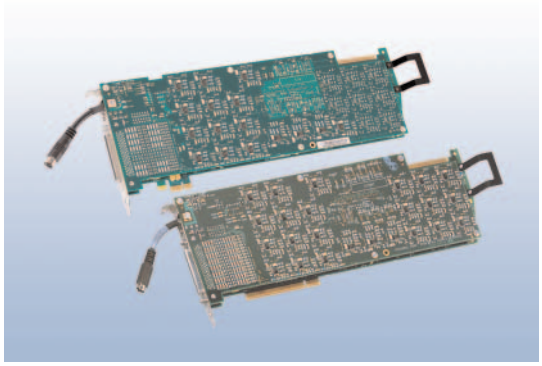
Dialogic® Station Interface Boards



Dialogic® Station Interface Boards are next-generation building blocks for converged communications systems. These boards are single-slot PCI or PCI Express solutions that connect analog telephone devices directly to converged communications platforms to create affordable, small- to mid-size, server-based Private Branch Exchanges (PBXs), telemarketing systems, and call centers. These products are highly reliable and cost effective, offering an optimized mix of analog station interfaces and resources on which to build highly scalable systems.

Products Discussed in This Datasheet

- Dialogic® DI/SI16 Switching Board
- Dialogic® DI/SI24 Switching Board
- Dialogic® DI/SI32 Switching Board

DI/SI16, DI/SI24, and DI/SI32 are full-size, single-slot PCI or PCI Express boards, which are based on DM3 architecture. They provide connectivity for up to 16, 24, or 32 station interfaces and include conferencing, voice play/record, tone detection and generation, and Caller ID capabilities. DM3 architecture allows access to independent, high-performance, firmware-based network protocol and media processing resources that can be operated and integrated on compatible hardware platforms.

Features	Benefits
Single-slot PCI solution	Can connect up to 32 analog telephone devices directly to converged communications platforms
Conferencing resources	Supports up to 16 conferees in flexible configurations of 2 to 16 parties per conference
Enhanced conferencing features	Includes coach-pupil mode, volume controls, and active-talker identification
Frequency Shift Keying (FSK) station signaling	Enables Caller ID delivery and message-waiting-indicator control
Off-hook FSK signaling	Allows messaging implementations to Caller ID Type 2 devices, such as Caller ID or Call Waiting
Separate models available with Universal PCI or PCI Express edge connector	Universal PCI form factor compatible with 3.3 V and 5.0 V bus signals enabling deployment in a wide variety of PCI chassis from popular manufacturers; PCI Express form factor compatible with 1x slots (x1 or higher compatible) also available

Technical Specifications

DI/SI16, DI/SI24, and DI/SI32

Maximum boards per system	8
Analog station interfaces	DI/SI16: 16 DI/SI24: 24 DI/SI32: 32
Fixed voice resources	16, 24, 32
Sharable conference resources	16
CLASS signaling	Frequency Shift Keying (FSK)
CT Bus loads per board	1
Maximum CT Bus loads per system	20
Resource sharing bus	CT Bus/H.100
Control microprocessor	ARM7 TDMI
Digital signal processor	Freescale DSP56303 @ 100 MHz, with 128Kx24 private
Supported operating systems	Windows®; Linux. Details at http://www.dialogic.com/systemreleases

Host Interface — PCI

Bus compatibility	Complies with PCI-SIG Bus Specification, Rev. 2.2
Bus speed	33 MHz
Bus mode	32- to 16-bit conversion in target mode
Shared memory	128 KB page
Interrupt level	1 IRQ shared by all DI/SI boards
I/O ports	None

Platform — PCI

Form factor	PCI long card 12.3 in. (31.24 cm) long (without edge retainer) or 13.3 in. (33.78 cm) long (with edge retainer) 0.79 in. (2 cm) wide (total envelope) 3.87 in. (9.83 cm) high (excluding edge connector)

Power Requirements — from Host PCI Slot

	DI/SI32	DI/SI24	DI/SI16
+5 VDC	3.5 A max.	3.1 A max.	2.7 A max.
+12 VDC	5 mA max.	5 mA max.	5 mA max.
–12 VDC	20 mA max.	20 mA max.	20 mA max.

Host Interface — PCI Express

Bus compatibility	Complies with PCI-SIG PCI Express Base Specification, Rev. 1.1
Bus speed	2.5 Gbps maximum per direction
Bus mode	x1 lane configuration (x1 or higher compatible)
Shared memory	32 KB to 64 KB page
Interrupt level	Message Signaled Interrupt (MSI)
I/O ports	None

Platform — PCI Express

Form factor	PCI Express x1 lane configuration (or higher) 12.28 inch (31.2 cm) long 4.2 inch (10.67 cm) high

Technical Specifications (cont.)

