

Dialogic® Vision™ Products

Fast Creation and Simplified Deployment of Interactive Multimedia Services

Datasheet

Video, audio, and speech-enabled services can be developed quickly with Dialogic® Vision™ Products using industry-standard VoiceXML and CCXML, and those services can be deployed easily on the same platform into practically any kind of network.

With real-time video and voice transcoding, operators and service providers can use Vision Products to deliver enhanced video quality and network interoperability. Subscribers and applications can be connected from packet-switched, circuit-switched, mobile, and IMS-based networks.



Features

Standards-based control using VoiceXML and CCXML

Benefits

Allows rapid development and deployment of interactive speech and video services

3G-324M protocol, including H.263, H.264, and MPEG-4

Enables the same video services to perform comparably on 3G wireless and IP networks

Text and image overlay

Permits building dynamic applications with visual prompting, advertising, and watermarking

Real-time any-to-any video transcoding and rate adaptation

Adapts video conversion as media moves between mobile and IP network devices

Fast call setup with MONA

Enables low-delay video call setup time resulting in an enjoyable subscriber experience

Simultaneous support of TDM, IP, voice, and video calls

Permits a single technology stack, which is cost efficient and reduces complexity

Integrated SS7, SIGTRAN, BICC, SIP-I, ISDN, and SIP signaling

Can terminate calls in any type of network, including SIP gateway interworking

Note: Some features might not be available on all Vision Product configurations

Platforms for Multimedia Applications

Vision Products are used to construct many kinds of multimedia applications, such as:

- Mobile calling to SIP phones and applications (3G-324M gateway)
- Streaming internet video to mobile handsets
- Multimedia ringback
- Video conferencing
- Mobile value-added services (VAS)
- Multimedia messaging, voice mail or SMS
- Video call center, automated self-service, and outbound dialing
- Video call completion to voice (VCCV)

Overview of Dialogic® Vision™ Products

Five major configurations of Vision Products optimize features for a wide range of application requirements:

Dialogic® Vision™ 1000 Video Server	Carrier-ready VoiceXML and CCXML platform for interactive video applications
Dialogic® Vision™ 1000 Audio Server	Carrier-ready VoiceXML and CCXML platform for interactive voice and speech-enabled applications
Dialogic® Vision™ 1000 Video Gateway	3G-324M mobile video handset interconnection to SIP devices and services, with video transcoding
Dialogic® Vision™ 1000 Video SCE	Service Creation & Execution environment for rapid, graphical design of multimedia applications
Dialogic® Vision™ IVVR Kit	Component bundle that gives the developer maximum flexibility over their hardware platform

Audio Server and Video Server

The Vision 1000 Audio Server and Vision 1000 Video Server (collectively called the Vision 1000 Servers) provide programmability using VoiceXML and CCXML industry-standard languages, optimized for video services. Supporting both audio and video services on the same platform allows an easy transition to video services. Because full gateway functionality is integral to Vision 1000 Servers, applications have full control over call functions such as outbound dialing, call forwarding, and conferencing.

Video Gateway

The Vision 1000 Video Gateway supports a wide range of carrier services, having integrated PSTN-to-SIP audio and video interworking functions, including programmable routing tables and CDR generation. With the ability to provide real-time bi-directional transcoding, the Vision 1000 Video Gateway enables dynamic and efficient interoperability between modern video sources and 3G mobile video devices.

Video Service Creation and Execution Environment

Dialogic offers the Vision 1000 Video SCE for rapid design, execution, and management of video and speech-enabled applications, including the Vicorp xMP Service Creation and Execution Environment integrated with the Vision 1000 Video Server. xMP is a unique graphic drag-and-drop tool based on VoiceXML that separates prompting and branding from the core application, enabling a level of code re-use, scaling, and maintainability that is difficult to achieve in most environments.

Interactive Voice and Video (IVVR) Kit

For customers needing to have greater control over their hardware platform, Dialogic offers Vision IVVR Kits — component bundles that include Dialogic® hardware and software required to support Vision Product functionality. Customers are responsible for integrating Vision IVVR Kits into the hardware platforms of their choice, and delivering finished products to the market.

