

Dialogic® Diva® softIP for SIP Software provides the same telephony and fax functionality as a Dialogic® Diva® Media Board, and can be used instead of a Diva Media Board in an application that was originally written for one of the Application Programming Interfaces (APIs) used with Diva Media Boards. Diva softIP for SIP can act as a “virtual” media board, providing telephony and fax functionality in an IP software-only solution that scales from 1 to 120 VoIP/FoIP channels (phone lines) per server, or it can provide telephony and fax functionality in a hybrid TDM/IP solution when used with a Diva Media Board, scaling from 2 to 240 VoIP/FoIP channels per server.

Diva softIP for SIP supports the three Dialogic® Diva® APIs in the Diva SDK, as well as other APIs, including CAPI, COM Port, TTY, and Dialplan.

This datasheet discusses the following products:

- Dialogic® Diva® softIP for SIP (Telephony)
- Dialogic® Diva® softIP for SIP (Telephony and T.38 Fax)
- Dialogic® Diva® softIP for SIP (Upgrade)

Features	Benefits
Support for the three Dialogic® Diva® APIs in the Dialogic® Diva® Software Development Kit (SDK) as well as CAPI, COM Port, TTY, and Dialplan	Allows Diva softIP for SIP to work with existing applications written for Dialogic® Diva® Media Boards
Supplementary service support	Enables seamless use of common telephony services such as call diversion, call transfer, call hold, and message waiting in both hybrid and IP-only environments
Supports high-speed FoIP in T.38 and G.711 pass-through mode	Permits use of legacy fax machines in an IP environment with up to 33.4 kbps connection speed
Handles VoIP-specific call control	Frees developers from dealing with SIP integration, allowing them to concentrate on enhancing applications, which speeds development and reduces time-to-market
Supports three configurations: IP only, hybrid TDM and IP, and IP with TDM functionality	Provides flexibility in using Dialogic® Diva® technology, allowing software only or software and TDM board combinations, depending on functionality required
Ability to activate additional channels and features, as needed, using a flexible software licensing model	Permits easy scalability that allows initial development on a small platform followed by deployment to a much larger platform
Ability to bind licenses to a Dialogic® Diva® Activation Key Infrastructure (AKI) USB dongle instead of a server	Allows Diva softIP licenses to be moved to different server hardware easily

Diva softIP for SIP supports open standards (SIP, T.38 FoIP, and RTP) and can enable a seamless migration of existing fax, voice, and unified messaging applications to an all-IP communications environment. Diva softIP for SIP provides access to Soft PBX and IP Call Manager platforms using SIP and RTP, and permits applications based on a supported Dialogic® Diva® API or CAPI to work with IP phones and softphones in an IP telephony environment.

Diva softIP for SIP allows developers to avoid implementing the SIP protocol and instead to concentrate on enhancing their applications, greatly reducing development effort and time-to-market. Because it supports important supplementary telephony services and T.38 real-time FoIP, Diva softIP for SIP lets sophisticated unified messaging and call center applications work transparently within both existing telephony and IP environments.

Diva softIP for SIP supports three basic configurations:

- **Pure IP** — Enables a VoIP/FoIP environment that supports telephony services in a software-only environment using the three Diva APIs in the Diva SDK and other supported APIs
- **Hybrid TDM and IP** — Allows an application created with the Dialogic® Diva® SDK or other supported APIs to connect to both TDM and IP lines and to offer the same or similar services in both environments; requires both Diva Media Boards and Diva softIP for SIP
- **Supplemented IP** — Permits TDM functionality (V.90/V.34 modem or V.34 fax) to be retained after migration to pure IP; requires Diva softIP for SIP used in conjunction with Diva Media Boards. In this configuration, the Diva Media Boards are not connected to a TDM line; instead, the Digital Signal Processors (DSPs) on the Diva Media Boards add their processing capabilities to those of Diva softIP.

Technical Specifications

Quick Reference

API	Dialogic® Diva® APIs in the Dialogic® Diva® Software Development Kit (SDK) CAPI 2.0, TTY, COM Port Dialplan
Functionality	Call control (SIP) Supplementary services Fax (T.30 Group 3 and T.38 FoIP) In-band DTMF and DTMF relay (RFC 2833)
Media streaming	RTP; G.711
Network interface	IP over Ethernet (NDIS-5) — uses NIC from host system Dependent on Dialogic® Diva® Media Boards in use: ISDN BRI, ISDN PRI, E1, T1, analog loopstart
Channel density	Up to 240 concurrent (hybrid TDM/IP); up to 120 concurrent (pure IP) Up to 8 Ethernet or Diva Media Boards
Operating systems	Windows®; Linux. Details at http://www.dialogic.com/systemreleases
Interoperability	Cisco (Unified Communications Manager, Unified Communications Manager Express, VoIP gateway), Netwise (gateway), Bintec/Funkwerk (gateway), Patton (gateway, 4960), Quintum (gateway), NEC/Philips (IP PBX IS3000), Avaya (SES), Asterisk, Innovaphone (gateways, IP phones), Polycom (IP phone), SIPPS (softphone), Snom (IP phone), Telebau (gateway, IP phone), Siptronic (IP phone), Kapanga (softphone)

