

SCSA HARDWARE MODEL

AEB HARDWARE MODEL

PEB HARDWARE MODEL

# DM3 IPLink

## High-Density Standards-Based IP Telephony Platforms

The ability to make telephone calls over the Internet is driving corporate telephone and data networks together to form a single communications network. To create solutions that make the most of this business opportunity, you need the Dialogic DM3 IPLink™ product, a proven, high-performance, open development platform. The DM3 IPLink product supports the H.323 standard for communication across Internet Protocol (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, the DM3 IPLink product lets you add more processing power and ports on a single board as you need them. The DM3 IPLink product features a standard Intel control processor and operates under Windows NT®.

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

### STANDARDS-BASED IP DEVELOPMENT PLATFORM

The DM3 IPLink product is a comprehensive standards-based software and hardware development platform for IP telephony servers. Its optimized design incorporates all the necessary IP-related features on a single board. The DM3 IPLink product 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 not providing guaranteed Quality of Service (QoS). Gatekeeper functions, for address translation and bandwidth management, are also supported.

The DM3 IPLink product supports a wide range of popular H.323 conferencing software, including Microsoft NetMeeting, the VocalTec iPhone, and the Intel Video Phone. The DM3 IPLink product works with all H.323-compliant terminals.

Support for standard transport mechanisms such as Transmission Control Protocol/Internet Protocol (TCP/IP), User Datagram Protocol (UDP), and Real Time Protocol/Real Time Control Protocol (RTP/RTCP) is embedded in the DM3 IPLink product firmware. The DM3 IPLink product also has a sophisticated packet recovery algorithm.



### FEATURES AND BENEFITS

- Compliant with ITU-T H.323 specification, including gatekeeper compatibility
- Comprehensive support for industry-standard H.323 clients including Microsoft NetMeeting™, VocalTec iPhone™, Intel Video Phone™, and other compliant terminals
- Multiple vocoding algorithm support including ITU-T G.723.1, ITU-T G.729a, ITU-T G.711, GSM, Voxware RT24, and others
- Supports standard Internet - protocols including TCP/IP, UDP, and RTP/RTCP
- Embedded TCP/IP data networking interface (optional)
- Advanced features include VAD for maximum bandwidth utilization, embedded high performance echo cancellation, and out-of-band DTMF processing compliant with the International Multimedia Teleconferencing Consortium Interoperability Agreement 1.0
- Optimized call control API offloads host CPU application processing to minimize system latency, achieve maximum scalability, and optimize resource usage

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## FEATURES &amp; BENEFITS (cont.)

- Call processing, including call progress, voice record and play, DTMF detection, tone generation, volume control, noise tolerance, cut through, and talk off
- CT Bus™ interoperability for PCI (H.100) systems
- ANSI SCbus™ for integration with other standards-based CT resource platforms

## DM3 Platform Features

- 0, 1, 2, or 4 embedded digital network interfaces supporting T-1, E-1, or ISDN PRI
- DM3™ open resource architecture for reusable, platform-sharing network protocol and media processing resources
- Powerful, extensible, multiprocessor signal processing platform supporting up to 1800 fixed-point MIPs for DSP (up to 18 24-bit Motorola 5630x™ processors)
- Scalable 60 MIPs Intel i960®CF RISC control processor with EDO RAM
- Scalable signal processor, control processor, and global memories
- Rapid, robust resource development and integration environment including support for all Dialogic resources such as TTS, ASR, and fax

## APPLICATIONS

- Internet gateways (Voice over IP) for toll bypass
- Corporate WAN telephony traffic consolidation
- Web-enabled call centers and help desks
- Internet call waiting
- Advanced Intelligent Networks (AIN) applications on scalable Intelligent Peripherals
- PBX extenders

A 10Base-T Ethernet® interface is available as an embedded option.

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

The DM3 IPLink product design also supports important computer telephony open industry standards. The DM3 IPLink product's PCI baseboard supports both the SCSA™ SCbus and H.100 CT Bus specifications. The DM3 IPLink product's API software is compatible with S.100 Enterprise Computer Telephony Forum (ECTF) call processing standards.

## MULTIPLE VOCODER SUPPORT

The DM3 IPLink product 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. The DM3 IPLink product also supports popular algorithms such as GSM and the Voxware RT24 MetaVoice. 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 the DM3 IPLink product gives you the ability to sell IP-based applications throughout the world. The DM3 IPLink product's scalable DM3 signal processor architecture makes it easy to support new algorithms as they become widely accepted or are adopted as standards.

