**Questa Verification IP**

**Functional Verification**

**DATASHEET**

**QUESTA VIP BENEFITS**

- Consistent UVM architecture
- Easy-to-use EZ-VIP API
- Fast bring up
- Responsive, expert support 24/7
- Supported on all simulators
- Comprehensive test suite and compliance tests
- Complete verification plan, protocol coverage, and checking
- Intuitive transaction-level debug
- High-quality, mature VIP validated against commonly used design IP

**Built for Fastest Time to Verification Sign-Off**

Mentor, a Siemens Business, Questa® Verification IP (QVIP) integrates seamlessly into all advanced verification environments on any simulator. With a consistent and easy-to-use UVM architecture across all protocols, QVIP ensures maximum productivity and flexibility for the verification of block level, subsystem, and SoC designs.

Today’s designs rely heavily on a growing variety of complex industry standard interface protocols. QVIP enables engineers to effectively deal with this complexity, improves quality, and reduces schedule time by building Mentor’s protocol and methodology expertise into a library of reusable components that support many industry standard interfaces. This frees engineers from spending time developing BFM, verification components, or VIP, so they can focus on the unique and high-value aspects of their designs.

**Questa Verification IP Library**

- **Serial**
  - SPI
  - SPI 4.2
  - Smartcard
  - I2C
  - I3C
  - JTAG
  - UART
- **AMBA®**
  - CHI
  - AMBA LPI
  - AX5
  - AX3
  - AHB5
  - AHB
  - APB3
- **Display**
  - HDMI 2.1
  - HDMI 2.0
  - HDMI 1.4
  - DisplayPort
  - eDP
  - V-by-One
  - CEC
  - HDCP
- **Ethernet**
  - 1G Base T1
  - 200/400G
  - 40G
  - 10G
  - 100M
  - 1G
  - 100M
  - QSGMII
  - USXGMII
  - USGMII
  - Interlaken
  - MACSEC
  - Preemption
- **DRAM**
  - DDR5
  - DDR4
  - DDR3
  - DDR2
  - LPDDR4
  - LPDDR3
  - LPDDR2
- **Flash**
  - SDCard 6.0
  - eMMC 5.1
  - SDIO 4.1
  - UFS
  - Toggle
  - Parallel NOR
  - Serial NAND
- **HBM**
  - HBM2E
  - HBM2
- **DFI**
  - 1553b
  - PCI
  - PCIe
  - NoF
  - USB
- **Hi-Area**
  - Spacewire
  - PCI
  - PCIe
  - PCIe

Contact Mentor for additional verification IP components not listed here.

More information available at [www.mentor.com](http://www.mentor.com)

**Mentor**

A Siemens Business
Large Library of Protocols and Memory Models

QVIP supports a large library of industry-standard protocol and memory interfaces and devices. It includes standard SystemVerilog UVM components using a consistent, common architecture that allows rapid deployment and sharing of multiple protocols and memory models within a verification team. Test plans, compliance tests, test sequences, and protocol coverage are all included as SystemVerilog and XML source code, allowing easy reuse, extension, and debug. All QVIP components include a comprehensive set of protocol checks, error injection, and debug capabilities.

EZ-VIP: Architected for Rapid Productivity

EZ-VIP APIs and quick starter kits take care of the tedious connection, configuration, and set up tasks, so engineers can start writing tests using QVIP within a day, even for complex serial protocols, such as PCI Express and USB.

- Reusable protocol test plans linked to supplied protocol coverage
- Complete protocol checks and test suites achieve 100 percent protocol coverage to verify protocol compliance
- Comprehensive VIP built using advanced methodologies for fastest time to verification sign-off

An Integral Part of the Enterprise Verification Platform

Mentor Graphics Verification IP is a key component of the Enterprise Verification Platform™ (EVP). Complete VIP components reduce bring up time and enable rapid coverage closure. Common APIs and methodologies enable tests and testbenches to be moved from one verification engine to another. As an integral part of EVP, QVIP can be used with a combination of shared databases, debug applications, and analysis tools, allowing users to choose the best tool for different tasks within a single, highly productive verification flow.

For the latest product information, call us or visit: w w w . m e n t o r . c o m