Carrier-Ready and Highly Scalable Platforms

Vision 1000 Servers and the Vision 1000 Gateway are highly available and fully integrated carrier-ready 1U servers, ready to deploy at an operator or service provider, allowing developers to focus effort and investment on their applications. The servers and gateway incorporate network interfaces, network signaling, media processing, host computing resources, local storage, and administration through a web console or SNMP. Software licensing provides a convenient way to expand capacity and features.

Rich Multimedia Feature Set

For modern multimedia applications, access to internet content is as essential as the basic functions of prompting, interpreting responses, and recording. Vision 1000 Servers provide access to streaming content using the RTSP protocol, as well as access to 3GP mobile video files served over HTTP or local networks. The AAC audio decoder, along with real-time video transcoding, provides access to a wide variety of internet content, suitable for mobile subscribers. Real-time conferencing enables a social dimension to multimedia applications.

Voice and Video Applications on One Platform

Vision Products simultaneously support voice calls on RTP packet or T1/E1circuit channels, and video calls on RTP packet or T1/E1 circuits using the 3G-324M protocol. The capability of supplying the audio portion of a video call to a non-video endpoint positions application developers to quickly create and deploy rich multimedia solutions without complex routing and expensive external gateways, and to interoperate effectively in 2G, 3G, and 4G mobile networks.

Real-Time Any-to-Any Video Transcoding

Vision Products offer excellent efficiency and an enhanced viewer experience with real-time any-to-any video transcoding only when needed. Rate matching and size matching of video streams is available on demand, and video transcoding capabilities include H.264 to H.263/MPEG-4 for interoperability between web-based video content and mobile video handsets. Industry-standard fast call setup procedures such as MONA and WNSRP improve subscriber satisfaction when making 3G-324M calls.

		3G-324M Mobile Handset (QCIF)	SIP Video Phone (QCIF/CIF)	3GPP Stored Content (QCIF)	IP Video Streaming (QCIF/CIF)	2G/3G Non-Video Handset (audio only)
3G-324M Mobile Video Handset	H.264	✓	✓	✓	✓	✓
	MPEG-4	✓	✓	✓	✓	✓
	H.263	✓	✓	✓	✓	✓

Video Interworking Supported

Signaling for the Carrier Network

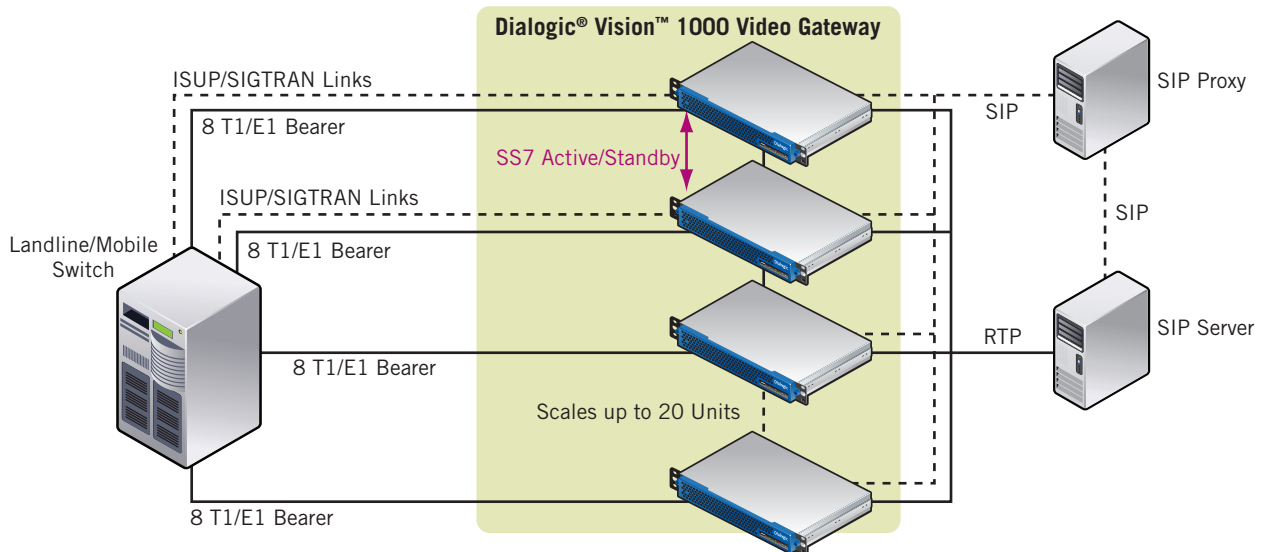
Having support for directly terminating calls in ISDN, SS7/ISUP, SIGTRAN, BICC, SIP-I, and SIP, Vision Products are suitable for deployment in a wide variety of carrier environments. SIP interworking to all supported telecom protocols is built into the Vision 1000 Servers and Gateway. Trial, test, or small-scale deployments can begin with only 1U of rack space.

