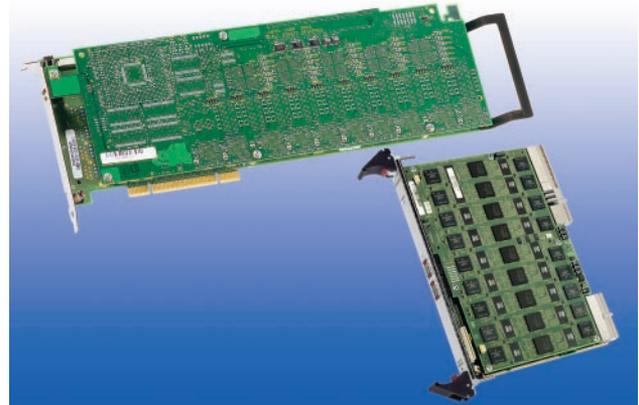


The Dialogic® Media Boards are among the industry's most powerful media platforms for developers seeking to rapidly build and globally deploy the highest density media server solutions for the enterprise and public networks. They provide a true universal port solution with a robust media feature set, including voice processing, speech recognition, fax, and conferencing capabilities in a single PC slot. The boards are available in both H.100 (PCI) and H.110 (CompactPCI) compliant universal form factors and are well-suited for service providers and large enterprise applications.

Products Discussed in This Datasheet

- Dialogic® DM/V3600BP Media Board
- Dialogic® DM/V4800BC Media Board



The DM/V3600BP and DM/V4800BC boards provide developers with the ability to choose from nine different types of predefined media loads — including one that offers 480 ports of voice processing features* including the play and record of voice prompts, tone signaling, tone detection and generation, and call progress analysis on the DM/V4800BC.

Support for Continuous Speech Processing (CSP) technology enables friendly user interface and seamless integration of speech recognition software from the leading speech technology vendors. The onboard conferencing solution offers an advanced feature set, presenting both a satisfying conferencing experience for the end user and one that can be used to deploy network-grade conferencing systems with comparable features, audio quality, and density as typical proprietary solutions, but at significantly reduced costs.

Features

New universal media loads offer mixed media resources including voice, fax, and conferencing

Built on the industry-standard telephony bus — ECTF H.100/H.110 CT Bus

Supports TrueSpeech voice coder (a default coder with Windows® supported by Windows Media® Player)

Ability to select between 16 ms, 32 ms, and 64 ms echo cancellation tail on select media loads

Supports three different types of conferencing media loads including rich, standard, and basic

Benefits

Combines three boards into one

Reduces the development, inventory, and solution costs by eliminating the need for dedicated media boards

Lets applications expand (up to 1200 ports per system) through access to other communications boards, such as IP telephony, ATM, HDSI, and SS7

Allows developers to play Internet content and develop unified messaging systems without creating and supporting custom clients

Longer tail lengths are useful for environments and applications where optimum audio quality and clarity is a necessity

Maximizes flexibility by offering media loads that enable network-grade conferencing system deployment with features, audio quality, and density comparable to typical proprietary solutions, but at significantly reduced costs

Technical Specifications

Maximum boards per system	Application, call traffic, and CPU dependent			
CT Bus	PCI: ECTF H.100 compliant CT Bus, offering onboard switching access to 4096 bi-directional 64 kb/s DS0 time slots 68-pin ribbon cable connector CompactPCI: ECTF H.110 compliant CT Bus, offering onboard switching access to 4096 bi-directional 64 kb/s DS0 time slots			
Control processor	Intel i960HD			
Digital signal processors	PCI: Motorola 56321; 10 DSPs @ 220 MHz each CompactPCI: Motorola 56321; 18 DSPs @ 220 MHz each			
Control processor memory	32 MB			
DSP memory	Baseboard global memory 32-bit wide DRAM accessible to all signal processors and control processor			
Cache prompts	PCI: 512 K word SRAM local to each DSP CompactPCI: 512 K word SRAM local to each DSP			
Supported operating systems	Linux; Windows®. Details at http://www.dialogic.com/systemreleases			
CSP	Yes			
Signaling	None			
Host Interface				
Bus compatibility	PCI: Rev 2.2 of PCI Bus Specification CompactPCI: Rev 2.2 of PCI Bus Specification			
Bus mode	Target and DMA master mode operation			
Host interface memory	512 KB			
Support	3.3 V or 5 V signaling environment (universal connectivity)			
Platforms				
Form factors	PCI: PCI long card, single-slot width 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) CompactPCI: 6U Eurocard form factor, single-slot width PBA, including faceplate, handles, and connectors 10.43 (265) mm long 8.27 in. (210 mm) wide .79 in. (20 mm) high			
Network connectors	None			
Power Requirements				
Configuration	+5 VDC	+12 VDC	-12 VDC	+3.3 VDC
DM/V3600BP	4.0 A	N/A	N/A	N/A
DM/V4800BC	0.5 A	N/A	N/A	7.4 A

