Dialogic® I-Gate® 4000 SIP Gateway

Bridging TDM to SIP and VoIP Services

Datasheet

The Dialogic® I-Gate® 4000 SIP Gateway is a feature-rich bridge from legacy TDM-based networks to next generation SIP IP-based networks. The I-Gate 4000 SIP Gateway enables service providers to reduce the cost of supplying voice services to enterprise customers using legacy TDM PBXs by allowing them to access IP and SIP-based services. In addition, multi-site enterprises can use the I-Gate 4000 SIP Gateway to interconnect locations that are still using legacy TDM voice switches with other sites that have already been migrated to VoIP.

Features	Benefits
Can be configured for six-nines reliability	Supports zero-downtime applications
Up to 16:1 compression with high voice quality	Includes industry-leading voice compression while maintaining toll quality
Maintains call processing performance, voice quality, and compression rates, even at maximum load	Provides sustained performance
Supports a comprehensive set of digit handling, call routing and IP QoS features	Delivers a high degree of flexibility and optimized performance
GUI-based xMS management system	Allows easy configuration and management
Open architecture and standards compliance	Enables multi-vendor interoperability

Handling SIP in a Hybrid Network Environment

The unrivaled hardware architecture and industry-leading signaling and media handling features of the I-Gate 4000 SIP Gateway combine to form a powerful platform for bridging TDM and IP networks.

The I-Gate 4000 SIP Gateway can be deployed in a fully redundant configuration providing six-nines reliability and high availability. Its support for full system redundancy is without comparison, and lack of full redundancy means typically having to settle for availability below five-nines. High reliability is especially important because the I-Gate 4000 SIP Gateway is often placed at the customer premise, where access may be difficult and time-consuming.

Figure 1 shows an example of how I-Gate 4000 SIP Gateways can be used in a hybrid TDM-IP network environment.

