

MPEG-4 AVC/H.264

Real-time Encoding Module

Optibase's MPEG-4 AVC/H.264 encoding module enables live encoding and transcoding of next generation CODECs with Optibase's MGW IPTV platforms. The MPEG-4 AVC module is a high-performance real-time encoder that can process any analog, digital or DVB (MPEG-2) video input into MPEG-4 AVC. This module is part of a system specifically designed to address applications where high availability, full redundancy and no single point of failure are all crucial parameters.



Key Features

MPEG-2 DVB-ASI Transcoding

Service providers that already support MPEG-2 signals from satellite TV feeds can now process these same channels into MPEG-4 AVC without changing their existing head-end infrastructure. The MPEG-4 AVC module has on-board transcoding capabilities and requires no additional video decoding or processing components.

CODEC Flexibility

Each MPEG-4 module utilizes a strong set of on-board state-of-the-art DSP processors that encode and multiplex video and audio streams according to MPEG-4 AVC/H.264 industry standard. The MPEG-4 module is software upgradeable to other next-generation algorithms such as VC1.

Carrier-Grade Design

Each module in Optibase's IPTV platforms is a stand-alone unit, controlled through a dual-star IP backplane and totally independent from other encoding modules. A real-time operating system controls each module separately, assuring constant streaming of live TV content. Modules can be configured to 1+1 and N+K redundancy according to application demands. All parts are hot swappable and support hot-standby redundancy.

Main and Baseline Profile

Through its ability to encode Baseline and Main profiles, the same MPEG-4 AVC module can address low resolution and low bit-rate applications. The Baseline profile provides very low latency (mandatory for military and surveillance applications) and dramatically low video bit-rates (ideal for mobile and PC streaming).

Technical Specifications

Inputs

Video	1 or 2 video channels per board Serial digital SDI (625/525) Analog composite and S-video (PAL/NTSC)
Audio	Stereo pair per channel Balanced or unbalanced (user configurable) AES-EBU or embedded audio for SDI
Transcoding	2 DVB-ASI inputs per board MPEG-2 Transport stream over DVB/ASI



Output (MGW5100/1100 platforms)

- MPEG Transport stream
- CBR or VBR bit-rate control
- IP (10/100/1000Mbps)
- ATM (Native or IPoA)

Video CODEC

ISO/IEC 14496-10 (MPEG-4 part 10, AVC) / H.264

- Main profile level up to 3 (MP@L3) – Latency 300 msec
- Main profile (MP@L3, MP@L3.1, MP@L3.2)
- Baseline profile (BP@L1, BP@L2)
- Bit-rate range: 256K to 2.5Mbps
- Interlace support
- Configurable GOP structure with B frame support
- VBV size controlled by user
- Sub-pixel accuracy – Full, Half or Quarter (user defined)



Audio CODEC

AAC HE - ISO/IEC 14496-3:2001

- AAC or AAC+ (user configurable)
- MPEG-1 L2
- Bit-rate range: 48 - 256 Kbps
- Sampling rate: 32 - 48 KHz

Transport Stream Multiplexer

ISO/IEC 13818-1 H.222.0

- Audio and data PID pass-thru (Dolby® Digital Audio, MPEG-1 Layer 2 and MP3)
- Transport stream headers – configurable spacing
- Configurable PSI/SI information table (PID re-mapping)

Video Resolutions

- Main Profile - Half D1 to Full D1 (Horizontal 720, Vertical 576 or 480)
- Baseline Profile – CIF up to Full D1

Corporate Headquarters

7 Shenkar Street
Herzliya 46120, Israel
Tel: +972-9-970-9288
Fax: +972-9-958-6099

North America Headquarters

1250 Space Park Way
Mountain View
CA 94043, USA
Tel: +1-800-451-5101
+1-650-230-2400
Fax: +1-650-691-9998

info@optibase.com
www.optibase.com