H2642RTP
Hardware RTP Stack for H.264 Stream Encapsulation

Implements a Real Time Transport Protocol (RTP) hardware stack that encapsulates H.264/NAL streams to RTP packets that are compliant with RFC 3984 and RFC 6184. The H2642RTP can be directly connected to the output of an H.264 encoder to output RTP packets, which can subsequently be forwarded for UDP/IP or TCP/IP encapsulation. The hardware stack produces complete RTP packets, without the need for any host-processor assistance. Along with CAST’s UDP/IP hardware stack, the H2642RTP core is ideal for offloading the demanding task of RTP/UDP/IP encapsulation from a host processor, and enables H.264 video streaming even in processor-less SoC designs.

The core is easy to integrate in systems with or without a host processor. H.264 stream and RTP packet data are input/output via dedicated streaming-capable interfaces, enabling direct connection to hardware video encoders and hardware stacks for UDP or TCP. Status and control registers are accessible by an AXI4-Lite interface.

The H2642RTP core is available in RTL source or as a targeted FPGA netlist. Platforms integrating the core along with an H.264 encoder, UDP/IP, and eMAC cores, are also available from CAST, and can enable rapid development of video over IP systems.

Applications
The H2642RTP core is suitable for a wide variety of systems and devices featuring H.264 video streaming over IP networks. A sample block diagram of such systems is provided below:

Block Diagram

![Block Diagram](image)

Support
The H2642RTP as delivered is warranted against defects for ninety days from purchase. Thirty days of phone and email technical support are included, starting with the first interaction. Additional maintenance and support options are available.

Related Products
- **H264OIP-HDE**: H.264 over IP – HD Encoder Subsystem
- **RTP2H264**: Hardware RTP Stack for H.264 Decapsulation
- **H264-E-BPS**: Low-Power H.264 Baseline Profile Encoder
- **H264-E-MPS**: Low-Power H.264 Main Profile Encoder
- **H264-E-BPF**: Ultra-Fast H.264 Baseline Profile Encoder
- **H264-E-HIS**: H.264 High-10 Intra Profile Encoder
- **UDP/IP**: UDP/IP Hardware Stack from CAST
- **EMAC-1G**: Gigabit Ethernet Media Access Controller