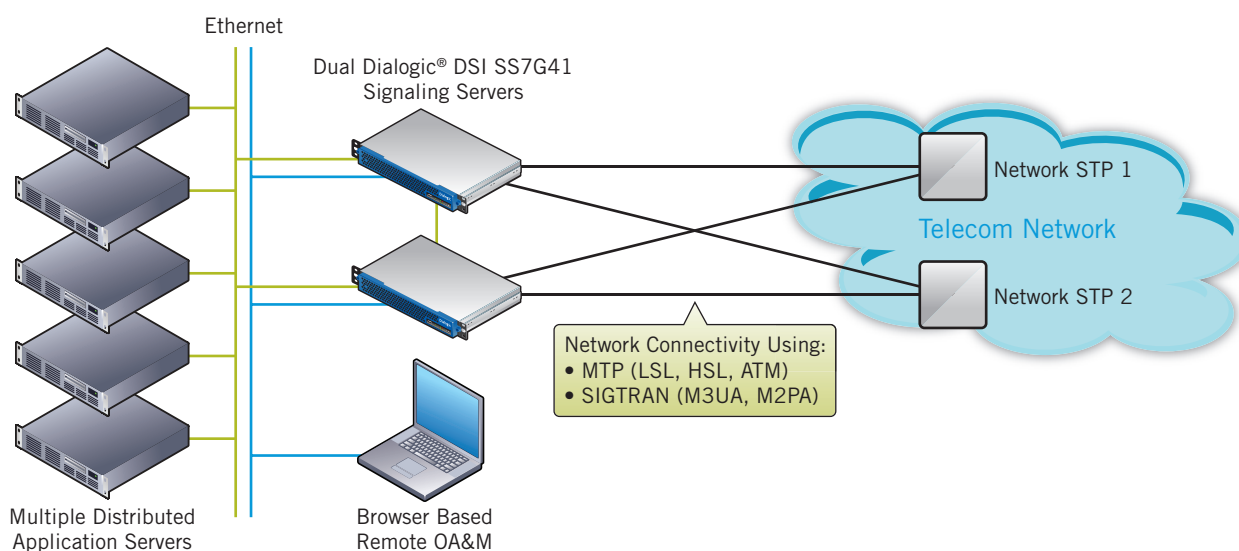


Figure 1. Dialogic® DSI SS7G41 Signaling Servers in a Service Provider Network

Offers High Availability and Flexible OA&M

The DSI SIU offers carrier-ready fault resiliency, occupies a small (1U) footprint, and offers dual hot-swappable AC or DC power supplies. It supports standard operations, administration, and maintenance (OA&M) interfaces via a web browser, a command line interface, and SNMP, allowing easy integration into automated, centralized management systems.

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Technical Specifications

Configurations	SS7G41	
Form factor	1U Rack Mount Server	
SS7 T1/E1 interface boards	Up to two boards per unit; either Dialogic® DSI SS7LDH4 Network Interface Board or Dialogic® DSI SS7MDL4 Network Interface Board are used	
	SS7LD	SS7MD
T1/E1 ports per board	4 T1 or 4 E1	4 individually selectable T1/E1
SS7 Low Speed Links per board	Up to 16	Up to 124
SS7 High Speed Links (Q.703 Annex A) per board.	N/A	Up to 4
ATM High Speed Links per board.	N/A	Up to 4
Maximum SS7 links per unit	248	
Maximum SS7 link sets per unit	64	
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	4 as standard; can be increased to 6 using Dual Gigabit Ethernet NIC accessory SS7G41NIC, which consumes one of the signaling card slots	
Calls per second over TDM or SIGTRAN	12,000 (provisional figure)	
Transactions per second over TDM or SIGTRAN TCAP, MAP, ANSI-41, or INAP/CAMEL	12,000 (provisional figure)	
Number of hosts supported	128	
Supported host operating systems	Linux, Solaris (x86 or SPARC), and Windows	
Power	AC or DC	
MTBF (Using Telcordia method at 40°C)	33,000 hours (Assuming dual PSU configuration)	

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

Technical Specifications *(continued)*

Power

DC-powered products

Supply voltage (range nominal)	–48 VDC to –60 VDC
Input power (fully equipped)	150 W
Range limits	–36 VDC to –75 VDC

AC-powered products

Input voltage	90 VAC to 264 VAC
Input power (fully equipped)	150 W
Frequency range	43 Hz - 63 Hz

Physical Dimensions

Height	1.74 in. (4.4 cm)
Width	16.93 in. (43.0 cm)
Depth	20.4 in. (51.9 cm)
Weight – fully equipped	26.8 lbs (12.16 kg)

Environmental

Operating temperature	+50°F (+10°C) to +104°F (+40°C)
Storage temperature	–40°F (–40°C) to +158°F (+70°C)

Safety and EMC

International	CB Certificate to IEC UL 60950 -1 2nd Ed. 2007 EN 300 386, EN55022, EN55024, CISPR 22
United States	UL 60950 -1 2nd Ed. 2007 FCC Part 15 Class A
Canada	CAN/CSA-C22 No UL 60950 -1 2nd Ed. 2007 ICES-003

Telecommunications

International	TBR12, TBR13
United States	TIA-968-A
Canada	CS-03
Hazardous substances	RoHS compliance information at http://www.dialogic.com/rohs
Country-specific approval information	Refer to global product approvals database at http://www.dialogic.com/declarations
Warranty	Warranty information at http://www.dialogic.com/warranties
Service plans	See Dialogic® Pro™ Services information at http://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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