

# H.264/AVC Main Profile Encoder/Decoder

## High quality, high speed, low power consumption

Powered by original computing algorithm "DMNA" based on mathematical methods

### 1 Abstract

- Techno Mathematical has developed a software encoder/decoder that complies with H.264/AVC (ISO/IEC 14496-10).
- By incorporating the proprietary computer algorithm "DMNA" it achieves high-speed processing with lower power consumption compared to general free software such as OpenH264.
- Efficient parallel processing delivers superior throughput for environments requiring real-time playback and low latency processing.
- It provides stable video quality by maintaining high image quality even at low bit rates.
- It can be used in a wide range of applications, including video editing and decoding on PC, digital cameras, surveillance cameras, network distribution, edge devices, and cloud video processing.
- It is compatible with terrestrial digital broadcasting standards and **simultaneously achieves lightweight, high image quality, high-speed processing, and low power consumption.**

### 2 Features

## H.264 /AVC

- Equipped with proprietary computer algorithm "DMNA"**

It significantly reduces the computational load, achieving both high-speed processing and low power consumption.

- High-speed encoding**

It has excellent parallel processing performance and delivers high throughput, making it ideal for real-time applications.

- Maintaining high image quality**

Even at low bit rates, video quality is unlikely to deteriorate, providing stable image quality.

- Extensive support functions**

Supports many H.264 features, including B-frames, CABAC, weighted prediction, and interlacing.

- Flexible implementation**

C API and GStreamer plugin make it easy to implement on various systems.

### 3 Specification

Supported standards	H.264/AVC (ISO/IEC 14496-10) compliant
Profile	Baseline/Main
Image format	YCbCr420 (8bits) Planar format
Stream format	Annex B Byte Stream
Function	Equipped with three encoding modes (high speed/balanced/high quality) Compatible with ARIB standards (terrestrial digital TV broadcasting standards)

#### CONTACT

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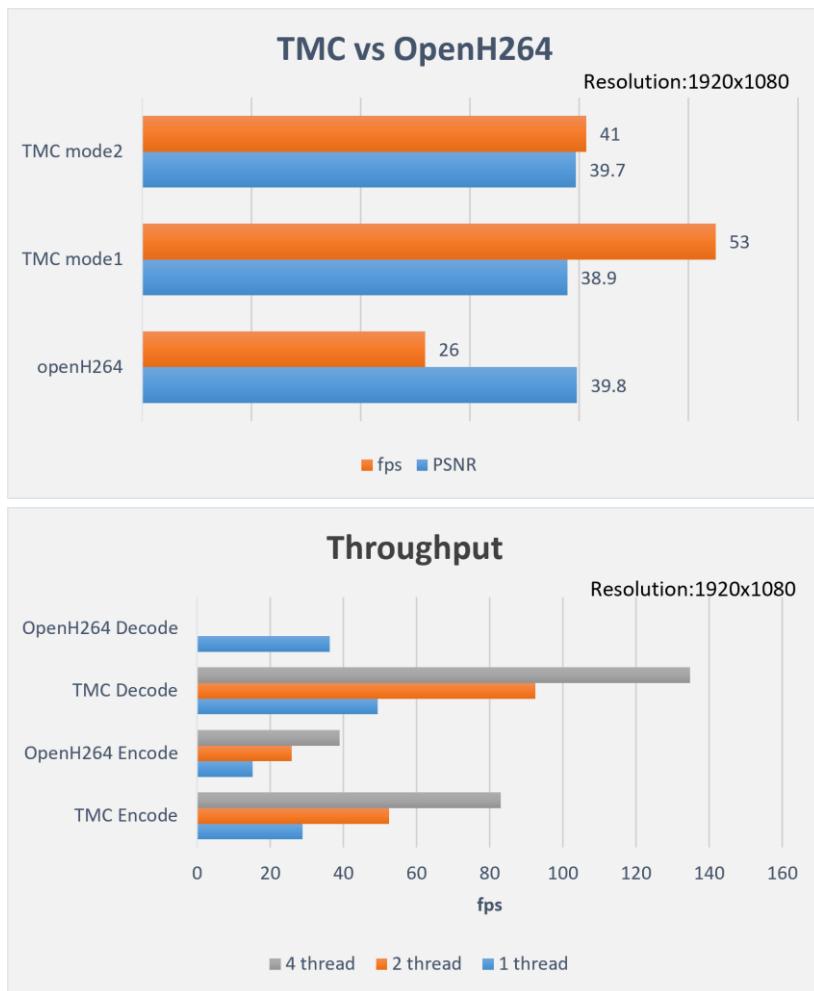
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Resolution	Up to 4096x2160
Supported CPU	ARM Cortex-A, Intel x86/x64 (32/64 bit)
Number of threads	1 to number of CPU cores
OS	Linux/Windows
API format	C API (proprietary), GStreamer plugin

## 4 Performance



- TMC high-speed mode (mode 1): **Up to 50% faster than OpenH264TMC.**
- Balanced mode (mode 2): **Approximately 30% faster than OpenH264 with almost the same PSNR.**
- Excellent parallel processing **performance and high throughput.**

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