

## Dialogic® Diva® 4BRI-8 Media Board

The Dialogic® Diva® 4BRI-8 Media Board supports four ISDN Basic Rate Interfaces (BRIs). This Dialogic® Diva® Media Board is an excellent choice for medium-sized businesses since one board can support eight concurrent communications with a mix of ISDN devices, V.90 analog modems, GSM mobile phones, and fax machines. It is available in a PCI and a PCI Express version.



Because the Diva 4BRI-8 is based on open systems architecture, industry-leading computer telephony integration, Voice over Internet Protocol (VoIP), and unified messaging applications integrate easily. The flexibility of the Diva 4BRI-8 provides network administrators with a simple, cost-effective, and powerful open-communications solution.

Features	Benefits
<b>Standard software interfaces such as CAPI 2.0 and TAPI</b>	Supports industry-leading software packages, allowing network administrators to build communications platforms that are well suited to an organization's needs
<b>Dialogic® Diva® Software Development Kit - Version 4.5</b>	Allows software vendors to develop applications easily
<b>Dialogic® Diva® boards can be mixed and matched in a single system</b>	Easy scalability to meet an organization's increasing communications needs
<b>Onboard CPU and Digital Signal Processors (DSPs)</b>	Removes performance bottlenecks by performing real-time tasks that would ordinarily place an excessive burden on the host server
<b>DTMF, ECM, MR, MMR, MH and 33.6 kbps fax. V.42bis compression and V.42 error-correction</b>	Ensures fast and reliable modem and Group 3 fax transmission
<b>Full provision of supplementary services, such as call forwarding and explicit call transfer</b>	Excellent for Interactive Voice Response (IVR) and contact center applications since the board interoperates with the existing PBX infrastructure
<b>Support for echo cancellation (G.168) and voice compression in a DSP</b>	Enables high performance for Voice over IP (VoIP) gateways
<b>Conforms to plug and play standards</b>	Easy installation and operation
<b>Supports multinational ISDN protocols</b>	Ready for use virtually anywhere in the world

## Technical Specifications

### Quick Reference

Voice resources	8
Fax resources	8
Conferencing resources	8
Maximum boards/system	8
CSP	Yes
Form factor	Half-size PCI or PCI Express
Resource bus	PCI rev 2.2 up to 66 MHz or PCI Express 1.0a x 1 lane (3.3/12 V)
Connection	4 RJ-45
Network interface	BRI (TE and NT Mode)
Signaling	ETSI, NI-1, 4ESS, 5ESS, and all major ISDN protocols; QSIG and many more
Operating system	Windows®; Linux. Details at <a href="http://www.dialogic.com/systemreleases">http://www.dialogic.com/systemreleases</a>
Volts	3.3 V, 5 V
Required accessories	None

### Hardware

- Active ISDN adapter for Basic Rate Interface (BRI)
- 4 X RJ-45 connectors / 4 BRI (S/T) / (8B and 4D channels)
- Bus type: PCI rev 2.2 up to 66 MHz or PCI Express 1.0a x 1 lane (3.3/12 V)
- 32-bit RISC CPU, 100 MHz, 131 MIPS
- 8 x 65 MHz, 65 MIPS DSP
- 16 MB onboard SDRAM
- High-impedance mode for passive monitoring
- I/O addresses and interrupt placed by the system
- Plug and play interface
- Scaleable to 8 adapters per system
- Power down management
- Form factor: Half-size PCI and PCI Express
- Physical Dimensions:
  - 174.63 mm x 106.68 mm (PCB)
  - 187.84 mm x 126.37 mm (with bracket)
- Production quality: ISO 9002

### Power Consumption and Environmental

- Power consumption: 580 mA @ +5 V typical
- Operating temperature: 10°C to 70°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: Window®; Linux. Details at <http://www.dialogic.com/systemreleases>
- D-channel protocols: DSS1 (Euro-ISDN), NI-1 (North America National ISDN 1), 5ESS (North America), 1TR6 (Germany), INS Net 64 (Japan), VN3 (France), CT1 (Belgium), QSIG
- B-channel protocols: HDLC, Synchronous PPP and MLPPP, X.75 (LAPB), Transparent, X.25, T.30, T.90NL, T.70NL, Rate adaptation (56 kbps), V.90, V.42, V.42bis, V.110, 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)
- Diagnostic tools: B-channel and D-channel trace program
- 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>.

## Technical Specifications (cont.)

### Fax and Modem Features

- Fax Group 3 support
  - Up to 33.6 kbps with each B-channel (send and receive)
  - Fax compression MH, MR, MMR
  - Error Correction Mode (ECM)
  - Fax polling / fax on demand
  - Fax tone detection
  - Standard, fine, super-fine and ultra-fine resolution
- Support for fax class 1 and 2
- Fax Group 4 support (via third party application)
- Support for FoIP, T.38 (when using SIPcontrol)
  - Up to 33.6 kbps with each channel (send and receive)
- Remote access (via HDLC, V.90, GSM, V.120, X.75)
  - GSM support (V.110) up to 38.4 kbps
  - Communicates with analog modems up to V.90 (up to 56 kbps on each B-channel)

### 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
- ISDN 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,  $\mu$ -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

## Technical Specifications (cont.)

### 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
4BRI-8 (PCI)	305-486
4BRI-8 AU (PCI)	306-193
4BRI-8 JP (PCI)	306-141
4BRI-8MRV30Q (PCI)*	306-322
4BRI-8 (PCle)	306-341

\*This is a bundle of a Diva® board with Dialogic® HMP Software.

More information on HMP Software can be found at: [http://www.dialogic.com/products/ip\\_enabled/docs/10424-01\\_SIPHMPDivaBrd\\_tb.pdf](http://www.dialogic.com/products/ip_enabled/docs/10424-01_SIPHMPDivaBrd_tb.pdf)

To learn more about Dialogic® products, go to [www.dialogic.com](http://www.dialogic.com)

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