VMM1402 VESA DisplayPort™ Multi-Monitor Controller

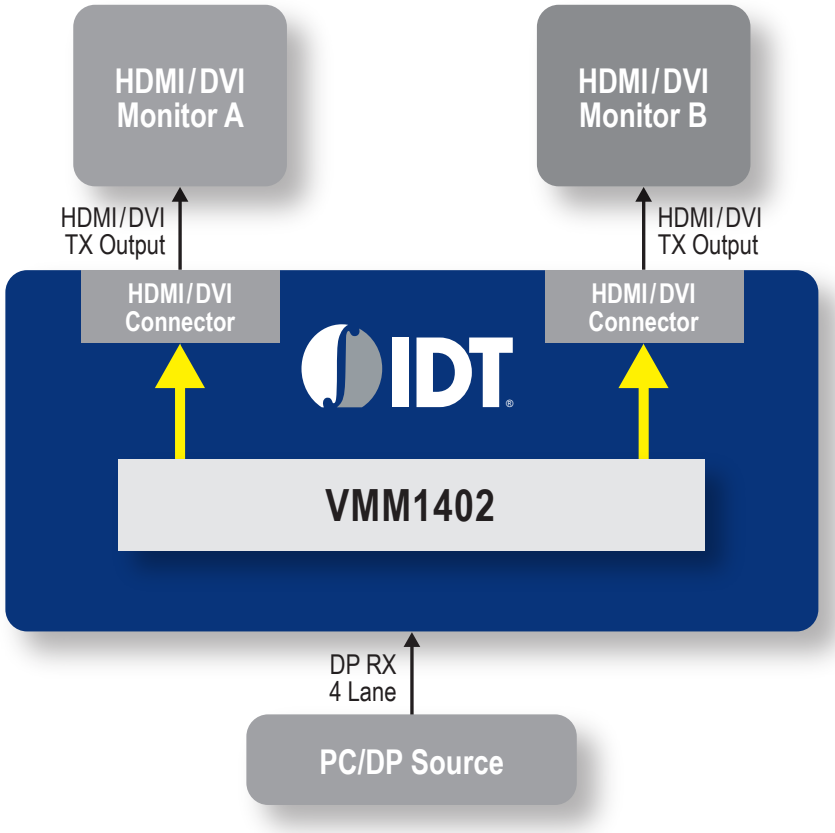
Integrated Device Technology

FEATURES

- Standards compliance/support: DisplayPort v1.1a, HDMI™ Standard v1.3, VESA DDM Standard, HDCP v1.3, and EDID v1.4
- Supports main link rates of 2.7Gbps (HBR) and 1.62Gbps (RBR) from the source
- Supports 1/2/4 lanes of main link for RX side
- Supports 2 HDMI output ports
- AC coupled for low voltage chipset operation
- High speed bi-directional auxiliary channel (AUX CH) enables I²C mapping over AUX CH between the source/sink and the VMM1402
- Dedicated I²C slave for main processor to access the VMM1402
- Supported output resolution
  - 2 Monitor: Up to 3840X1200@60Hz
  - Input pixel and format options
  - Input pixel data depth 6/8/10 bits
  - Input pixel format supports RGB444, and sRGB
- Output pixel and format options
  - Compatible with VESA standards
  - Swappable output lane for flexible PCB layout
  - Support 6/8/10 bit color depth output
  - Supports output pixel formats RGB444
- Support audio (pass-through) up to 7.1 channel/ 192 KHz sampling rate
- Provides exceptional Secured Content Protection with HDCP v1.3 for digital content
- Built-in EEPROM for EDID, HDCP key, and configuration data
- 144-Pin BGA RoHS compliant green package

APPLICATIONS

- 1 DP In 2 HDMI output Monitor Controller Box



Overview

The IDT VMM1402 is a VESA DisplayPort v1.1a, HDMI v1.3 and VESA DDM standard compliant multi-monitor controller; it has one DP RX port and two HDMI output ports.

After initialization, the VMM1402 will sense how many monitors are connected to the transmitter (TX) ports and retrieve those monitor's EDID information. It will then generate the corresponding combined resolution and present that information on the receiver (RX) port as a Hybrid Passive Display (HPD).

The generated EDID will provide the user with the expanded resolution and original resolution options. When the user selects the expanded resolution, the VMM1402 will expand the PC desktop to both monitors as if it were one large, single monitor. When the user selects a display resolution that is the same or smaller than the original monitor's native resolution, the VMM1402 will send identical PC desktop screens to both attached monitors.

Both the RX and TX ports of the VMM1402 are protected with the highest level of built-in security circuitry, and are fully compliant with the industry standard HDCP v1.3.

Discover what IDT know-how can do for you:
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