Dialogic® Vision™ Products

Datasheet

Fast Creation and Simplified Deployment of Interactive Multimedia Services

The Vision 1000 Servers and Gateway can accommodate commercial deployments in carrier environments because two units will provide 1+1 signaling redundancy. Capacity can easily scale to more than 5,000 ports in a single point code, enabling N+1 pooling of media resources for complete system redundancy.



Full-Scale High-Availability SS7 Deployment

Web-Based Management

All Vision Products include web-based management with remote configuration, management, and monitoring. Multiple Vision 1000 Servers and Vision 1000 Gateways can be coordinated into a single “node” so that a single web view provides centralized monitoring, configuration, device control, call detail records, and reporting of key performance indicators. True lights-out remote management of a Vision 1000 Server or Vision 1000 Gateway is possible, even while a unit is powered down.

High Availability

The Vision 1000 Servers and the Vision 1000 Gateway are NEBS-compliant and ship with dual redundant hot-swappable power supplies and dual RAID disk drives. High-availability system features include redundant signaling, watchdog process monitoring, real-time temperature monitoring with thermal shutdown protection, and Baseboard Management Controller (BMC) with remote Ethernet access.

Fast Recovery

Even with NEBS-compliant hardware and high-availability features, the possibility of a hardware failure that decommissions a Vision Server is such that replacement hardware needs to be quickly added back to the resource pool in order to minimize operating risk. Spare hardware for Vision 1000 Servers and the Vision 1000 Gateway can be ordered at low cost, incorporating specialized licenses that enable quick on-site replacement of a failed unit, no matter the configuration and provisioning of that unit.

For More Information

For more information about the product discussed in this datasheet, contact your local Dialogic representative. Worldwide contact information can be found online at www.dialogic.com/contact.

Ordering Information

Part numbers for ordering Vision Products may be found in individual technology briefs. The following parts are common across Vision Products: A la carte licenses, spare hardware, and power cords.

A La Carte Licenses

The following A La Carte Licenses may be ordered to enhance functionality or expand the capacity of Vision Products. “Integrated” (VLI) licenses must be included as part of a purchase order with a Vision Product and will be integrated and shipped as a finished product. “Upgrade” (VLU) licenses are posted to the Dialogic License Activation Server and may be applied as a field upgrade to any Vision Product.

A La Carte Licenses (30 ports unless specified)	Integrated Part	Upgrade Part
Video Transcoder, Full Duplex	VLI-029-030	VLU-029-030
VoiceXML and CCXML License, Audio	VLI-003-030	VLU-003-030
VoiceXML and CCXML License, Video and Audio	VLI-004-030	VLU-004-030
Gateway License, Audio	VLI-013-030	VLU-013-030
Gateway License, Video and Audio	VLI-014-030	VLU-014-030
G.723 Audio Codec	VLI-017-030	VLU-017-030
G.729 Audio Codec	VLI-018-030	VLU-018-030
Developer 60-day full capacity, 240 ports		VLU-032-240

Spare Hardware

The Vision 1000 Servers and the Vision 1000 Gateway are based on a standardized hardware platform, which can be ordered as a spare hardware unit for rapid field replacement. The spare hardware units do not have any features or capacity activated; however, they can accept the license files from a failed unit and can immediately activate those licenses.

Spare Hardware	Part Number
Spare AC Media and SS7 Platform	VPA-001-000
Spare DC Media and SS7 Platform	VPD-001-000
Spare AC IP/TDM Media Platform	VPA-002-000
Spare DC IP/TDM Media Platform	VPD-002-000
Spare AC SS7 Signaling Platform	VPA-003-000
Spare DC SS7 Signaling Platform	VPD-003-000

Power Cords

Vision 1000 Servers and the Vision 1000 Gateway do not include a power cord in the standard product definition, so these must be ordered separately. Two power cords should be ordered for each server or gateway unit.

