

CAST JPEG IP Core Helps Kapsch TrafficCom Handle Real-Time Image Compression

September 10, 2010, Woodcliff Lake, NJ — Another notable customer has incorporated the JPEG Encoder IP Core from CAST, Inc. in an innovative product.

Based in Austria with offices worldwide, Kapsch TrafficCom is an international supplier of innovative road traffic telematics solutions that help manage traffic flow and improve driving safety. Their electronic toll collection (ETC) systems are at work in over 12,000 lanes in 38 countries.

The Vehicle Detection and Registration (VDR) Sensor captures moving traffic images for Kapsch's multi-lane free-flow and city tolling systems.

This requires real-time handling of license plate images shot with a high-resolution (typically 1280x1024 pixels) self-triggering camera and then processed by a high-performance optical character recognition (OCR) engine to register each passing vehicle. In case of a network failure, images are stored in an internal buffer with 10,000+ images. The LPN (license plate number) VDR works in the infrared (IR) range with 12 bits per pixel; the color Overview VDR version captures wider scenes with 8-bits per pixel.

The success depends on the quality of the captured images. Kapsch found that CAST's JPEG-E Encoder Core produced the necessary quality within the demanding performance requirements, and does so in their targeted FPGA device.

The Kapsch engineering team said this about working with CAST and our IP core:

"The IP-core is well documented and has fulfilled our demands in all aspects of quality, performance, efficient usage of FPGA-resources as well as configurability. With our previous design using JPEG2000 we sometimes had problems with certain images - those problems have now been mitigated."

— Erik Larsson, Product Mgr. for Video and Sensor Solutions, Kapsch TrafficCom

Learn more:

Kapsch TrafficCom

<http://www.kapsch.net/en/ktc/>

VDR Vehicle Detection and Registration Sensor Datasheet

http://www.kapsch.net/en/ktc/downloads/files/KTC_VDR_Datasheet_EN.pdf

CAST JPEG-E Image Compression IP Core

<http://www.cast-inc.com/ip-cores/images>

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