

Description

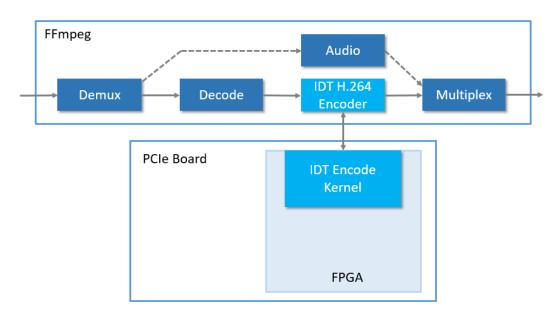
The R11F MPEG-4 AVC/H.264 Encoder is a broadcast quality real-time encoder designed for live streaming applications using FPGA acceleration tightly coupled with general purpose CPUs. Leveraging technological expertise from ASIC and CPU designs, the R11F provides the best of both worlds in a scalable OPEX friendly platform for a high density of video transcoding.

Typical Applications

- Cloud Video Services
- Adaptive Bit Rate streaming
- High Density Video Transcoding

Features

- Multiscreen optimized H.264/MPEG-4 Encoder
- IDR aligned multiple resolution outputs for OTT packaging
- Dense encoder with support up to 6x HD AVC per FPGA
- Unique Computational Control System for highly efficient content adaptive encoding to maximize video quality
- Seamless integration into existing cloud workflows with FFmpeg framework plug-in support
- Live and File Input/Output
- H.264 profiles: high, main, baseline
- Dynamic GOP structure with up to 7 B frames
- Large hierarchical motion estimation
- Exhaustive professional mode search
- Low hardware latency
- Unlimited, adaptive GOP structure
- User set intra refresh rate.
- Scene change detection
- Fade detection
- Skin tone detection
- Adaptive quantization



Block Diagram



IMPORTANT NOTICE AND DISCLAIMER

RENESAS ELECTRONICS CORPORATION AND ITS SUBSIDIARIES ("RENESAS") PROVIDES TECHNICAL SPECIFICATIONS AND RELIABILITY DATA (INCLUDING DATASHEETS), DESIGN RESOURCES (INCLUDING REFERENCE DESIGNS), APPLICATION OR OTHER DESIGN ADVICE, WEB TOOLS, SAFETY INFORMATION, AND OTHER RESOURCES "AS IS" AND WITH ALL FAULTS, AND DISCLAIMS ALL WARRANTIES, EXPRESS OR IMPLIED, INCLUDING, WITHOUT LIMITATION, ANY IMPLIED WARRANTIES OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE, OR NON-INFRINGEMENT OF THIRD-PARTY INTELLECTUAL PROPERTY RIGHTS.

These resources are intended for developers who are designing with Renesas products. You are solely responsible for (1) selecting the appropriate products for your application, (2) designing, validating, and testing your application, and (3) ensuring your application meets applicable standards, and any other safety, security, or other requirements. These resources are subject to change without notice. Renesas grants you permission to use these resources only to develop an application that uses Renesas products. Other reproduction or use of these resources is strictly prohibited. No license is granted to any other Renesas intellectual property or to any third-party intellectual property. Renesas disclaims responsibility for, and you will fully indemnify Renesas and its representatives against, any claims, damages, costs, losses, or liabilities arising from your use of these resources. Renesas' products are provided only subject to Renesas' Terms and Conditions of Sale or other applicable terms agreed to in writing. No use of any Renesas resources expands or otherwise alters any applicable warranties or warranty disclaimers for these products.

(Disclaimer Rev.1.01)

Corporate Headquarters

TOYOSU FORESIA, 3-2-24 Toyosu, Koto-ku, Tokyo 135-0061, Japan www.renesas.com

Trademarks

Renesas and the Renesas logo are trademarks of Renesas Electronics Corporation. All trademarks and registered trademarks are the property of their respective owners.

Contact Information

For further information on a product, technology, the most up-to-date version of a document, or your nearest sales office, please visit <u>www.renesas.com/contact-us/</u>.