

H.265/HEVC Main12 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 compliant with H.265/HEVC (ITU-T H.265 | ISO/IEC23008-2).
- By incorporating the proprietary computer algorithm "DMNA" it achieves high-speed processing with lower power consumption compared to common free software such as x265.
- 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 supports high-definition video such as 4K/8K, and **maintains high image quality even with high compression, while achieving both high-speed processing and low power consumption.**

2 Features

• 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.

• Flexible Mode Selection

You can choose between high-speed, balanced, and high-quality modes depending on your application and performance requirements.

• Flexible implementation

Its unique, simple C API makes it easy to incorporate into a variety of systems.

3 Specification

Supported standards	H.265/HEVC (ISO/IEC 23008-2) compliant
Profile	Main/Main10/Main12
Image format	YCbCr420/422 (8bits/10bits/12bits) Planar format
Stream format	Annex.B Byte Stream

CONTACT

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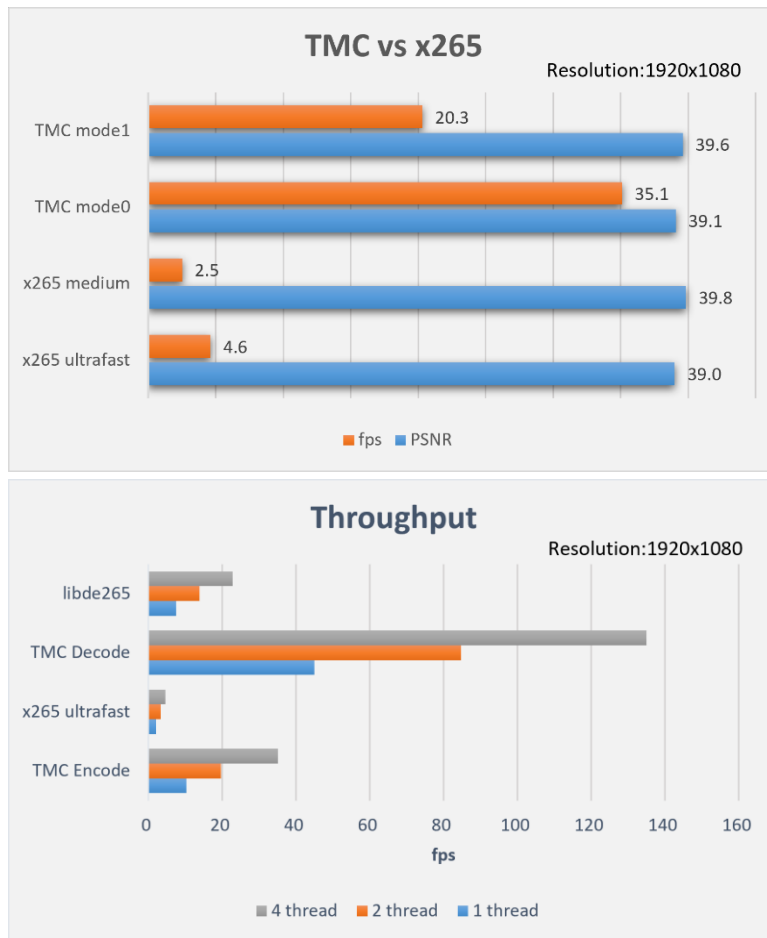
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Function	Equipped with three encoding modes (high speed / balanced / high quality) Compatible with ARIB standards (terrestrial digital TV broadcasting standards)
Resolution	Up to 8192x4320
Supported CPU	ARM Cortex-A、Intel x86/x64 (32/64 bit)
Number of threads	1 to number of CPU cores
OS	Linux/Windows
API format	C API (proprietary)

4 Performance



- High-speed mode (mode 0): **Up to 80% faster than x265 ultrafast.**
- Balanced mode (mode 1): **Approximately 80% faster than x265 medium with almost the same PSNR.**
- Excellent parallel processing performance **provides high throughput**

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