Technical Specifications (continued)**Environmental Requirements**

Operating temperature	+32°F (0°C) to +122°F (+50°C)
Cooling condition for maximum operating temperatures	+122°F (+50°C) 2.3 CFM per board +104°F (+40°C) 1.5 CFM per board +86°F (+30°C) 1.1 CFM per board
Storage temperature	-4°F (-20°C) to +158°F (+70°C)
Humidity	8% to 80% noncondensing

Approvals and Compliance

Hazardous substances	RoHS Compliance Information at http://www.dialogic.com/rohs
<i>Safety and EMC</i>	
United States	UL 60950 File E96804 FCC Part 15 Class A
Canada	ULc CSA 60950 File E96804 ICES-003 Class A
Europe	EN60950 EN55022 EN55024
International	IEC60950 CISPR 22 CISPR 24
<i>Telecom Approvals</i>	
United States	US:EBZUSA-33951-CE-T
Canada	IC:885A 10020 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 Telcordia Method I PCI: 116,000 hours CompactPCI: 96,000 hours
Warranty	Warranty information at http://www.dialogic.com/warranties

Audio Signal

Usable receive range	-40 dBm0 to 0 dBm0 nominal, configurable by parameter**
Automatic gain control	Application can enable/disable output level, configurable by parameter**
Silence detection	-40 dBm nominal, software adjustable**
Transmit level (weighted average)	-12.5 dBm nominal, configurable by parameter**
Transmit volume control	40 dB adjustment range, with application-definable increments and legal limit cap

Technical Specifications (continued)**Frequency Response**

24 kb/s	300 Hz to 2600 Hz ± 3 dB
32 kb/s	300 Hz to 3400 Hz ± 3 dB
64 kb/s	300 Hz to 3400 Hz ± 3 dB

Audio Digitizing

8.5 kb/s	TrueSpeech
13 kb/s	GSM (TIPHON, MSGSM)
16 kb/s, 24 kb/s, 32 kb/s, and 40 kb/s	G.726
24 kb/s	OKI ADPCM, 6 kHz sampling rate
32 kb/s	OKI ADPCM, 8 kHz sampling rate
32 kb/s	IMA ADPCM, 8 kHz sampling rate
48 kb/s	G.711 PCM (μ -law for T-1 and A-law for E-1) @ 6 kHz sampling rate
64 kb/s	G.711 PCM (μ -law for T-1 and A-law for E-1) @ 8 kHz sampling rate
64 kb/s	Linear PCM, 8 kHz sampling rate, 8-bit resolution (88 kbps) VOX and WAVE†
128 kb/s	Linear PCM, 8 kHz sampling rate, 16-bit resolution (128 kbps) VOX and WAVE†
88 kb/s	Linear PCM, 11 kHz sampling rate, 8-bit resolution (88 kbps) VOX and WAVE†
176 kb/s	Linear PCM, 11 kHz sampling rate, 16-bit resolution (176 kbps) VOX and WAVE†
Digitization selection	Selectable by application on function call-by-call basis
Playback speed control	Pitch controlled Available on the following 8 kHz coders: OKI ADPCM, G.711 PCM, and Linear Adjustment range: $\pm 50\%$ Adjustable through application or programmable DTMF control

DTMF Tone Detection

DTMF digits	0 to 9, *, #, A, B, C, D per Telcordia LSSGR Sec. 6
Dynamic range	(T-1) -36 dBm to $+3$ dBm per tone, configurable by parameter** (E-1) -39 dBm to 0 dBm per tone, configurable by parameter**
Minimum tone duration	32 ms, can be increased with software configuration
Interdigit timing	Detects like digits with a >45 ms interdigit delay Detects different digits with a 0 ms interdigit delay
Acceptable twist and frequency variation	(T-1) Meets Telcordia LSSGR Sec 6 and EIA 464 requirements (E-1) Meets ITU-T Q.23 recommendations**
Noise tolerance	Meets Telcordia LSSGR Sec 6 and EIA 464 requirements for Gaussian, impulse, and power line noise tolerance
Cut-through	(T-1) Local echo cancellation permits 100% detection with a >4.5 dB return loss line (E-1) Digital trunks use separate transmit and receive paths to network
Talk-off	Performance dependent on far-end handset's match to local analog loop Detects less than 10 digits while monitoring Telcordia TR-TSY-000763 standard speech tapes (LSSGR requirements specify detecting no more than 470 total digits) Detects 0 digits while monitoring MITEL speech tape #CM 7291

Technical Specifications (continued)**Global Tone Detection**

Tone type	Programmable for single or dual
Maximum number of tones	Application-dependent
Frequency range	Programmable within 300 Hz to 3500 Hz
Maximum frequency deviation	Programmable in 5 Hz increments
Frequency resolution	±5 Hz. Separation of dual frequency tones is limited to 62.5 Hz at a signal-to-noise ratio of 20 dB
Timing	Programmable cadence qualifier, in 10 ms increments
Dynamic range	(T-1) Default set at -36 dBm to +3 dBm per tone, programmable (E-1) Default set at -39 dBm to +0 dBm per tone, programmable

