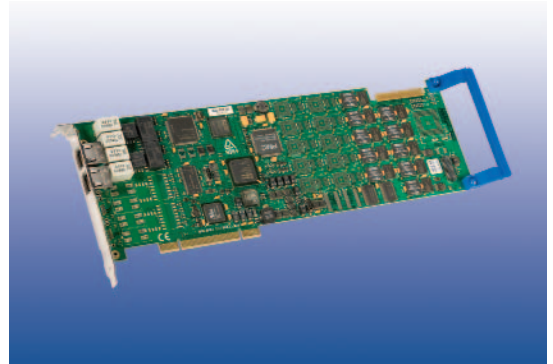


Dialogic® Diva® Media Boards

The Dialogic® Diva® Media Boards are building blocks for enabling large-scale speech and VoIP applications. Based on the latest PCI standards, each board provides connectivity to the telephony network via 2 or 4 ISDN PRI or T1/E1 interfaces. A 64-bit RISC CPU and powerful DSPs — each one dedicated to six communications channels — ensure real-time voice processing while reducing system latency and improving overall system performance. An open and well-documented Application Programming Interface (API) combined with support for a broad range of operating systems, facilitates development of leading-edge speech and VoIP applications.



Products Discussed in This Datasheet

- Dialogic® Diva® V-2PRI/T1-48 Media Board
- Dialogic® Diva® V-2PRI/E1-60 Media Board
- Dialogic® Diva® V-4PRI/T1-96 Media Board
- Dialogic® Diva® V-4PRI/E1-120 Media Board

Features	Benefits
Onboard DSPs	Performs complex operations in real time, enhancing overall system performance and lowering implementation cost
Full-duplex voice channels	Enables barge-in
Enhanced echo cancellation and voice activity detection	Improves recognition accuracy and effectively uses host platform resources
Line connection and conferencing on a single board and across boards with Automatic Gain Control (AGC)	Enhances switching and allows the implementation of large conferencing systems
Supports voice packetization into RTP, voice activity detection, adaptive jitter buffer, and comfort noise generation	Allows integration of established voice, speech, and conferencing applications with IP telephony clients and IP phones (VoIP)
Implements a set of supplementary services	Ensures that applications are compatible with major PBXs
Supports CAPI, TAPI, and the Dialogic® Diva® API	Excellent for voice portals, speech-enabled IVR, and media servers
Up to four Dialogic® Diva® boards can operate concurrently in the same server	Scales easily from 60 to 480 channels
Conforms to plug and play standards	Easy installation with GUI-based configuration

Technical Specifications

Quick Reference

Voice resources	48 to 120 depending on board type
Fax resources	0
Conferencing resources	48 to 120 depending on board type
Maximum boards/system	4
CSP	Yes
Form factor	Full-size PCI
Resource bus	PCI
Connection	2 or 4 x RJ-45
Network interface	PRI, E1, and T1 (TE and NT Mode)
Signaling	ETSI, NI-1, 4ESS, 5ESS, and all major ISDN protocols; QSIG, T1/RBS, E1/R2, SS7 (ITU-T ISUP), and many more
Operating system	Windows®, Linux. Details at http://www.dialogic.com/systemreleases
Volts	3.3, 5
Required accessories	2 or 4 PRI/E1 cables (RJ-45/RJ-45)

Hardware

- Active ISDN board for Primary Rate Interfaces (PRI) and E1 interfaces
- 2 or 4 X RJ-45 connectors
- 64-bit RISC CPU, 466 MHz, 1070 MIPS with 64 MB SDRAM
- 10 (V-2PRI) or 20 (V-4PRI) DSPs, 600 MHz, 1200 MIPS each 32 MB SDRAM per DSP
- 384 or 704 MB onboard SDRAM
- Physical dimensions:
 - 312.00 mm x 106.68 mm (PCB)
 - 352.17 mm x 126.37 mm (including bracket and retainer)
- High-impedance mode for passive monitoring
- I/O addresses, memory and interrupt allocated automatically
- Plug and play interface
- PCI 2.2 (3.3 and 5.0 V required) supported in PCI-X slots
- Scaleable to 4 adapters per system
- Production quality: ISO 9002

Power Consumption and Environmental

- Power consumption (Dialogic® Diva® V-2PRI/T1-48 and Dialogic® Diva® V-2PRI/E1-60)
 - 3.0 A @ +3.3 V typical, 4.9 A @ +3.3 V maximum
 - 40 to 80 mA @ +5 V (blue LEDs)
- Power consumption (Dialogic® Diva® V-4PRI/T1-96 and Dialogic® Diva® V-4PRI/E1-120)
 - 5.5 A @ +3.3 V typical, 6.5 A @ +3.3 V maximum
 - 80 to 160 mA @ +5 V (blue LEDs)
- Operating temperature: 10°C to 50°C
- Storage temperature: 0°C to 70°C
- Maximum tolerance in voltage fluctuation: According to the respective PCI or PCI Express specification