Advanced features include Voice Activity Detection (VAD) for maximum bandwidth utilization, as well as embedded high-performance echo cancellation and out-of-band DTMF processing optimized for the IP network. The DM3 IPLink product's jitter buffers can be fine tuned for best 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. The DM3 open resource architecture additionally 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.

The DM3 IPLink product is the highest density, highest performance IP telephony platform in the industry. You can add signal processing and network interface daughterboards to the DM3 IPLink product's baseboard for up to 1800 MIPs of available signal processing and two spans of T-1 (48 ports), E-1 (60 ports), or ISDN PRI (46 T-1, 60 E-1 ports) on a single board. The DM3 IPLink product's scalable, on-board, 60 MIPs Intel i960CF RISC control processor, scalable signal processors, and global memories free the host CPU for other application tasks.

## CONFIGURATIONS

You can use the DM3 IPLink product to build complete gateway platforms that bridge the public switched telephone network (PSTN) and the IP network. The DM3 IPLink product provides all of the required IP resources – data network interface, telephone network interface, IP and H.323 stacks – as well as media-stream processing resources on a single board. Additional Dialogic and third-party resources can be accessed through the DM3 IPLink product CT Bus/SCbus connections. The DM3 IPLink board can optionally use any telephone network interface with CT Bus/SCbus connections. IP telephony servers using the basic DM3 IPLink product gateway configuration can be deployed in wide range of markets including enterprise, public telephone network, and call center applications.

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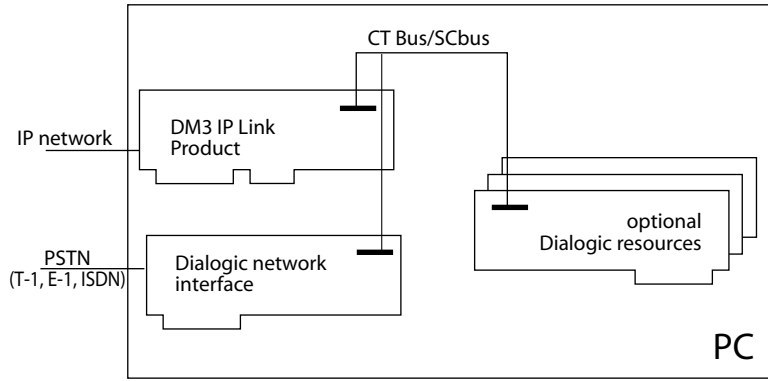
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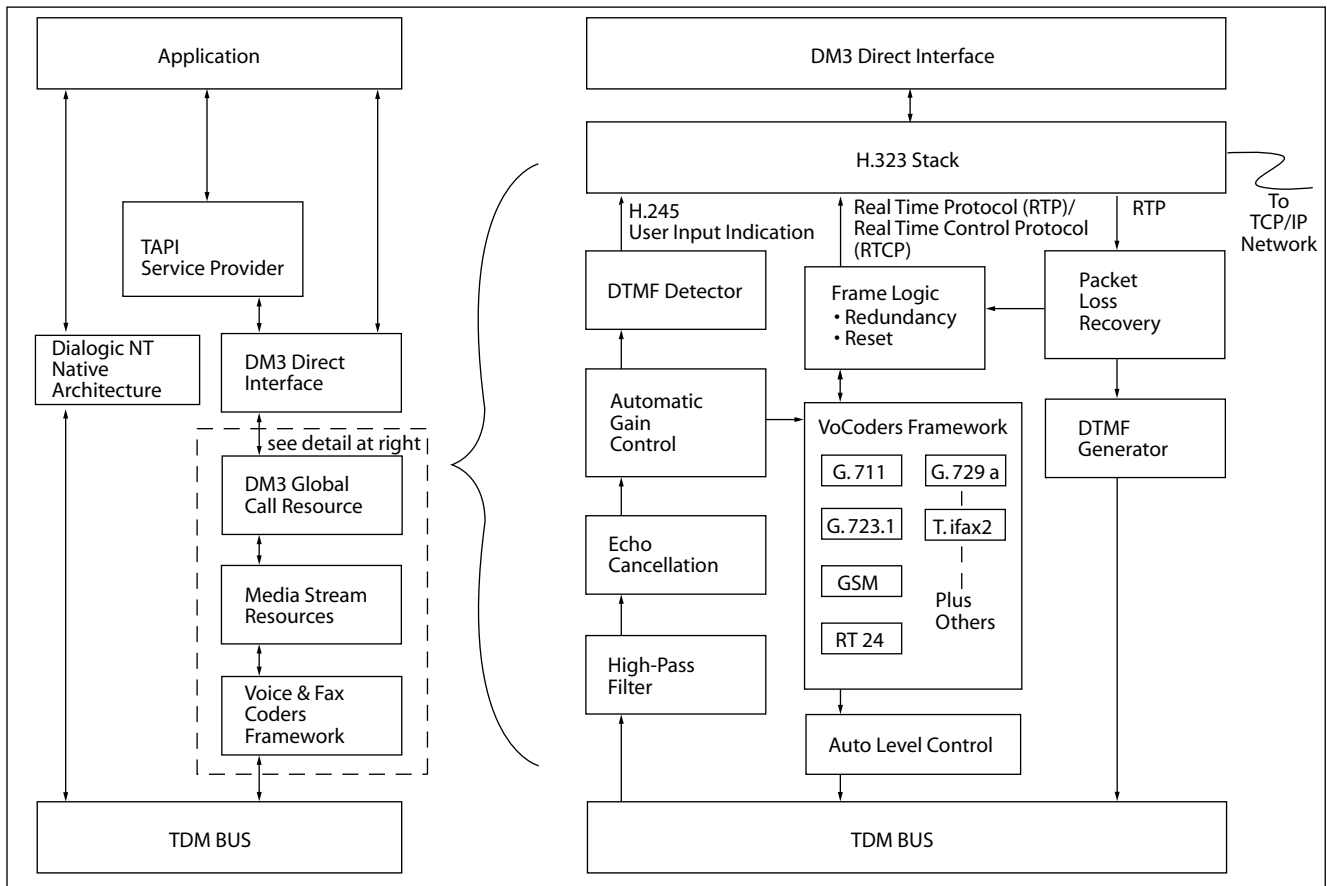
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**SOFTWARE SUPPORT**

