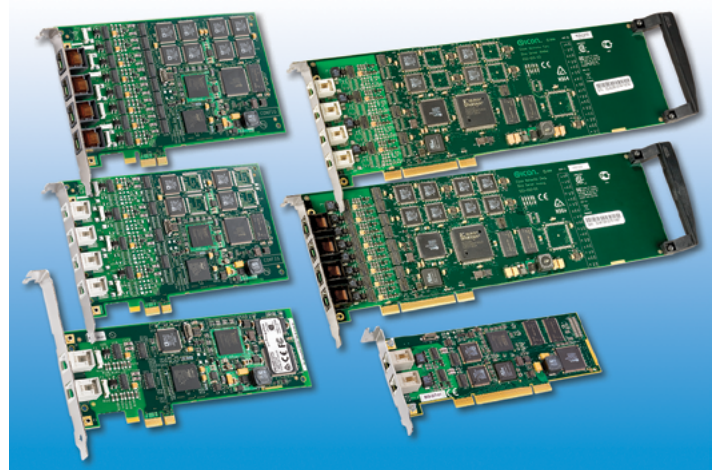


Dialogic® Diva® Analog Media Boards

The Dialogic® Diva® Analog Media Boards provide two, four, and eight ports and serve as an excellent communication platform, which scales from 2 to 64 channels (phone lines) per single server.

This datasheet covers the following products

- Dialogic® Diva® UM-Analog-2 Media Board (PCI and PCIe version)
- Dialogic® Diva® UM-Analog-4 Media Board (PCI and PCIe version)
- Dialogic® Diva® UM-Analog-8 Media Board (PCI and PCIe version)
- Dialogic® Diva® Analog-2 Media Board (PCI and PCIe version)
- Dialogic® Diva® Analog-4 Media Board (PCI and PCIe version)
- Dialogic® Diva® Analog-8 Media Board (PCI and PCIe version)



Features

Onboard CPU with large RAM and powerful FPGA chip for fast data streaming between the host CPU, the DSPs, the phone line and the other active components onboard

One powerful DSP dedicated to each communications channel

Sophisticated hardware design

Conforms to plug-and-play standards

Implements most supplementary services and many different analog signaling protocols

Pulse and tone dialing

Voice packetization into Real-time Transport Protocol (RTP), adaptive jitter buffer, voice compression (G.726, GSM), and Comfort Noise Generation (CNG)

Supports the same programming interfaces as other Dialogic® Diva® Media Boards: CAPI, Dialogic® Diva® APIs and others

Up to eight Diva Media Boards of the same or different types can operate concurrently in a single server

Benefits

Can remove performance bottlenecks by offloading key real-time tasks that would ordinarily place an excessive burden on the host server, allowing Quality of Service (for example, voice quality and connection speed) to be more consistent

Provides real-time processing of complex operations (such as V.90 data modem, V.34 fax receiver and transmitter, voice compression, or echo cancellation) without reducing overall system performance, which lowers implementation costs

Operates with low power consumption

Easy installation and operation

Allows application compatibility with major PBXs and can make a system based Dialogic® Diva® technology ready for worldwide use

Handles enterprise voice, conferencing, fax, and remote access applications via any PBX offering analog trunk interfaces

Permits legacy voice, speech, and conferencing applications to be used with VoIP clients and IP phones

Reduces porting efforts and time to market by making Diva Media Boards compatible with most standard telephony and communications applications

Easy scalability and flexibility to address an organization's communications needs in changing environments, such as VoIP



The Diva Analog Media Boards offer voice, speech, conferencing, VoIP, modem and fax features, and can serve as a base for many communication applications. The boards are supported by many standard applications, and are also suitable for new application development. Diva Analog Media Boards are available in Low Profile, Half Size, or Full Size form factors and are available in both PCI and PCI Express (PCIe) versions. Diva Analog can be seamlessly combined with other Dialogic® Diva® Media Boards, such as E1/T1, ISDN PRI/BRI, and VoIP.

Because both PCI and PCIe versions share the same feature sets, migration from a PCI Server hardware to PCI Express hardware is easy. PCI and PCIe versions can also be used in the same server.

The Diva Analog Media Boards support the same set of application interfaces as other Diva® Media Boards: the three Dialogic® Diva® APIs as well as CAPI, COM port, WAN Miniport and TTY. Because of consistent interface support, applications written for one Diva Media Board will normally work without modification with Diva Analog Media Boards.

