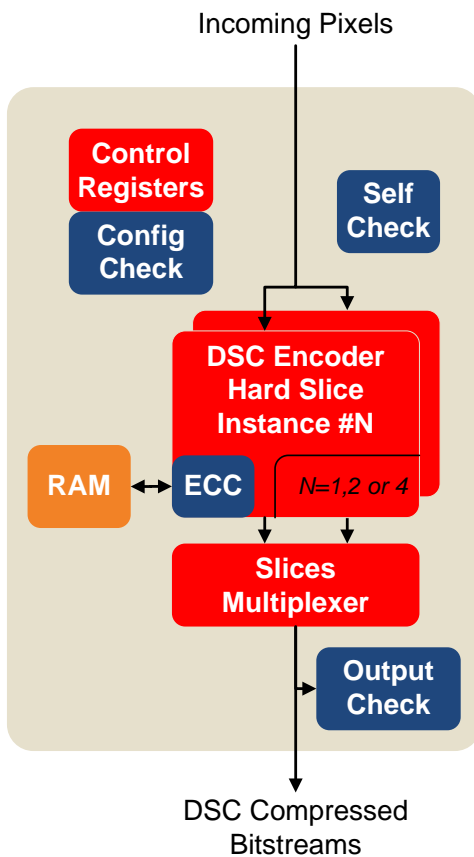# VESA DSC 1.1 Encoder IP Core For Automotive Displays
ASIL-B Ready ISO 26262 Certified

Applications

- Automotive video transmission
- Automotive video applications
- Infotainment
- Navigation systems
- Rearview camera displays

Hardent DSC 1.1 Encoder IP Core for Automotive Displays

Incoming Pixels

DSC Compressed Bitstreams

Hardent provides IP solutions as well as cutting-edge ASIC and FPGA design services for electronics manufacturers using display technology. As a member of VESA and a key contributor of the DSC Task Group, Hardent has used its expertise and skills to develop the very latest standards in display technology. Hardent's high-quality IPs enable clients to accelerate their development schedules and meet demanding time-to-market deadlines.

Description

The Hardent VESA DSC 1.1 Encoder IP Core for automotive displays implements a fully compliant VESA DSC 1.1 encoder. It contains additional safety features to detect and report transient or permanent faults in order to meet the high level of safety required by automotive applications. The VESA DSC IP core is ASIL-B ready, as per the ISO 26262 standard.

Key Features

- VESA DSC 1.1 compliant
- Supports all DSC 1.1 mandatory encoding mechanisms
- Configurable maximum display resolution
    - Up to 4K (4096x2160), 5K (UHD+), and 8K (FUHD)
- 8 and 10 bits per video component
- Parameterizable number of parallel slice encoder instances (1, 2, or 4) to adapt to the capability of the technology and target display resolutions used
- Ultra low latency

Safety Features

- Self-checking during VBLANK period
- Control output diagnostics
- RAM protection
- Configuration and Status Register (CSR) protection
- Fault avoidance mechanism

Deliverables

- Safety manual
- Failure modes, effects and diagnostic analysis (FMEDA) report
- Encrypted RTL source code IP core
- Functional and structural coverage reports
- Comprehensive integration guide
- Technical support and maintenance updates

Product Options

- IP customization and integration services available on request
- Multi-project licenses available
- UVM verification bindable modules

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