The DM3 IPLink product runs under the Windows NT operating system and comes with a software package containing the Dialogic NT Native Architecture, DM3 Core Software for Windows NT, Dialogic IPT Software, complete ocumentation, and gateway demonstration code. Standard Dialogic Release 4 resource APIs and DM3 Direct Interface APIs are also included. Dialogic high-level APIs provide a standards-based way for developing IP gateway applications. The DM3 Direct Interface gives developers flexibility for customizing and controlling the low-level application details.



## ■ DM3 IPLink Product Technical Specifications\*

### PCI HARDWARE SPECIFICATIONS

Control processor	Intel i960CF at 33 MHz, 60 MIPs
Control processor memory	Up to 8 MB local to control processor
Signal processors	DSP: Motorola 5630x, 1 K word program cache, 66/80/100 MIPs PowerPC: Motorola 603e at 166/200 MHz, 32 KB built-in cache
Signal processor memory	DSP: 256 K or 1 M word DRAM local to each DSP 128 K word SRAM local to each DSP PowerPC: 8 or 32 Mbytes SDRAM local to each 603e
Baseboard global memory	4, 8, or 16 MB of 32-bit wide DRAM accessible to all signal processors, control processor, and host 72-pin SO DIMM modules for easy upgradability
Real-time media bus	Up to 256 full duplex channels at 64 Kb/s onto ANSI SCbus. Supports SCSA time slot bundling(N × 64 K channels) for high bandwidth requirements. ECTF H.100 CT Bus interoperability. Planned: ECTF H.110 interoperability for cPCI®.
SCbus speed	2, 4, and 8 Mb/s

### HOST INTERFACE

Host interface memory	512 KB
PCI bus compatibility	Rev 2.1 of PCI bus specification
PCI bus mode	Target and DMA master mode operation
PCI form factor	PCI long card

### POWER REQUIREMENTS

+5 VDC	9 A
+12 VDC	200 mA
-12 VDC	200 mA
+3.3 VDC	0.0 A

### COOLING REQUIREMENTS

Operating temperature	0°C to +50°C
Storage temperature	-20°C to +70°C
Humidity	8% to 80% noncondensing

To enable the DM3 IPLink product to operate reliably over the stated environmental conditions, a total of 5.2 CFM or greater air flow is required per chassis assembly.

### SOFTWARE SPECIFICATIONS

Downloaders, Drivers, and Libraries are provided for each host operating system (OS).

Control processor OS	VxWorks from Wind River Systems, Inc.
Signal processor OS	SPOX® from Texas Instruments, Inc.

### Host System Requirements

- Operating system: Windows NT for Intel CPUs

### DM3 IPLink Product Development Kits

Contact Dialogic for offerings and customer qualifications.

\*All specifications are subject to change without notice.