Power Requirements — from Host PCI Express Slot

	DI/SI32	DI/SI24	DI/SI16
+3.3 VDC	1.4A	1.2 A	1.0 A
+12 VDC	1.0A	0.9A	0.8 A

Environmental — PCI and PCI Express

Operating temperature	+32ºF (0ºC) to +122ºF (+50ºC)
Storage temperature	–4ºF (–20ºC) to +158ºF (+70ºC)
Humidity	8% to 80% non-condensing
Cooling Conditions for Maximum Operating Temperatures	
+122ºF (+50°C)	1.8 CFM per board
+104ºF (+40°C)	1.2 CFM per board
+86ºF (+30°C)	.9 CFM per board

Station Interface

Signaling type	Loop start originate
Loop current range	25 ± 5 mA
Open loop voltage	20.5 ± 1 VDC
External power supply	1 required per board
Ring frequency	20 Hz
Ring amplitude	40 Vrms @ 20 Hz minimum into 4 REN
2-wire return loss	25 dB
Connectors	68-pin SCSI to RJ-11 breakout box
Maximum loop length	3500 ft (1050 m) using 24 AWG

Dialogic® Analog Station Interface Usage WARNING

This Dialogic analog station interface product is designed to support analog station equipment only within the walls of a single standalone building or structure (i.e., on-premise). It is not designed to sustain electrical overstress from external sources and factors such as severe weather conditions. Electrical overstress can be introduced on cables extending outside of the walls of a single standalone building or structure (i.e., off-premise) such as in a campus environment or other multi-building facility. Severe electrical overstress caused by misuse of this interface product with cables extending outside of the walls of a single standalone building or structure could cause property damage and/or personal injury and/or death. Such misuse voids the warranty for this interface product.

Audio Input Interface

Input impedance	1000 Ohms, AC coupled
Maximum input level	600 mVpp
Connector	1/8-in. (.31 cm) mini-phone jack

Conferencing

Conference resources	16
Conference size	2 to 16 conferees
Number of conferences	Up to 5
Features	Automatic gain control Dynamic create/destroy Dynamic add/delete Echo cancellation Coach/pupil mode DTMF volume control Tone clamping Active talker notification

Technical Specifications (cont.)

Approval and Compliance

Hazardous substances	RoHS Compliance Information at http://www.dialogic.com/rohs
Safety and EMC	
Canada	ICES-003 Class A ULc CSA 950 File E96804
Europe	EN60950 EN55022 EN55024
Japan	VCCI Class A
United States	FCC Part 15 Class A UL 1950 File E96804
International	IEC 950 CISPR 22 CISPR 24
Telecom Approvals	
United States	EBZUSA-43111-CE-T
Canada	IC:885 11531 X
Country-specific approvals	See the Product Declarations & Global Approvals list at http://www.dialogic.com/declarations/ or contact your Authorized Distributor

Reliability/Warranty

Estimated MTBF	Per Telecordia Method 1 PCI: 134,000 hours
Warranty	Warranty information at http://www.dialogic.com/warranties

MSI Global Power Module

The MSI Global Power Module generates –24 and –70 volts to power the integrated station interface loop. One power module is required per board when station modules are used. The power module connects to a pre-wired power cable attached to the board.

Connectors

Input connector	Standard North American AC input
Output connector	6-pin female mini-DIN
Internal fusing	Not user replaceable

Power Requirements

Input voltage	90 VAC to 265 VAC, 47 Hz to 63 Hz
Output voltage	–24 VDC: 1.0 A –70 VDC: 300 mA
Output ripple	100 mV (peak-to-peak main)
Percent regulation	± 2.5% for –24 V ± 7.5% for –70 V
Operating temperature	+32ºF (0ºC) to +122ºF (+50ºC)
Dimensions	Length: 6.5 in. (16.25 cm) Width: 3.75 in. (9.375 cm) Height: 2.17 in. (2.425 cm)
Country-specific approvals	See the Product Declarations & Global Approvals list at http://www.dialogic.com/declarations/ or contact your Authorized Distributor
Warranty	Warranty information at http://www.dialogic.com/warranties

Safety Certifications

UL	1950 3rd edition File No: E148586
TUV	EN60950 File No: B970624072005
CE	CUL (CSA 950) File No: E160908
DENAN	PS-E MEL 080801-NC 4339

Technical Specifications (cont.)

DI/SI Breakout Box and Cable

DI/SI16, DI/SI24, and DI/SI32 use a 68-pin SCSI connector to provide physical analog station interfaces. The DI/SI Breakout Box includes a 68-pin SCSI cable to connect the DI/SI boards to a 32-port RJ-11 patch panel.

DI/SI Telephony Adaptor Cable

DI/SI16, DI/SI24, and DI/SI32 use a 68-pin SCSI connector to provide physical analog station interfaces. The DI/SI telephony adaptor cable is a 12-inch (30.5 cm) cable with a 68-pin SCSI connector to attach to the DI/SI boards at one end, and two RJ-21X male amphenol-style connectors at the other end, carrying 16 stations each.

System Hardware Requirements

Pentium processor based bus or compatible computer (PCI or PCI Express). Operating system hardware requirements vary according to the number of channels being used.

Ordering Information

Product Code	Order Code	Description
DISI16W	882-698	16-port Analog Station, PCI
DISI24W	882-701	24-port Analog Station, PCI
DISI32W	882-702	32-port Analog Station, PCI
DISI16EW	884-570	16-port Analog Station, PCIe
DISI24EW	884-595	24-port Analog Station, PCIe
DISI32EW	884-658	32-port Analog Station, PCIe
MSISCGBLPWRMODW	882-818	MSI Global Power Module: external station power supply; supports up to 32 stations; supports one board
DISIBOBKITW	882-759	DI/SI Breakout Box: 68-pin SCSI connector from DI/SI board breakouts to (32) RJ-11 jacks; 68-pin cable included
CBLTAC0X32Q	883-037	DI/SI Telephony Adaptor Cable: 68-pin SCSI connector to (2) RJ-21X male amphenol-style connectors, 12 inch (30.5 cm) total length

Dialogic

To learn more, visit our site on the World Wide Web at **http://www.dialogic.com**

Dialogic Corporation
9800 Cavendish Blvd., 5th floor
Montreal, Quebec
CANADA H4M 2V9

10/07 8492-10