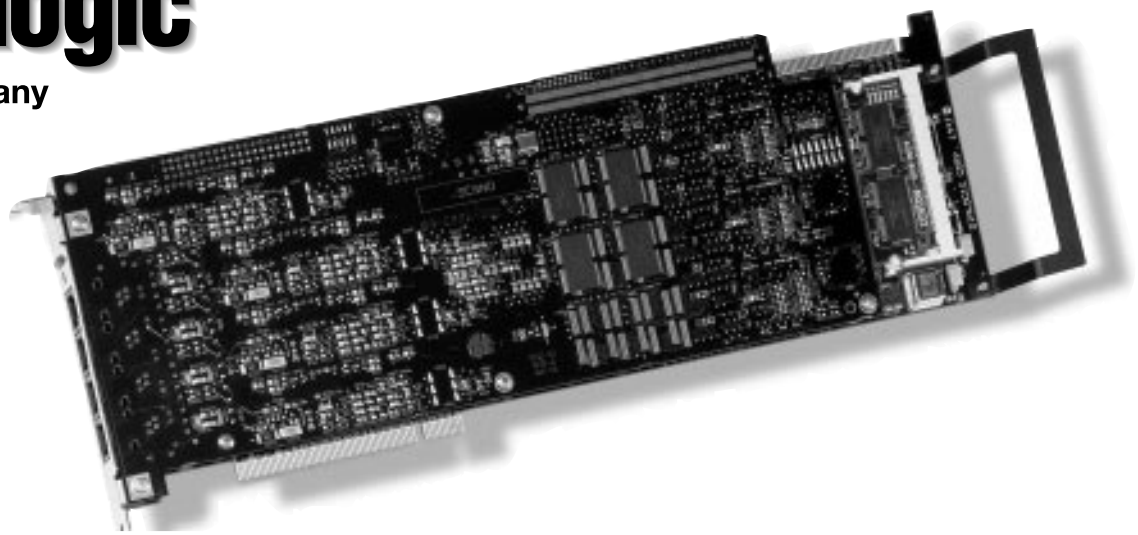
Dialogic®

an Intel company



SCSA HARDWARE MODEL | AEB HARDWARE MODEL | PEB HARDWARE MODEL

DM3 IPLink DM/IP040-LSI

Standards-Based IP Telephony Platforms

DM3 IPLINK: MAKING THE MOST OF OPPORTUNITY

Packet-switched telephony applications are driving the convergence of data networks and the public telephone network. To create solutions that make the most of this business opportunity, you need Dialogic DM3™ IPLink™, a proven, high-performance, open development platform.

DM3 IPLink supports the H.323 standard for communication across IP networks and a wide variety of vocoder algorithms for complete IP compliance.

Based on the modular DM3 mediastream architecture, a powerful and scalable hardware and software development environment, DM3 IPLink lets you add processing power and ports, as you need them, on a single board. DM3 IPLink features a standard Intel® control processor and operates under Windows NT® 4.0.

The combination of extensive IP standards support and open architecture in DM3 IPLink gives you maximum flexibility for building IP gateways and incorporating IP telephony capability into a wide range of computer telephony (CT) applications.

STANDARDS-BASED IP DEVELOPMENT PLATFORM

DM3 IPLink DM/IP040-LSI™ is a comprehensive, standards-based software and hardware development platform for IP telephony servers. Because it has the DSPs for voice and fax coding over IP, and the analog interfaces on board, the host is free to implement the H.323 processing to optimize performance. DM3 IPLink complies with the International Telecommunications Union ITU-T H.323 specification (including H.245 and H.225 protocols). H.323 sets standards for audio, video, and data communications across IP networks, without providing guaranteed quality of service (QOS). It also supports gatekeeper functions for address translation and bandwidth management.

DM3 IPLink supports a wide range of popular H.323 conferencing software, including Microsoft NetMeeting, VocalTec IPhone, and Intel VideoPhone. DM3 IPLink works with all H.323-compliant terminals.