Driver Software

- Supported operating systems: Windows®, Linux. Details at <http://www.dialogic.com/systemreleases>
- D-channel and signaling protocols: ETSI-DSS1 (Euro-ISDN), NI-1 (North America National ISDN 1), 1TR6 (Germany), NET3 (Belgium), VN3/4/6 (France), 4ESS (AT&T), 5ESS (AT&T), 5ESS (Lucent), DMS100 (Nortel), T1/RBS (Robbed Bit Signaling), INS-64 (Japan), INS-1500 (Japan), Australia on-ramp, Q-SIG, E1/R2 (China), E1/R2 (India), Channelized E1, External Signaling (transparent D-channel), Direct Access Mode (no signaling), Network Termination (NT Mode)
- B-channel protocols: Transparent HDLC, Transparent (Voice), Synchronous PPP and MLPPP, X.75 (LAPB), X.25, T.90NL, T.70NL, Rate adaptation (56 kbps), V.42bis, V.120, PIAFS
- Application interfaces: Microsoft®: WAN Miniport, COM Port, TAPI, CAPI 2.0, extended CAPI, Dialogic® Diva® API, Component API (VB6 and VB.NET), VoIP (SIP/RTP); Linux: TTY, CAPI 2.0, extended CAPI, Diva API, VoIP (SIP/RTP)

Technical Specifications (cont.)

Driver Software (cont.)

- M-adapter feature (patent pending): Combined Virtual Adapter, Internal Call Transfer, Explicit Call Transfer Emulation
- SNMP support: Windows®: v2c; Linux: Net-SNMP v1, v2c and v3
- Dialogic® Diva® SIPcontrol™ Software: VoIP and FoIP (T.38) Gateway Software. For up to 8 channels per system, the licenses are free of charge. If more than 8 channels are required, licenses can be ordered from Dialogic. Diva SIPcontrol can be downloaded from <http://www.dialogic.com>.

Voice Features

- DTMF/MF transmission, detection and generation
- Voice Activity Detection (VAD)
- Generic tone detection and generation
- Fax signal detection
- Full-duplex voice, barge-in
- G.168 echo cancellation, up to 128 ms tail length
- Pitch control
- Audio tap
- SDN supplementary services
 - Number identification services (CLIP, CLIR, COLP, COLR, KEY, MSN, DDI, SUB)
 - Call offering services (TP, CFU, CFB, CFNR)
 - Call completion services (CW, HOLD, ECT)
 - Charging services (AoC)
 - Three-party conference
 - Large conference
- Special Information Tone (SIT) detection
- DTMF clamping and filtering
- Silence detection
- Automatic Gain Control (AGC)
- Cross-board switching
- Onboard switching and conferencing via line interconnect (call tromboning)
- VoIP support (features available when used in VoIP installations)
 - G.711 voice coder (64 kbps, μ -law, A-law)
 - G.726 voice coder (32 kbps)
 - GSM voice coder (13 kbps)
 - G.168 echo cancellation, up to 128 ms tail length
 - Adaptive jitter buffer
 - Voice Activity Detection (VAD)
 - Comfort Noise Generation (CNG)
 - Real-time Transport Protocol (RTP) framing

Safety and EMC

Canada	ICES-003 Class B, CSA 60950-1
Europe	EN60950-1, EN55022, EN55024
United States	FCC Part 15 Class B UL60950-1

Telecommunications

United States	TIA-968
Canada	CS03

Approvals, Compliance, and Warranty

Hazardous substances	RoHS compliance information at http://www.dialogic.com/rohs
Country-specific approvals	Global product approvals database at http://www.dialogic.com/declarations
Warranty	Warranty information at http://www.dialogic.com/warranties

Ordering Information

Dialogic® Diva® Product	Order Code
V-2PRI/T1-48 – North America	306-250
V-2PRI/T1-48 – Japan	306-308
V-2PRI/E1-60	306-249
V-2PRI/E1-60 – Australia	306-293
V-4PRI/T1-96 – North America	306-252
V-4PRI/T1-96 – Japan	306-307
V-4PRI/E1-120	306-251
V-4PRI/E1-120 – Australia	306-292

To learn more, visit <http://www.dialogic.com>

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08/07 10505-01