

Dialogic® IMG 1010 Integrated Media Gateway is a carrier-ready 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 and multimedia border element functions, such as SIP mediation for network edge 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 multimedia border element capabilities, including SIP mediation, topology hiding, and media transcoding

Facilitates efficient operations between incompatible network elements in a service provider infrastructure.

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 and DNS

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, RFC 4040 clear channel

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 and Network Time Protocol (NTP)

SNMP

MIBs: MIB-2, Interface, Alarms, DS0, DS1, and DS3

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)

Technical Specifications *(continued)*

Resiliency

- SS7 Signaling: 1+1 active/standby redundancy
- DS3 N + 1 active/standby redundancy
- Redundant Element Management System servers
- Graceful software upgrade over multiple IMG 1010s
- Graceful busy out per trunk group
- Virtual IP addresses for SIP load balancing (via third party server)
- Local termination of ISUP links and IP backhaul to IMG 1010 signaling node
- Call Release due to media inactivity timeouts
- Optional dual DC power

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

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
- ISDN UUI mapping to SIP and H.323
- SS7/C7 ISUP: ITU and ANSI variants supported through the Dialogic® Programmable Protocol Language (PPL)
- SS7 TCAP for message-waiting-indication service
- 64 SS7 links (A-links and F-Links supported)
- E1 to DS3 mapping (for third party STM-1 multiplexor compatibility)

IP Protocols

- H.323
- H.323 v2
- H.323 Keep Alive

Technical Specifications *(continued)*

SIP and Related Specifications

RFC 2246 Transport Layer Security (TLS) for SIP
RFC 2327 Session Description Protocol (SDP)
RFC 2976 SIP Info for digit transmission (#,*) and interworking DTMF
RFC 3261 SIP Basic
RFC 3262 SIP PRACK
RFC 3263 Locating SIP servers for DNS lookup SRV and A records
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 3515 SIP Refer
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 3764 ENUM for SIP Address of Record
RFC 4028 SIP Session Timer
RFC 4244 SIP History info (for call diversion)
RFC 4904 SIP tgrp (trunk group) parameter
SIP 3xx Gateway Responses and 302 Initiate
SIP Diversion Header
SIP Trunk Group IDs (OTG, DTG)
SIP Coder Negotiation
SIP Busy Out
ITU-T Q.1912.5 – SIP and ISUP Interworking (includes SIP-I) and Overlap signaling (SIP to SIP ISUP)
SIP mediation (SIP to SIP)
SIP to SIP-I/SIP-T

SIGTRAN

RFC 3332 — M3UA Adaption Layer
M3UA Application Server
M3UA Signaling Gateway for TCAP/SCCP

Technical Specifications *(continued)*

QoS

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

Approvals and Compliance

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

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

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

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