The Diva UM-Analog-2, UM-Analog-4, and UM-Analog-8 Media Boards support fax transmissions on half (50%) of their available channels. The feature set of the Diva Media Boards in the UM series has been designed to meet the needs of typical Unified Messaging applications.

The Diva Analog-2, Analog-4, and Analog-8 boards support V.34 fax transmissions on all available channels. The Diva Analog-2, Analog-4 and Analog-8 boards are normally referred to as part of the Universal series.

Technical Specifications

Quick Reference

Voice resources	2, 4, or 8
Fax resources	2, 4, or 8 (Universal series) and 1, 2 or 4 (UM series)
Conferencing resources	2, 4, or 8
Maximum boards/system	8 (tested by Dialogic); more than 8 are possible (application and server dependent)
CSP	Yes
Form factor	Low Profile: 2-port PCI/PCIe; Half Size: 4/8-port PCIe; Full Size: 4/8-port PCI
Resource bus	PCI rev 2.2 up to 66 MHz or PCI Express 1.0a x1 lane (3.3/12 V)
Connection	2, 4, or 8 RJ-11/14 connectors
Network interface	Analog
Signaling	Loopstart
Operating system	Windows and Linux. Details at http://www.dialogic.com/systemreleases
Volts	PCI: 5; PCI Express: 3.3 and 12
Required accessories	None

Hardware

- 32-bit RISC CPU, 100 MHz, 131 MIPS
- 2, 4 or 8 DSPs (32.76 MHz and 65 MIPS)
- 16 MB onboard SDRAM Memory
- Telephony interface:
 - 2 x RJ-10 (2-port), RJ-10/RJ-11 cables supplied
 - 4 x RJ-10 (4-port), RJ-10/RJ-11 cables supplied
 - 4 x RJ-45 (8-port), RJ-10/RJ-11 cables and RJ-45/RJ-10 adapters supplied
 - POTS trunk interface
 - Loopstart signaling

- Physical dimensions:
 - 2-port PCI: 167.65 mm x 64.41 mm (PCB)
 - 2-port PCIe: 167.65 mm x 68.90 mm (PCB)
 - 2-port PCI/PCIe: 180.96 mm x 120.88 mm (with standard bracket)
 - 2-port PCI/PCIe: 180.96 mm x 80.06 mm (with low profile bracket)
 - 4/8-port PCIe: 167.65 mm x 111.15 mm (PCB)
 - 4/8-port PCIe: 180.96 mm x 126.31 mm (with standard bracket)
 - 4/8-port PCI: 312.00 mm x 106.68 mm (PCB)
 - 4/8-port PCI: 325.310 mm x 126.37 mm (with standard bracket)
 - 4/8-port PCI: 352.17 mm x 126.37 mm (with interface bracket and retainer)
- I/O addresses, memory and interrupt allocated automatically
- Plug-and-play interface
- PCI: PCI 2.2, up to 66 MHz, 32 bit (also supports 64 bit dual address cycle DMA), 5 V supply required, 3.3 V, or 5 V universal signaling, supported in backwards compatible PCI-X slots
- Production quality: ISO 9002

Power Consumption and Environmental

- Power consumption:
 - 2-port PCI: 0.34A @ +5 V (typical)
 - 2-port PCIe: 0.26A @ +3.3 V and 0.16A @ 12 V (typical)
 - 4-port PCI: 0.45A @ +5 V (typical)
 - 4-port PCIe: 0.26A @ +3.3 V and 0.18A @ 12 V (typical)
 - 8-port PCI: 0.5A @ +5 V (typical)
 - 8-port PCIe: 0.34A @ +3.3 V and 0.22A @ 12 V (typical)
- 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

Dialogic® Diva® System Release Software and Dialogic® Diva® SDK Software

- Supported operating systems: Windows and Linux. Details at <http://www.dialogic.com/systemreleases>
- M-adapter feature (Dialogic patented technology): Combined Virtual Adapter, Internal Call Transfer, Explicit Call Transfer Emulation
- SNMP support:
 - Windows: v2c
 - Linux: Net-SNMP v1, v2c and v3
- Application interfaces (provided by Dialogic Diva System Release Software and Dialogic Diva SDK):
 - Microsoft: Diva API, Diva API for .NET, Diva Component API (VB.NET), COM Port, WAN Miniport, CAPI 2.0, extended CAPI, VoIP (SIP/RTP)
 - Linux: Diva API, TTY, CAPI 2.0, extended CAPI, VoIP (SIP/RTP)