FEATURES AND BENEFITS

- Internet Protocol (IP) telephony PCI board with onboard digital signal processors (DSP) and four onboard loop start analog interfaces. Ideal for enterprise-level solutions.
- DM3™ based platform and application programming interface (API) provides compatibility with existing DM3 IPLink™ applications for ease of development and faster time to market
- Compliance with ITU-T Enterprise Computer Telephony Forum (ECTF) H.323 Revision 1 specification, including gatekeeper compatibility provides easy interoperability with a variety of IP telephony solutions
- Multiple vocoding algorithm support including ITU-T G.723.1, ITU-T G.711, ITU-T G.729a, MS-GSM, and ETSI-GSM provides the flexibility required for global deployment
- Includes T.38 real-time fax over IP coder support for seamless real-time fax communication over IP. Permits a broader service offering, letting you differentiate your product in the marketplace.
- Supported by the regular DM3 IPLink SDK Release 3.1 for Windows NT®; will be supported by the standard releases of the DM3 IPLink SDK for Windows NT
- Standard DM3 IPLink Release 3.1 features include support for Internet protocols including TCP/IP, UDP, and RTP/RTCP

Dialogic Corporation	Dialogic North American Sales	Dialogic Latin America & Caribbean	Dialogic Europe	Dialogic Japan	Dialogic China	Dialogic Asia
1515 Route Ten Parsippany, NJ 07054 1-973-993-3000 fax: 1-973-993-3093 http://www.dialogic.com sales@dialogic.com	1-800-755-4444 or 1-973-993-3030 fax orders: 1-973-631-9631 dlac.sales@dialogic.com	(Buenos Aires) 54-11-4328-1531 fax: 54-11-4328-5425 dte.sales@dialogic.com	(Brussels) 32-2-712-4311 fax: 32-2-712-4300 asia.sales@dialogic.com	(Tokyo) 81-3-5430-3252 fax: 81-3-5430-3373 japan.slaes@dialogic.com	(Beijing) 86-10-6590-0055 fax: 86-10-6590-7989 china.sales@dialogic.com	(Singapore) 65-339-9833 fax: 65-339-9211 asoa/sa;es@dialogic.com

FEATURES AND BENEFITS (cont.)

- Advanced features include voice activity detection (VAD) for maximum bandwidth utilization, coder negotiation on the fly, and out-of-band DTMF processing compliant with the International Multimedia Teleconferencing Consortium (IMTC) Interoperability Agreement 1.0
- Performance improvement features include variable jitter buffer control, voice activity detection/silence compression, and embedded high-performance echo cancellation
- Optimized call control API offloads host CPU application processing to minimize system latency, achieve maximum scalability, and optimize resource usage
- Call processing features include echo cancellation, call progress, DTMF detection, tone generation, volume control, noise tolerance, cut-through, and talk-off
- ANSI SCbus™ and H.100 support for integration with other standards-based CT resource platforms

APPLICATIONS

- Enterprise bypass IP telephony gateway
- Web-enabled call centers and help desks
- Internet call waiting
- PBX extenders

Dialogic is committed to building standards-based products that simplify your development and reduce your time to market. A founding member the Voice over Internet Protocol (VoIP) Forum (now IMTC), Dialogic continues to be an active participant in the IMTC, the Internet Engineering Task Force (IETF), and other IP-related standards bodies. DM3 IPLink complies with IMTC/VoIP enhancements and refinements to H.323.

The DM3 IPLink design also supports important open CT industry standards. The DM3 IPLink PCI baseboard supports both the SCSA™ SCbus™ and H.100 CT Bus™ specifications. The DM3 IPLink API software is compatible with ECTF S.100 call processing standards.

MULTIPLE VOCODER SUPPORT

The DM3 IPLink DM/IP040-LSI board offers many optimized, low-bandwidth vocoder algorithms for transmitting audio over the IP network, including the ITU-T G.711, G.723.1, and G.729a, along with ETSI and MS-GSM. It includes the T.38 fax-over-IP coder as part of the standard release. These algorithms use a variety of coding techniques, bit rates, and frame sizes to compress audio for managing data network bandwidth. The wide algorithm support of DM3 IPLink gives you the ability to sell IP-based applications worldwide. The scalable DM3 IPLink signal processor architecture makes it easy to support new algorithms as they become widely accepted or adopted as standards.

