The Hardent VESA VDC-M 1.2 Decoder IP Core implements a fully compliant VESA Display Compression-M (VDC-M) 1.2 decoder to deliver visually lossless video compression. The decoder supports various usage models, including typical MIPI Display Serial Interface 2 (MIPI DSI-2) usage models.

**Key Features**

• VESA Display Compression-M (VDC-M) 1.2 compliant
• Supports all VDC-M encoding mechanisms
  o BP, transform, MPP, MPP fallback, and BP skip
  o Flatness detection and signalling
• Configurable maximum display resolution of up to 16Kx16K
  o Typical 4K (4096x2160), 5K UHD+, and 8K UHD supported
• 8, 10, or 12 bits per component video
• 4:4:4 samples for RGB video output format
• 4:4:4, 4:2:2, and 4:2:0 samples for YCbCr video output formats
• Parameterizable number of parallel slice decoder instances (1, 2, or 4) to adapt to the capability of the technology and target display resolutions used
• Supports logical slice decoding (soft slice) in each physical decoder (hard slice)
• Ultra-low latency
• Pixel throughput of four pixels per clock per hard slice decoder
• Optimized for power saving

**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
• Multi-project licenses available

**Applications**

• Mobiles & Tablets
• AR/VR Products
• MIPI DSI-2 Applications
• Automotive Video Transmission