

The Dialogic® Software Video Transcoder (SVT) provides scalable, real-time MPEG-4, H.263, and H.264 transcoding for video application developers. SVT works in conjunction with Dialogic® NaturalAccess™ Video Access Toolkit and Dialogic® CG Series Media Boards.

Developers designing video applications, such as video mail, video chat, and streaming video, can take advantage of the SVT's dynamic management of transcoder resource pools. This innovative feature provides a cost-effective use of scarce transcoder resources. In addition, combining video with the text and image overlay features of SVT enables developers to enhance user interaction with the application.

Developers also need the ability to guarantee a given Quality of Service (QoS) for streaming video applications. To address this need, SVT supports QoS via a user-configurable IPv4 Type of Service (ToS) field.

## Features

- **Video transcoding engine implemented as a networked resource** — Provides a scalable option that allows the user to incrementally grow resources as needed
- **Low-delay transcoding and transrating engine** — Supports 3G-324M and IP terminals running at different frame rates and sizes in real-time applications
- **Half-duplex channel access** — Enables efficient resource utilization in support of gateway, messaging, and batch processing applications running simultaneously
- **Text and image overlay** — Allows text, menus, and other graphics to be combined with video content to enrich the user experience
- **Runs on the Linux operating system** — Makes the SVT compatible with affordable and scalable hardware platforms
- **Interoperable with Dialogic® NaturalAccess™ Video Access Toolkit** — Can reduce time-to-market for video gateway or messaging applications

## Seamless Interoperability

Support of industry-standard protocols and formats (including RTP, MPEG-4, H.263, H.264, and RTCP) provides a high degree of interoperability.

Seamless interoperability is also enabled by client-side APIs, which give mobile video application developers fine-grained control over transcoding functions, such as format conversion, transrating, and transcoding performed on a per stream basis.

## Unmatched Performance

SVT is tuned for low-latency, real-time throughput, and error resilience. These properties are important for delay-sensitive applications, such as 3G wireless video conferencing, streaming video, and multimedia gaming.

## Architecture

The architecture of SVT has three elements:

- **Video Transcoding Platform (VTP)** — Networked system performing the transcoding operations
- **Transcoder Resource Control (TRC)** — API controlling the VTP through a network IP connection
- **Video Transcoder Management Interface (VTMNG)** — Manages transcoder resources with an API through an IP connection

Figure 1 provides an illustration of this architecture. The TRC is co-located on the same system as the video application, and VTPs can be distributed across multiple systems. One TRC supports up to five networked VTPs.

