



# **Applications**

- UHD monitors
- UHD TVs & home theaters
- HDMI 2.1 hubs & accessories
- Professional video equipment

#### Hardent HDMI 2.1 FEC RX IP

From De-Scrambler & 16b18b Decoder Lane2 Lane1 Lane0 Lane3 De-Interleaver FC Decoder FEC Decoder FC Decoder FC Decoder FEC Buffer **FEC Buffer FEC Buffer MUX** Lane2 Lane1 Lane0 Lane3

> To Packet Re-Assembly

Hardent's IP portfolio offers customers ready-made solutions to accelerate product development and meet demanding time-to-market schedules.

Developed by a team of experienced FPGA and ASIC designers, Hardent's IP cores have undergone extensive verification and offer proven interoperability and compatibility.

### **Description**

The HDMI Forward Error Correction (FEC) Receiver IP Core implements Reed-Solomon FEC and symbol de-interleaving/ de-mapping as specified by the HDMI 2.1 specification.

Forward Error Correction is required to ensure glitch-free operation in Fix Rate Lane (FRL) mode, a packet mode introduced in HDMI 2.1. FRL allows for the use of Display Stream Compression (DSC) bitstream transport.

#### **Key Features**

- HDMI 2.1 compliant
- Reed-Solomon RS(255,251) FEC, 8-bit symbols
  Supports 3-lane and 4-lane operation
  Includes error counters

#### **Deliverables**

- 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 availableUVM verification bindable modules



HDMI2.1-FEC-RX prodbrief-v1.0