Advanced features include voice activity detection (VAD) for maximum bandwidth utilization, plus embedded high-performance echo cancellation and out-of-band DTMF processing optimized for the IP network. You can fine-tune the DM3 IPLink jitter buffers for optimum performance.

POWERFUL, SCALABLE DM3 MEDIASTREAM ARCHITECTURE

The DM3 architecture provides access to independent, high-performance, firmware-based network protocol and media processing resources that can be operated and integrated on compatible hardware platforms. Also, the DM3 open resource architecture gives you the flexibility to easily scale processing and interface resources as needed for future application upgrades or IP telephony server enhancements. Support for standard SCbus and CT Bus connectivity gives you a growth path for incorporating other Dialogic and third-party media and network resources.

CONFIGURATIONS

You can use DM3 IPLink to build complete gateway platforms that bridge the public switched telephone network (PSTN) and the IP network. DM3 IPLink provides the telephone network interface and mediastream processing resources on a single board. To build a gateway, you need only put a DM/IP040-LSI card and a third-party data network interface into a standard PC server. Dialogic provides the voice and fax coders and H.323 stack to be run on the host CPU. You can access additional Dialogic and third-party resources through DM3 IPLink CT Bus/SCbus connections.

SOFTWARE SUPPORT

The DM/IP040-LSI board is supported by the DM3 IPLink SDK Release 3.1 for Windows NT and higher.

DM3 IPLink runs under the Windows NT 4 operating system and comes with a software package containing the Dialogic NT Native Architecture, DM3 Core Software for Windows NT, Dialogic IPT Software, complete documentation, and gateway demonstration code. Standard Dialogic DM3 Direct Interface APIs are also included. The DM3 Direct Interface gives developers flexibility for customizing and controlling the low-level application details. ■

■ DM3 IPLink Technical Specifications*

Signal processors DSP	Motorola 5630x, 1 K word program cache, 100 MIPs
Signal processor memory DSP	256 K word DRAM local to each DSP, 128 K word SRAM local to each DSP
Baseboard global memory	4 MB of DRAM, accessible to all signal processors
Real-time media bus	Up to 256 full-duplex channels at 64 Kb/s onto ANSI SCbus. Supports SCSA time slot bundling (N x 64 K channels) for high bandwidth requirements. ECTF H.100 CT Bus interoperability.
SCbus speed	2, 4, and 8 MHz
Physical slots	Configured with a DM3 baseboard and a single multifunction DSP and telephony interface daughterboard; a single-slot PCI solution

HOST INTERFACE:

Host interface memory	512 KB
Bus compatibility	Rev 2.1 of PCI Bus Specification
Bus mode	Target and DMA master mode operation
Form factor	PCI long card

TELEPHONE INTERFACE:

Line interface	Loop start, analog Caller ID capability
Connectors	4 onboard RJ-11s

POWER REQUIREMENTS:

+5 VDC	3.3 A
+12 VDC	70 mA
–12 VDC	0 mA
+3.3 VDC	0.0 A
Wattage	16.5 watts

COOLING REQUIREMENTS:

Operating temperature	0°C to +50°C
Storage temperature	–20°C to +70°C
Humidity	5% to 85% noncondensing

REGULATORY, SAFETY, AND EMC CERTIFICATIONS

Regulatory	FCC Part 68, Canadian IC CS03, JATE
Safety	UL1950, EN60950, EN41003, CSA 950
EMC	FCC Party 15, Class A; EN 55022, Class B; EN50082-1

* All specifications are subject to change without notice

SOFTWARE REQUIREMENTS

Downloaders, drivers, and libraries are provided for each host operating system (OS)
Signal processor OS: SPOX® from Spectron Microsystems

HOST SYSTEM REQUIREMENTS

Operating system: Windows NT 4 for Intel CPUs
DM3 IPLink Product Development Kits: contact Dialogic for offerings and customer qualifications

00-4799-002