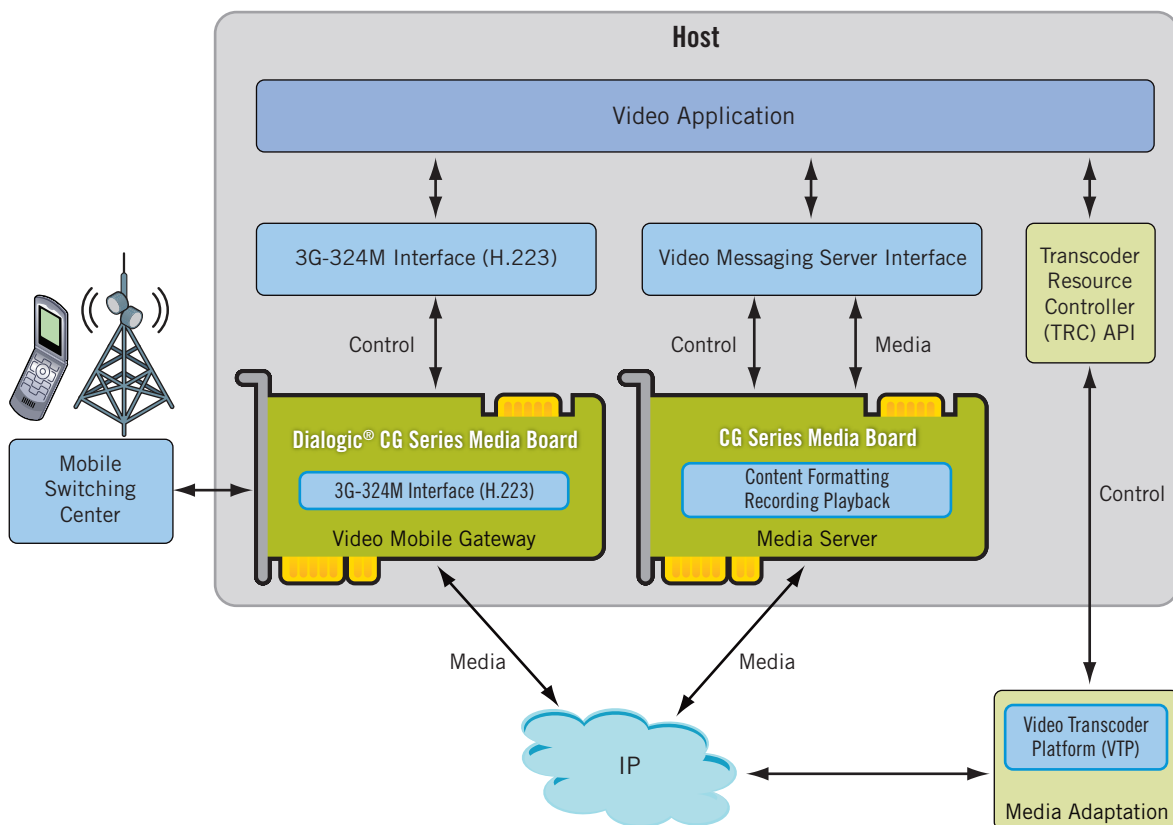


Figure 1. SVT Architecture

## Technical Information

### General

Seamless integration with Dialogic® NaturalAccess™ Video Access Toolkit for real-time configuration of transcoding resource on a session-by-session basis

Transcoding and transrating of permutations among MPEG-4, H.263, and H.264

Support for text and image overlay

Features supported per half-duplex (simplex) channel

### IP Interface

Video transported over RTP/UDP

RFC3550 and RFC3551 for RTP and RTCP

RFC2190 (for H.263)

RFC2429 (for H.263)

RFC3016 (MPEG-4)

RFC3984 (H.264)

Proprietary protocol over IP with APIs

### Video Formats

H.263 baseline profile level 10, 20, 30, 45

MPEG-4 simple profile levels 0 through 3

H.264 baseline profile levels 1-1.3, 2-2.2, 3

### Transcoding (and Transrating)

Picture format, frame rate, and bit rate adaptation

Among all video codecs (MPEG-4, H.263, H.264)

### Frame Size and Rates

QCIF, CIF

Programmable output up to 30 frames/second

Programmable output from 25 kbps to 2000 kbps (depending on codec level)

### Input Resiliency

Reordering out-of-order packets

Optional filtering of partial frames

### Quality of Service

User programmable IPv4 ToS

RTCP

### Configuration Flexibility

Five networked VTPs supported per TRC

Multiple application-sharing of one VTP

Remote management for configuration, status, and statistics

## Technical Information *(continued)*

### VTP Hardware Environment

Recommended system requirements

- Dual E5540 processors
- Dual 1 Gbps Ethernet interfaces

### VTP Software Environment

Supported Operating System

- Red Hat Enterprise Linux ES 4.0, 32-bit and 64-bit compatibility mode

### TRC Software Environment

Supported Operating Systems

- Windows 2003 Server® Enterprise Edition
- Red Hat Enterprise Linux ES 4.0 (32-bit)

### Estimated Density (per VTP)

Maximum density (that is, maximum number of ports or channels) depends on system hardware, codec configuration, picture size, bit rate, frame rate, bitstream complexity, and other factors. Because of these variables, the maximum number of ports achieved in a particular environment may be higher or lower than the following estimates:

- Estimated maximum number of half-duplex ports per VTP: 480
- Estimated maximum number of full-duplex ports per VTP: 240

## Ordering Information

Order Code	Description
<b>Runtime Licenses</b>	
VHL300004	Software Video Transcoder 3.0 license, 4 sessions
VHL300024	Software Video Transcoder 3.0 license, 24 sessions
VHL300030	Software Video Transcoder 3.0 license, 30 sessions
VHL300060	Software Video Transcoder 3.0 license, 60 sessions
VHL300120	Software Video Transcoder 3.0 license, 120 sessions
VHL300240	Software Video Transcoder 3.0 license, 240 sessions
VHL303120	Video Transcoder 3.0, 120 sessions, 45 Day Trial



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