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Diva™ Server V-PRI/E1

The Ultimate Voice, Speech and Conferencing Platform for PRI and E1

Most peoples' interaction with PCs is text-based such as email and instant messaging, but human voice is still the most natural way of communicating. Advances in speech recognition technologies and the ubiquity of fixed and mobile telephones now opens up a new world of opportunities for voice based systems.

Diva Server V-PRI/E1 adapters are key building blocks for enabling these new breeds of voice business applications. Based on the latest PCI standards, each adapter provides connectivity to the telephony network via ISDN Primary Rate (PRI) or E1 interfaces. Powerful Digital Signal Processors (DSP) – one dedicated to each communication channel - ensure real-time voice processing 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 voice business applications.

Eicon Networks Certified
ISO 9001 2000
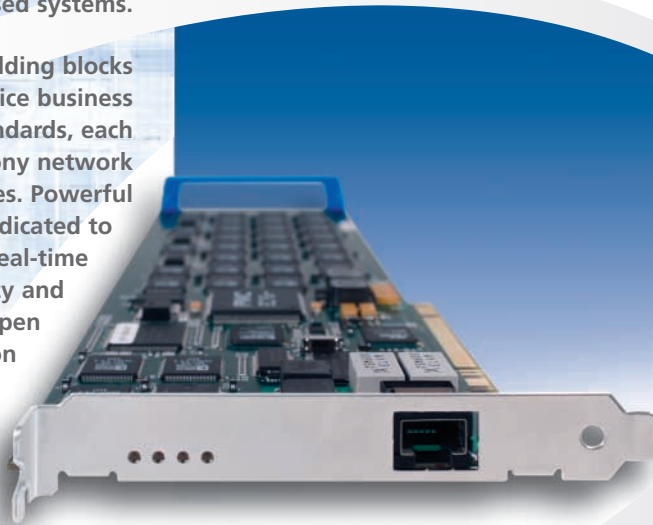
diva server

Key Benefits

World-Class Voice Processing	Diva Server V-PRI/E1 adapters provide a full set of voice processing functions including tone detection and generation, voice activity detection and echo cancellation. Handling voice either in PSTN standard coding or in compressed coding allows adaptation to any kind of telephony system. Onboard DSPs perform these complex operations in real-time enhancing overall system performance and lowering implementation cost.
Facilitates Speech-Enabled Applications	Thanks to supporting full-duplex voice channels, callers can use an application-friendly feature known as "Barge-In". This allows a caller to interrupt speech prompts by speaking over them thereby controlling the pace of the conversation for a more pleasant user experience and better platform utilization. Enhanced echo cancellation and voice activity detection improve recognition accuracy and make better use of host platform resources.
Enhanced Switching and Conferencing Support	Diva Server V-PRI/E1 adapters support line interconnection and conferencing of calls on a single board as well as across boards within a server. Automatic gain control (AGC) is provided to automatically adjust the signal level of incoming calls for recording at normal levels.
Robust Voice Over IP (VoIP) Technology	For integrating established voice, speech and conferencing applications with emerging IP-Telephony clients and IP-Phones, Diva Server V-PRI/E1 provides key enabling features such as voice packetization into real-time transport protocol (RTP), voice compression (G.726 and GSM), adaptive jitter buffer and comfort noise generation.
Supports Best-of-Breed Applications	The support of standardized software interfaces such as CAPI 2.0 or TAPI as well as an open API (Diva Server SDK) facilitate the development of voice business applications. Common applications include voice portals, speech enabled interactive voice response (IVR) systems and media servers.
Superior Scalability and Flexibility	Up to eight Diva Server adapters - offering 2 to 240 channels - can be installed and operated concurrently in a single server. Any type of Diva Server adapter whether Analog, ISDN BRI, ISDN PRI, or E1/T1 can be mixed and matched.
Easy to Install	Diva Server V-PRI/E1 adapters conform to Intel and Microsoft Plug and Play standards, eliminating the need to manually configure the server.

Technical Specifications

Hardware:	• Active ISDN adapter for Primary Rate Interface (PRI) and E1 interface • RJ45 Connector • 31 x 33 MHz, 60 MIPS DSP • Full size PCI form factor • I/O Addresses and Interrupt are placed by the system • Production Quality: ISO 9002	• Plug and Play Interface • Bus type: PCI rev. 2.2 (3.3V / 5V) • 64-bit RISC CPU, 300 MHz • 32 MB onboard SDRAM • Scaleable to 8 adapters per system • Power Down Management • 5 year warranty
Power Consumption and Environmental	• *Power consumption:* 0.92 A @+5 V typ., 2,6 A @+5V max. • *Operating temperature:* 10°C to 50°C • *Maximum tolerance in power supply variation:* -5% to +5%	• *Storage temperature:* 0°C to 70°C • *Operating humidity:* 10% to 90% (non-condensing)
Driver Software	• *Supported operating systems:* - Microsoft: Windows 2000, Windows XP, Windows Server 2003, including 64-Bit Editions. - Linux: Red Hat, SuSE and Debian distributions • *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 – 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, 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, CAPI 2.0, TAPI, Diva Server API (SDK) - Linux: TTY, CAPI 2.0, Diva Server API (SDK) • *Diagnostic Tools:* B-channel and D-channel trace program • *M-Adapter Feature (patent pending):* Combined Virtual Adapter, Internal Call Transfer, Explicit Call Transfer Emulation	

Voice, Speech and Conferencing Features:	• DTMF/MF transmission, detection and generation
	• Voice Activity Detection
	• DTMF Clamping and Filtering
	• Fax signal detection
	• Full duplex voice 'Barge-In'
	• G.168 echo cancellation, up to 32 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
		• Silence Detection
		• Generic Tone detection and generation
		• Automatic Gain Control (AGC)
		• Cross board switching
		• On-board switching and conferencing via line interconnect (call tromboning)
		• VoIP support
		  - G.711 voice codec (64 kb/s, μ-law, A-law)
		  - G.726 voice codec (32 kb/s)
		  - GSM voice codec (13 kb/s)
		  - G.168 echo cancellation, up to 32 ms tail length
		  - Adaptive jitter buffer
		  - Voice activity detection (VAD)
		  - Comfort noise generation (CNG)
		  - Real Time Protocol (RTP framing)

Ordering Information

Product Name	Product Code
Diva Server V-PRI/E1-30 - International	306-214
Diva Server V-PRI/E1-30 - Australia	306-215

National variants might be available. Please contact the Eicon Networks office in your region or look at www.eicon.com for further information.

Corporate LAN

Diva Server V-Series adapter used with 3rd party voice, speech and conferencing application

Telephone

Mobile phone

Telephone

PBX

ISDN

GSM

Analog

Telephone

Telephone

www.eicon.com/divaserver