

# Host Media Processing Software

*Media-Processing Software for Cost-Effective IP and TDM-Based Telephony Solutions*

## Features

- HMP Software 3.0 introduces security features to encrypt media and signaling information for media transactions. Secure RTP (SRTP) provides encryption, message authentication, and integrity and replay protection to RTP data so that conversations cannot be stolen for later playback. Transport Layer Security (TLS) is available in SIP to protect signaling data so that dialing or keypad input information cannot be stolen.
- When deployed in the TDM network with Dialogic® Digital Network Interface boards, HMP Software supports a wide range of PSTN protocols including ISDN and CAS. The boards are software selectable T1 and E1 trunks, and extend the flexible software model with downloadable firmware.
- HMP Software is compliant with important industry standards (including the IETF RFC 3261 SIP standard and ITU H.323 and H.450.2 specifications), which allow easy interoperability for call control with a wide range of gateways, gatekeepers, and other IP endpoints.
- HMP Software also supports RTP/RTCP protocols for media streaming over IP using G.711, G.726, G.723.1, and G.729ab formats and a standard Ethernet NIC for network connectivity. To improve the quality of media streaming over the network, the Dialogic HMP Software supports frame sizes of 10 ms, 20 ms, and 30 ms (for G.711), and features such as Quality of Service (QoS) threshold alarms and packet loss concealment. Additional QoS features include the ability to detect and report timeouts in RTP and RTCP sessions to an application and change the default TOS byte setting in the Windows® Registry during installation.
  - Dual Tone Multi-Frequency (DTMF).
  - User-defined tone detection and generation, including industry-standard RFC 2833 and H.245 user input indication (UII) mechanisms.
  - Support for outbound call progress analysis with positive voice detection and positive answering machine detection algorithms.
  - Support for continuous speech processing functionality with APIs fully compatible with other Dialogic boards so Dialogic HMP Software can integrate with Automatic Speech Recognition (ASR) and Text-To-Speech (TTS) engines.
  - Ability to scale up to 750 concurrent user sessions per system of voice conferencing using G.711 and up to 580 conferees per server using G.711.

## Licensing

HMP Software is implemented as a software-only product and it can be installed and upgraded as easily as other software. HMP Software is licensed using an industry-standard model that node locks the software using FlexNet software from Macrovision.

HMP Software can be licensed and deployed in any combination of call control and media processing channels, enabling customers to choose the combination of media processing resources they need.

Type of Resource	Features
IP Call Control	Provides call control stacks for the H.323 with H.450.2 supplementary services, and SIP Protocols. <i>Can only be used together with the RTP G.711 resource.</i>
RTP G.711	Provides the capability of streaming digitized voice over RTP, using the G.711 coder with 10 ms, 20 ms, 30 ms frames as well as SRTP. <i>Required for each RTP session.</i>
Speech Integration	Integrates HMP with speech engines for ASR and TTS support by using the continuous speech processing APIs. <i>Add on top of the voice resource.</i>
Enhanced RTP	Adds the capability of streaming voice over RTP using G.723.1, G.729a, and G.729b coders to the RTP G.711 resource. <i>Add on top of the RTP G.711 resource.</i>
Voice	Allows play with volume control, record with AGC, DTMF, user-defined tone detection and generation, including RFC 2833 and H.245 UII

## Technical Specifications

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### NETWORK INTERFACE

IP over a standard Ethernet connection

### CALL CONTROL OVER IP

#### Call control protocol

SIP

H.323

H.450.2

### MEDIA STREAMING OVER IP

#### Protocols

RTP

Encoding formats: G.711 A-law,  $\mu$ -law 8-bit 8K (64 kbps); frame sizes 10 ms, 20 ms, and 30 ms

Secure RTP (SRTP)

G.723.1

G.726

G.729a

G.729b

G.729ab

#### QoS

Alarms

Frames per packet control

Packet loss concealment

RTP/RTCP timeouts

Ability to modify the default TOS byte setting

#### Tone generation and detection

RFC 2833

H.245 UII

#### Media control over RTP

Programmatic control of inbound RTP stream gain and outbound RTP stream volume

### CHANNEL DENSITY

A maximum of 750 concurrent user sessions per system of voice or 580 conferencing using G.711. A wide variety of other configurations that combine RTP streaming, voice, fax, speech, multimedia, and conferencing resources are also available, and the maximum number of concurrent sessions per system is configuration-dependent.

### VOICE PROCESSING FEATURES

#### Features supported

Play, record, and tone generation and detection

#### Play

Volume control and index play

### Record

AGC

#### Audio file formats for play /record

OKI ADPCM 24K, 32K

G.711 A-law,  $\mu$ -law 48K, 64K

All of the above in Wave format

Linear PCM 8b 11K (Wave format only)

Linear PCM 8b 8K

#### Tone generation and detection

In-band DTMF generation and detection

User-defined global tone generation and detection (GTG, GTD)

RFC 2833 tone generation and detection

H.245 UII tone generation and detection

### SUPPORTED DIALOGIC® HMP INTERFACE BOARDS

#### Network Interface

Diallogic® DNI/300TEPHMP Digital Network Interface Board

– one span with 24 T1 or 30 E1 channels

Diallogic® DNI/601TEPHMP Digital Network Interface Board

– two span with 48 T1 or 60 E1 channels

Diallogic® DNI/1200TEPHMP Digital Network Interface Board

– four span with 96 T1 or 120 E1 channels

### LICENSING

#### Enabling method

Node-locked using FlexNet licensing utility

### HARDWARE SYSTEM REQUIREMENTS

#### Memory Requirements

1000 MB recommended

#### System Requirements

IP-only solutions — single- or dual-processor platform with an Ethernet NIC (Note: 100BaseT is recommended).

Converged solutions — single- or dual-processor PIC platform with an Ethernet NIC and digital interface boards for HMP from Diallogic.

#### Processors Supported

Dual-Core and Quad-Core Intel Xeon processor-based platforms, and Dual-Core AMD Opteron processors.

#### Operating System Requirements

Microsoft® Windows® XP (including Service Pack 2), Windows® Server 2003, or Windows® Server 2003 R2 Enterprise Edition



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