Global Tone Generation

Tone type	Generate single or dual tones
Frequency range	Programmable within 200 Hz to 4000 Hz
Frequency resolution	1 Hz
Duration	10 ms increments
Amplitude	(T-1) -43 dBm0 to -3 dBm0 per tone nominal, programmable (E-1) -40 dBm0 to +0 dBm0 per tone nominal, programmable

Call Progress Analysis

Busy tone detection	Default setting designed to detect 74 out of 76 unique busy/congestion tones used in 97 countries as specified by ITU-T Rec. E., Suppl. #2 Default uses both frequency and cadence detection Application can select frequency only for faster detection in specific environments
Ring back detection	Default setting designed to detect 83 out of 87 unique ring back tones used in 96 countries as specified by ITU-T Rec. E., Suppl. #2 Uses both frequency and cadence detection
Positive voice detection	Standard
Positive voice detection speed	Detects voice in as little as 1/10th of a second
Positive answering machine detection	Standard
Fax/modem detection	Preprogrammed
Intercept detection	Detects entire sequence of the North American tri-tone Other intercept tone sequences can be programmed
Dial tone detection before dialing	Application enable/disable Supports up to three different user-definable dial tones Programmable dial tone drop out debouncing (when not part of regulatory approval)

Tone Dialing

DTMF digits	0 to 9, *, #, A, B, C, D per Telcordia LSSGR Sec 6, TR-NWT-000506, ITU-T Q.23
Frequency variation	Less than ±1 Hz
Rate	10 digits/s, configurable by parameter**
Level	(T-1) -4.0 dBm per tone, nominal, configurable by parameter** (E-1) -7.0 dBm per tone, nominal, country-specific**

Technical Specifications (continued)**Conferencing**

Maximum parties per conference	Up to 90 (without bridging) on select media loads
Bridging/cascade conferencing	Bridge together conferences from different DSPs and boards, consuming just two conferencing resources per bridge
Echo cancellation	16 ms
Tone clamping	Enable/disable at board level
Summing modes	Automatically configures to active talker or pure summation based on number of parties in a conference Application can specify minimum number of parties before active talker mode is used
Automatic gain control	Normalizes the parties' power levels to a unified target Key features include speech/noise discrimination, tolerance to impulsive noise, faster convergence, and increased steady-state stability
Tone detection/generation	Generates tariff tones and warning tones Detects DTMF from each party and can clamp those tones so that other members of the conference do not hear them
Active talker notification	Can notify the application of which party is talking so the application can process that information and act accordingly
Number of active talkers	Dynamically selectable
Modes	Duplex Monitor Coach Pupil

Facsimile

Fax compatibility	T.30, T.4, T.6, V.17, V.29, V.27ter, V.21
Speed	14.4 kb/s with automatic fallback send and receive concurrently on all channels
TIFF-F	Single page Multipage
Compression	MH (ITU T.4, 1D) MR (ITU T.4 2D) MMR (ITU T.6) Onboard, on-the-fly
ECM	Supported
ASCII to TIFF	Onboard, on-the-fly
Page headers	Generated onboard, on-the-fly
Width	A4
Polling	Normal and turnaround
Resolution	Standard (100 dpi x 200 dpi) Fine (200 dpi x 200 dpi) Superfine (200 dpi x 400 dpi)
JPEG/JBIG	Color fax and gray scale fax pass-through feature

Ordering Information

Product Code	Order Code	Description
DMV3600BPW	881-807	360-port resource only, PCI
DMV3600BPWCN	881-696	360-port resource only, PCI, China
DMV3600BPWIN	881-883	360-port resource only, PCI, India
DMV3600BPWJP	881-713	360-port resource only, PCI, Japan
DMV4800BCW	881-808	480-port resource only, cPCI
DMV4800BCWCN	881-699	480-port resource only, cPCI , China
DMV4800BCWIN	881-834	480-port resource only, cPCI , India
DMV4800BCWJP	881-715	480-port resource only, cPCI , Japan

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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.

Positive Answering Machine Detection/Positive Voice Detection

These performance results were measured using specific computer systems and/or components within specific lab environments and under specific system configurations. Any difference in system hardware, software design, or configuration may affect actual performance. The results are furnished for informational use only and should not be construed as a commitment by Dialogic. Dialogic assumes no responsibility or liability for any errors or inaccuracies.

Outbound Dialing/Telemarketing

Outbound dialing systems may be subject to certain laws or regulations. Dialogic makes no representation that Dialogic® products will satisfy the requirements of any such laws or regulations (including, without limitation, any regulations dealing with telemarketing).

* Select media loads on the DMV4800BC support 480 ports; however, audio quality issues will result if more than 420 ports are concurrently playing or recording G.711 8kHz 8-bit sampling rate data.

** Configurable to meet country-specific PTT requirements. Actual specification may vary from country to country for approved products.

† Supported on select media loads.