Application Programming Interfaces

- Diva APIs from Diva SDK
- CAPI 2.0, 4th Edition, featuring:
 - B-channel protocols, 64 kbps bit transparent, transparent, T.30
 - Fax support T.30, MH, MR, MMR, ECM
 - DTMF recognition and generation (in-band and out-band)
 - Conferencing via line interconnect
 - Explicit Call Transfer with Consultation Call
- Asterisk-based “Dialplan applications” (mainly used for adding T.38 fax to Dialplan applications)
- TTY and COM Port

Features

- VoIP call control
 - Session Initiation Protocol (SIP), RFC 3261
 - Session Description Protocol (SDP), RFC 2327
 - Further SIP Methods: INFO (RFC 2976), NOTIFY (RFC 3265), REFER (RFC 3515), SUBSCRIBE (RFC 3265), REGISTER (RFC3261) with digest authentication
- Supplementary services
 - Numbering services (abstracted as Called Party Number, Calling Party Number/CLIP, Redirecting Number)
 - Call hold/retrieve
 - Blind transfer
 - Message Waiting Indication (MWI)
 - Explicit Call Transfer (ECT)

Technical Specifications *(continued)*

- Fax services
 - T.30 Fax Group 3 up to 33.6 kbps using T.38 real-time fax over IP
 - T.30 Fax Group 3 up to 33.6 kbps using G.711 pass-through mode (requires Dialogic® Diva® Media Boards for BRI or PRI)
 - Fax compression MH, MR, MMR
 - Error Correction Mode (ECM)
- Tone processing features
 - DTMF generation and recognition (in-band)
 - DTMF relay, RFC 2833
- Media streaming
 - IP Real-time Transport Protocol (RTP)
 - G.711 coder, 64 kbps (64 kbps, A-law, μ -law), 10 ms, 20 ms and 30 ms packetization time
- Network interface
 - IP over Ethernet with any NDIS-5 compatible Ethernet adapter
 - ISDN BRI, ISDN PRI, E1, T1, analog loopstart with Diva Media Board
- Channel density
 - Ethernet adapters and Diva Media Boards can be mixed and matched
 - Up to eight adapters (Ethernet or Diva Media Board) per system
 - Up to 240 concurrent channels in TDM/IP hybrid configuration
 - Up to 120 concurrent channels in stand-alone IP configuration
- Operating system requirements
 - Windows®; Linux. Details at <http://www.dialogic.com/systemreleases>

Ordering Information

Dialogic® Diva® Product	Order Code	Description
Diva softIP for SIP SW-License Telephony, per channel	M01-040	Telephony includes SIP, RTP, DTMF, G.711 support
Diva softIP for SIP SW-License Fax T.38 including Telephony, per channel	M02-040	Fax and Telephony includes T.38 Real-Time Fax over IP, SIP, RTP, DTMF, G.711
Diva softIP for SIP SW-License Fax T.38 Upgrade per channel	M05-040	Upgrade from M01-040 to M02-040,
Dialogic® Diva® Activation Key Infrastructure (AKI) USB dongle	300-379	Licenses can be bound to a Diva AKI USB dongle instead of a particular server, allowing the licenses to be moved to different servers, as needed
Dialogic® Diva® BRI-2 Media Board (PCI)	306-162	Diva softIP can use this Diva Media Board to implement support for clear channel modem (V.34) and fax (V.17/V.34)
Dialogic® Diva® BRI-2 Media Board (PCle)	306-342	Diva softIP can use this Diva Media Board to implement support for clear channel modem (V.34) and fax (V.17/V.34)
Dialogic® Diva® 4BRI-8 Media Board (PCI)	305-486	Diva softIP can use this Diva Media Board to implement support for clear channel modem (V.34) and fax (V.17/V.34)
Dialogic® Diva® 4BRI-8 Media Board (PCle)	306-341	Diva softIP can use this Diva Media Board to implement support for clear channel modem (V.34) and fax (V.17/V.34)
Dialogic® Diva® PRI/E1-30 Media Board (PCI)	306-209	Diva softIP can use this Diva Media Board to implement support for clear channel modem (V.34) and fax (V.17/V.34)
Dialogic® Diva® PRI/E1-30 Media Board (PCle)	306-304	Diva softIP can use this Diva Media Board to implement support for clear channel modem (V.34) and fax (V.17/V.34)

www.dialogic.com

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

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