Dialogic®

Datasheet

Media Gateway

Dialogic® IMG 1010 Integrated Media Gateway

Dialogic® IMG 1010 Integrated Media Gateway is a carrier-grade VoIP gateway that supports both media and signaling in a single chassis. It allows service providers to add new telephony services quickly, and gives them a clear migration path to an all-IP network.

The IMG 1010 provides any-to-any voice network connectivity and can deliver SIP services into legacy PRI, CAS, and SS7 networks, as well as IP-to-IP transcoding for network peering applications. Its compact 1U high-density design, integrated SS7 termination across multiple gateways, GUI-based management, and software licensing for in-service capacity expansion make the IMG 1010 an excellent option for VoIP.

The IMG 1010 also features the Dialogic® Programmable Protocol Language (PPL), which allows rapid implementation of SS7 ISUP variants and other signaling changes.

Features	Benefits
Simultaneous support for PRI and SS7 signaling and SIP and H.323	Provides a flexible, cost-effective platform that can evolve from TDM-IP to all IP
SS7 signaling, call routing, call translation, and IP transcoding supported in a single chassis	Can reduce complexity and administrative overhead for VoIP services, and allows on-the-fly voice coder conversion
Supports up to 1024 channels in a 1U chassis	Allows easy scalability from 96 to 1024 channels in a small footprint
Wireline and wireless support, including ENUM	Enables fast connection time and lower phone charges because callers can connect to each other directly without using the PSTN
NEBS 3 carrier-grade design uses independent network interfaces to separate transport, signaling, and OAM&P	Provides high reliability and service availability
Works with load balancers	Optimizes distribution of SIP traffic and improves scalability and fault tolerance

Technical Specifications

Routing Features

Call routing and translation based on ANI, DNIS, and Nature of Address, Time of Day, Day of Week/Year
Pre- and post-routing digit translations
Multiple routing algorithms per trunk group or groups of trunks for IP-to-TDM and IP-to-IP, both A-law and µ-law conversions
Pre-call announcement (branding)

IP Bearer Features

Coder support: AMR, iLBC, G.711, G.723.1, G.729 A/B, G.729 E/G, GSM-FR, G.726
Echo cancellation: G.168 128ms tail length
Voice activity detection
Comfort noise generation
T.38 Real Time Fax
Fax/modem bypass
Digit transmission via RFC 2833 (SIP and H.323) or H.245 UII (H.323)
Symmetric NAT Traversal

OAM&P

Centralized Element Management System
GUI-based system allows monitoring and provisioning of up to 32 gateways
Node wizard for simplified configuration
Centralized routing engine simultaneously configures gateways in the network
Radius (billing, authentication, prepaid)
Local time zone support
SNMP
MIBs: MIB-2, Interface, Alarms, DS0, DS1, and DS3
MRTG and Cacti reporting

Power Requirements

-48 VDC with voltage range (-40 V to -60 V)
120 - 240 VAC 50/60 Hz with voltage range (90 V to 240 V)
Power consumption: 90 W

Physical Specifications

Dimensions: 1.72 in. high (43.7 mm) x 17.25 in. wide (438.2 mm) x 19.00 in. deep (482.6 mm)
Weight: 18 lb (8.1 kg)

Resiliency

SS7 Signaling: 1+1 active/standby redundancy
Graceful software upgrade over multiple IMG 1010s
Virtual IP addresses for SIP load balancing (via third party server)

Capacity

96 - 768 TDM channels per 1U shelf (scalable from 3 E1/ 4 T1 to 24 E1 / 32 T1)
96 - 1024 VoIP channels per 1U shelf

I/O Interfaces

Telephony: T1 and E1, or DS3
IP: 4 - Fast Ethernet for control and signaling, 2 - Gigabit Ethernet for VoIP payload
T1/E1s for timing (BITS clock) and signaling
Loop timing via any telephony port

Technical Specifications (cont.)

TDM Signaling Protocols

ISDN PRI (FAS and NFAS): NI2, Euro ISDN, DMS 250, 5ESS, JATE/Japan INS-NET1500
T1/E1 CAS (FGB, FGD and MFR2)
Q.699 ISDN to SS7 mapping
ISUP UUII mapping to SIP
SS7/C7 ISUP: ITU and ANSI variants supported through the Dialogic® Programmable Protocol Language (PPL)
64 SS7 links (A-links and F-Links supported)

IP Signaling Protocols

H.323 v2
H.323 Keep Alive
RFC 2327 Session Description Protocol (SDP)
RFC 2976 SIP Info for digit transmission (#)
RFC 3261 SIP Basic
RFC 3262 SIP PRACK
RFC 3264 SDP Offer/Answer Model
RFC 3265 SIP Subscribe/Notify
RFC 3311 SIP Update
RFC 3325 Asserted Identity
RFC 3326 SIP Reason Header
RFC 3372 SIP for Telephones (SIP-T)
RFC 3398 ISUP/SIP Mapping
RFC 3578 ISUP Overlap Signaling to SIP
RFC 3581 Symmetric Response Routing
RFC 3666 SIP to PSTN Call Flows
RFC 3725 Third Party Call Control for SIP
RFC 4028 SIP Session Timer
SIP 3xx Gateway Responses
SIP Diversion Header
SIP Trunk Group IDs
SIP Coder Negotiation
SIP Busy Out
ITU-T Q.1912.5 – SIP and ISUP Interworking (includes SIP-I)

QoS

Adaptive jitter buffer
Packet loss compensation
Configurable Type of Service (ToS) fields for packet prioritization and routing

Approvals and Compliance

EMC/EMI

USA/Canada: FCC Part 15, ICES-003
European Union: EN55022: 1998/A1:2000/A2:2003, EN55024: 1998/A1:2000/A2:2003, EN300386: 2001 Ver. 1.3.3
Australia/New Zealand: AS/NZS CISPR 22:2002
Japan: VCCI

Safety

USA/Canada: CSA-C22.2 No. 60950-1-03
European Union: EN60950-1
Australia/New Zealand: AS/NZS 60950.1:2003

Technical Specifications (cont.)

Approvals and Compliance (cont.)

For information about RoHS compliance and global approvals, contact your Dialogic sales representative.

CB Scheme

International CB Scheme IEC 60950-1

Telecom Approvals

USA/Canada: FCC Part 68/IC CS03

European Union: TBR 4, 12, 13

Australia/New Zealand: AS/ACIF S-016 and S-038/TNZ Telepermit

Japan: JATE Green Book

Reliability/Warranty

Warranty information at http://www.dialogic.com/warranties

Estimated MTBF per Telcordia Method 1

AC power: 61,367 hours

DC power: 71,666 hours

Dialogic

To learn more, visit our site on the World Wide Web at **http://www.dialogic.com**

Dialogic Corporation
9800 Cavendish Blvd., 5th floor
Montreal, Quebec
CANADA H4M 2V9

01/08 10806-02