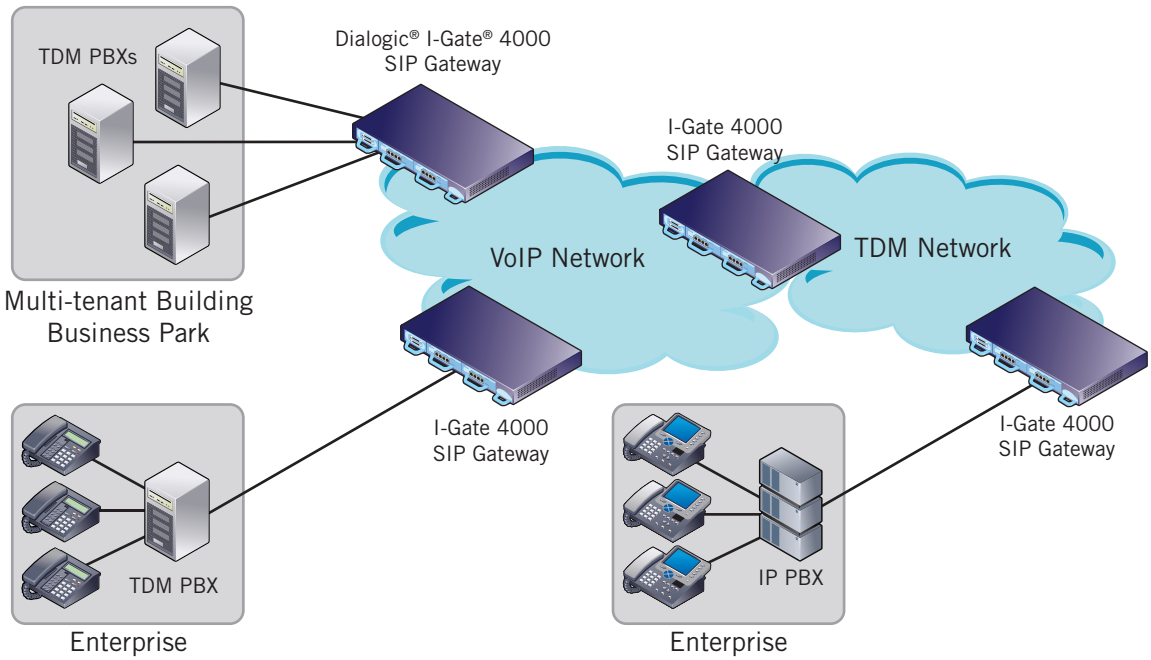

Figure 1. Dialogic® I-Gate® 4000 SIP Gateways in a Hybrid Network Environment

Optimized Call Handling and Other Benefits

The I-Gate 4000 SIP Gateway supports a comprehensive set of digit handling, call routing, and IP QoS features to optimize call handling. To simplify configuration and deployment and reduce operating costs, the I-Gate 4000 SIP Gateway is fully supported by the GUI-based xMS management system.

The I-Gate 4000 SIP Gateway also leverages the field-proven compression technology in the Dialogic® I-Gate® 4000 Media Gateway family to provide industry-leading compression levels of up to 16:1 without sacrificing voice quality. This capability is especially useful for reducing IP transport costs when extending services to remote locations.

Technical Specifications

Traffic Capacity

480 simultaneous calls max

Traffic Processing

Silence Suppression

G.711, App 2
G.729A, Annex B
G.729A, App 2 (G.711)
G.723.1, Annex A

Voice Codecs

G.711 PCM @ 64 kbps (A-law and μ-law)
G.729A (+B), CS ACELP @ 8 kbps
G.723.1, ACELP/MPMLQ @ 5.3, 6.3 kbps

Fax Support

Group 3 fax
ITU T T.38 fax relay or pass-through to G.711
V.27, V.29 and V.17 (up to 14.4 kbps)

VBD/Modem Support

Pass-through to G.711
V.22, V.23, V.32, V.34, V.90, and V.92
Operator configurable maximum number of VBD/modem calls (and transparent channels)

Echo Cancellation

ERL: 6 dB
ITU T G.168 and G.165 compliant
Up to 128 msec echo tail length
Dynamic echo cancellation controlled by signaling
Non-linear Processor (NLP) enable/disable

DTMF Support

In-band, DTMF relay (RFC 2833)
Out-of-Band, INFO method (RFC 2976)

Jitter Buffer

Adaptive
Up to 300 msec network jitter

Technical Specifications *(continued)*

Trunk Interfaces (PBX)

Up to 16 E1
Up to 20 T1

Packet Network Interface

Physical

Fast Ethernet (100BaseT)
TDM: E1 or T1

WAN Protocol

PPP
MLPPP

Signaling

RFC 3261
RFC 3264
RFC 4028
RFC 4566

Management

SNMP v2 (RFC 1907) for runtime configuration, status, alarm
FTP (RFC 959) for software and map download/upload

Power

Max dissipation	76 W
DC Nominal	-48/-60 V
DC Max/Min	-75/-36 V
AC Nominal	-220/110 V
AC Max/Min	90/265 V

Physical Specifications

Dimensions (H*W*D)	Height: 44.45 mm (1U) Width: 435 mm Diameter: 350 mm
Weight	4 (kg)

Redundancy

Main module
Power supply and input
TDM bearer
Fan tray and turbo support

Technical Specifications *(continued)*

Environmental

Operating Temperature	-5°C - 50°C
Relative Humidity	10% - 95% RH

Availability

99.9999% (six 9s)

Regulatory Standards

Safety

UL 60950-1:2003
CAN/CSA -C22.2 No. 60950-1-03
CE EN60950-1:2001
CB IEC60950-1:2001 1st Ed.
German: EN60950-1:2001+A11

Environmental

ETSI — TS300 019
Telcordia GR-63-CORE

EMC

Emission: EN55022
Immunity: EN61000-4 2, 3, 4, 5, 6, 11
EN 300 386 V1.3.2 (2003-05)
FTZ 1TR9:06-2002
FCC CFR 47 part 15
ICES-003
VCCI V-3/2001.04
CISPR 22:04

Approvals, Compliance, and Warranty

Hazardous substances	RoHS compliance information at www.dialogic.com/rohs
Country-specific approvals	Contact your local Dialogic sales representative
Warranty	Contact your local Dialogic sales representative

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10/10 12118-01