Power Cords	Part Number
DC Power Pigtail, 4M	83369
AC Power cord, 2M, North America, Asia	ACC000001
AC Power cord, 2M, GB	ACC000002
AC Power cord, 2M, FR, ES, DE	ACC000003
AC Power cord, 2M, IT	ACC000004
AC Power cord, 2M, CH	ACC000005
AC Power cord, 2M, AU	ACC000006
AC Power cord, 1M Right Angle Extension	ACC000010
AC Power cord, 2.5M Right Angle Extension	ACC000011

Technical Specifications

All Vision Products share a single software binary load; however, the availability of the following features and specifications will depend on the specific Vision Product licensing that has been activated. Please refer to individual Vision Product technology briefs for more details.

Video Gateway Support

3GPP-324M	H.223, Annex B (Level 2) H.245 ver 11 H.263, H.263+ MPEG-4 part 2 H.264 (MPEG-4 part 10)
Fast call setup	H.324 Annex A, C (CCSRL/NSRP/WNSRP) H.324 Annex K (MONA APC & MPC)
Audio processing	Pass-through and transcoded AMR-NB, G.711 transcoding for video calls
User indications	H.245 UII RFC 2833 In-band DTMF
Video transcoding	H.263, H.263+, MPEG-4 part 2, H.264
Video rate adaptation	42Kb to 384Kb, 6fps to 30 fps
Video size adaptation	QCIF, CIF
Video refresh	RFC 5168

Audio Gateway Support

Audio processing	Pass-through and transcoded AMR-NB, G.711, G.723.1, G.729a transcoding
User indications	RFC 2833 In-band DTMF
Fax support	Incoming fax detection on CNG, T.38 transport

Call Routing

DNIS to URI mapping
Configurable route table
CCXML 1.0 W D June 29, 2005 compliant
Call transfer (REFER)
Call bridging between audio and/or video calls
Video call tromboning
Early media (3G-324M requires switch support)

Technical Specifications *(continued)*

Media Transport

RFC 1889 (RTP/RTCP)
RFC 1890 (RTP profiles)
RFC 3550/3551 (RTP)
RFC 2833 (DTMF)
RFC 2429, RFC 2190 (H.263)
RFC 3267/IF2 (AMR)
RFC 3016 (MPEG-4)
RFC 3984 (H.264)
Nb-Up (for BICC/IP-324M)

Network Protocols

ISDN
ISUP/SS7
ISUP/SIGTRAN
BICC
SIP-I
SIP endpoints
SIP interworking with ISDN, ISUP, BICC, SIP-I

SS7/ISUP Compliance

Redundant support through external SS7 signaling server
Technology deployed in over 50 countries
China ISUP
EN 300-356-1, ETSI ISUP V.3, 1998
ETS 300-121, ETSI ISUP V.1, 1992
ETS 300-356-1, ETSI ISUP V.2, 1995
ETS 300-356-33, ETSI
Q.730-737, ITU-T, 1992
Q.761-764, ITU-T, 1997
Q.767, ITU-T, 1992
Q.784, ITU-T, 1996-1997
T1.113, 236, ANSI, 1995
NTT Q.761-764

SIGTRAN Compliance

M3UA (RFC 4666, ETSI TS 102 381 v1.1.1)
SCTP (RFC 2960, RFC 3309)

Technical Specifications *(continued)*

BICC Compliance

ITU-T Q.1902.1 – Q.1902.6, 07/2001
ANSI T1.673-2000
ANSI T1.673-2002 (CS1+)
Paired with media supported: Nb-Up (IP-324M)

ISDN Compliance

AT&T 5ESS10
Nortel DMS-100
Bellcore National 2
Euro ISDN and Euro Numbers
NTT INS 1500
QSIG
ANSI T1.607

SIP Compliance

RFC 3261 (SIP core)
RFC 3263 (Locating SIP Servers)
RFC 3264 (SDP Offer/Answer)
RFC 3515 (REFER)
RFC 3398 (ISUP/SIP mapping)
RFC 2327 (SDP)
RFC 2976 (INFO)
RFC 5168 (Video Refresh)