Features - Signaling

- Pulse dialing
- Analog caller identification (via FSK and DTMF signaling)
- Tone (DTMF/MF) dialing
- Hold/retrieve (via hookflash)
- Collection of post dial DTMF digits

- Call progress analysis:
 - Busy tone detection
 - Ring back tone detection
 - Special Information Tone (SIT) detection
 - Fax/modem detection
 - Dial tone detection

Features – Media Processing

- Voice and speech:
 - G.711 coding (A-law, μ -law selectable)
 - DTMF detection, generation, clamping and filtering
 - Generic tone detection and generation
 - Pulse tone detection
 - Full-duplex voice, barge-in
 - Voice Activity Detection (VAD)
 - Silence detection
 - Human talker detection
 - Recording Automatic Gain Control (AGC)
 - Pitch control
 - Audio tap
 - G.168 echo cancellation, up to 128 ms tail length
- Voice over IP (VoIP):
 - G.711 voice coder (64 kbps, μ -law, A-law)
 - G.726 voice coder (32 kbps)
 - G.729 voice coder (VoIP licenses required)
 - GSM voice coder (13 kbps)
 - Adaptive jitter buffer
 - Voice Activity Detection (VAD)
 - Comfort Noise Generation (CNG)
 - Real-time Transport Protocol (RTP) framing
 - G.168 echo cancellation, up to 128 ms tail length
- Switching and conferencing:
 - Onboard and cross-board switching and (large) conferencing via line interconnect (call tromboning)
 - Automatic Gain Control (AGC)
- Support for Fax Class 1 and 2
- Support for Fax Group 3, T.30:
 - V.17, V.29, V.27ter, V.21, V.34 modulation
 - Fax polling/ fax on demand
 - Up to 33.6 kbps with each channel (send and receive)
 - Page formats: ISO A4, B4, A3
 - Fax compression MH, MR, MMR
 - Error Correction Mode (ECM)
 - Standard, fine, super-fine and ultra-fine resolution
 - Color fax (JPEG-format)
- Data modem (Remote Access, POS and other Low Bit Rate (LBR) applications):
 - V.21, V.22, V.22bis, Bell 103, Bell 212A, V.32, V.32bis, V.34, V.42, V.42bis, V.90, MNP4, MNP5
 - Modem with extension: V.18, V.21, Bell 103, V.23, EDT, Baudot45/47/50 incl. DTMF, V.42, V.42bis

Approvals, Compliance and Warranty

Environmental Information

<http://www.dialogic.com/en/company/environmental-policy.aspx>

Country-specific safety and telecom approvals

<http://www.dialogic.com/declarations>

Warranty Information

<http://www.dialogic.com/warranties>

Ordering Information

Please see the [Analog Ordering Information](#) tab for these products

Please see the [UM-Analog Ordering Information](#) tab for these products



www.dialogic.com

For a list of Dialogic locations and offices, please visit: <https://www.dialogic.com/contact.aspx>

Dialogic, Diva, and SIPcontrol are either registered trademarks or trademarks of Dialogic Corporation, and its affiliates or subsidiaries ("Dialogic"). Dialogic's trademarks may be used publicly only with permission from Dialogic. Such permission may only be granted by Dialogic's legal department at 6700 Cote-de-Liesse Road, Suite 100, Borough of Saint-Laurent, Montreal, Quebec, Canada H4T 2B5. The names of actual companies and products mentioned herein are the trademarks of their respective owners.

Dialogic encourages all users of its products to procure all necessary intellectual property licenses required to implement their concepts or applications, which licenses may vary from country to country. None of the information provided in this Datasheet other than what is listed under the section entitled Technical Specifications forms part of the specifications of the product and any benefits specified are not guaranteed. No licenses or warranties of any kind are provided under this product brief.

Dialogic may make changes to specifications, product descriptions, and plans at any time, without notice.

Any use case(s) shown and/or described herein represent one or more examples of the various ways, scenarios or environments in which Dialogic® products can be used. Such use case(s) are non-limiting and do not represent recommendations of Dialogic as to whether or how to use Dialogic products.

This document discusses one or more open source products, systems and/or releases. Dialogic is not responsible for your decision to use open source in connection with Dialogic products (including without limitation those referred to herein), nor is Dialogic responsible for any present or future effects such usage might have, including without limitation effects on your products, your business, or your intellectual property rights.

