

Dialogic® Diva® V-PRI/T1-24 Media Board

The Dialogic® Diva® V-PRI/T1-24 Media Board is a building block for enabling speech and Voice over Internet Protocol (VoIP) applications.

The Diva V-PRI/T1-24 is based on the latest PCI and PCI Express standards, and provides connectivity to the telephony network via ISDN PRI or T1 interfaces. Powerful DSPs — one dedicated to each communications channel — 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.



Features	Benefits
Handles voice either in PSTN standard coding or in compressed coding	Allows adaptation to any kind of telephony system
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 conferencing
Supports voice packetization into RTP, voice compression (G.726 and GSM), adaptive jitter buffer, and comfort noise generation	Allows integration of established voice, speech, and conferencing applications with IP telephony clients and IP phones (VoIP)
Supports CAPI, TAPI, and an open API	Excellent for voice portals, speech-enabled IVR, and media servers
Up to eight Dialogic® Diva® boards can operate concurrently in the same server	Scales easily from 2 to 240 channels
Conforms to plug and play standards	Easy installation

Technical Specifications

Quick Reference

Voice resources	24
Fax resources	0
Conferencing resources	24
Maximum boards/system	8
CSP	Yes
Form factor	Full-size PCI or full-size PCI Express
Resource bus	PCI rev 2.2 up to 66 MHz or PCI Express 1.0a x1 lane (3.3/12 V)
Connection	RJ-45
Network interface	PRI and T1 (TE and NT Mode)
Signaling	NI-1, 4ESS, 5ESS, and all major ISDN protocols; QSIG, T1/RBS, and many more
Operating system	Windows®; Linux. Details at http://www.dialogic.com/systemreleases
Volts	PCI: 3.3 V, 5 V or PCI Express: 3.3 V, 12 V
Required accessories	PRI/T1 cable (RJ-45/RJ-45)

Hardware

- Active ISDN board for Primary Rate Interface (PRI) and T1 interface
- 1 X RJ-45 connector
- Bus type: PCI rev 2.2 up to 66 MHz or PCI Express 1.0a x1 lane (3.3/12 V)
- 64-bit RISC CPU, 300 MHz, 420 MIPS
- 24 x 33 MHz, 60 MIPS DSP
- 32 MB onboard SDRAM
- High-impedance mode for passive monitoring
- I/O addresses and interrupt are placed by the system
- Plug and play interface
- Scaleable to 8 boards per system
- Power down management
- Physical dimensions:
 - 312.00 mm x 106.68 mm
 - 352.17 mm x 126.37 mm (including bracket and retainer)
- Production quality: ISO 9002

Power Consumption and Environmental

- Power consumption: 0.92 A @ +5 V typical, 2.6 A @ +5 V maximum
- 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, 4ESS (AT&T), 5ESS (AT&T), 5ESS (Lucent), DMS100 (Nortel), T1 – Robbed Bit Signaling, QSIG, External Signaling (transparent D-channel), Direct Access Mode (no signaling), Network Termination (NT Mode)
- B-channel protocols: Transparent HDLC, Transparent Voice, X.75 (LAPB), X.75/V.42 bis, LAPD, T.90NL, T.70NL, V.120, X.25, X.31, PIAFS 1.0 / 2.0, SDLC
- 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
- M-adaptor 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>.

Technical Specifications (cont.)

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, 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
United States	FCC Part 15 Class B UL60950-1
Europe	EN60950-1, EN55022, EN55024

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-PRI/T1-24 – North America	306-213
V-PRI/T1-24 PCIe – North America	306-316
V-PRI/T1-24 PCIe – Japan	306-327

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

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