PSTN Physical Interfaces

8 or 16 T1/E1 trunks
T1: ANSI T1.102, T1.403
E1: G.703 2,048 kbps
MDO mini-RJ21 connector (per 8 trunks)
120 ohm termination or 75 ohm (optional)

SS7 Physical Interfaces (optional)

4 T1/E1 trunks, with or without voice channels
RJ-48C connectors, each with 2 T1/E1 trunks
4, 16, or 32 low speed links
4 high speed links (DS1)
120 ohm termination or 75 ohm (optional)

IP Media Physical Interfaces

Dual Gigabit Ethernet per 8 T1/E1 trunks
Dual Gigabit Ethernet per SS7 signaling card
Quad Gigabit Ethernet per Vision 1000 Server or Gateway
Configurable for failover or load balanced

Technical Specifications *(continued)*

Management

Web management console
Centralized node-level control and monitoring
Usage indication: CDR reporting and node-level aggregation
Key Performance Indicator reporting
Health monitoring and real-time alerting
Front panel visual, info/minor/major/critical
SNMP v1/v2/v3
Lights out management, IPMI 2.0 compliant
Detailed event logging with configurable levels

Physical Specifications

Height:	1.74 in (44 mm)
Width:	19 in (485 mm) ear-to-ear
Depth:	20.75 in (527.05 mm)
Weight:	26.80 lbs (12.16 kg)
Environmental:	0°C to 40°C operating -40°C to 70°C non-operating

Rack Mounting

1U, 19" rack mount (600 mm standard telecom rack)
Rack mount kit included (22" – 30.5", 4-post rack only)

Signal Entry Panel (SEP)

Passive convertor from mini-RJ21 to RJ-48C
For PSTN interfaces, up to 16 T1/E1 trunks

Height:	1.74 in (44 mm)
Width:	19 in (485 mm) ear-to-ear
Depth:	1.91 in (48.5 mm)
Weight:	2.6 lbs (1.18 kg)
Environmental:	0°C to 40°C operating -40°C to 70°C non-operating

Hardware Availability

Dual RAID 1 disks, hot swappable, front accessible
Dual 1+1 power supply, with dedicated fans, hot swappable, rear accessible
Quad fan subsystem for CPU and network cards, hot swappable, front accessible
Redundant network connections

Power Options

Dual 650 W AC
Dual 650 W DC

Technical Specifications *(continued)*

Media Capacity

VoIP gateway ports	480
Audio VoiceXML sessions	480
324M video gateway ports	240
Video VoiceXML sessions	240
Video transcoding ports	240 full-duplex, any-to-any (depends on codec type, image size and rate)

Capacity and feature upgrades through software license activation

Approvals, Standards, and Compliance

Hazardous substances: RoHS Compliance Information at <http://www.dialogic.com/rohs>

Compliance

Safety, EMC, Telco, NEBS-3/ETSI-designed

In certain cases, Vision Product certifications may be approved with the nomenclature AQR1U, AQR1UA or AQR1UB
<http://www.dialogic.com/products/others/declarations.aspx>



www.dialogic.com

Dialogic Inc
1504 McCarthy Boulevard
Milpitas, California 95035-7405
USA

Dialogic and Vision are either registered trademarks or trademarks of Dialogic Inc. and its affiliates or subsidiaries ("Dialogic"). Dialogic's trademarks may be used publicly only with permission from Dialogic. Such permission may only be granted by Dialogic's legal department at the address provided above. The names of actual companies and products mentioned herein are the trademarks of their respective owners.

Dialogic encourages all users of its products to procure all necessary intellectual property licenses required to implement their concepts or applications, which licenses may vary from country to country. None of the information provided herein forms part of the specifications of the product(s) and any benefits specified are not guaranteed. No licenses or warranties of any kind are provided hereunder.

Any use case(s) shown and/or described herein represent one or more examples of the various ways, scenarios or environments in which Dialogic® products can be used. Such use case(s) are non-limiting and do not represent recommendations of Dialogic as to whether or how to use Dialogic products.

Dialogic may make changes to specification, product descriptions, and plans at any time, without notice.

Aspects of one or more products mentioned herein are made and sold under license from Dilithium Networks, Inc.