



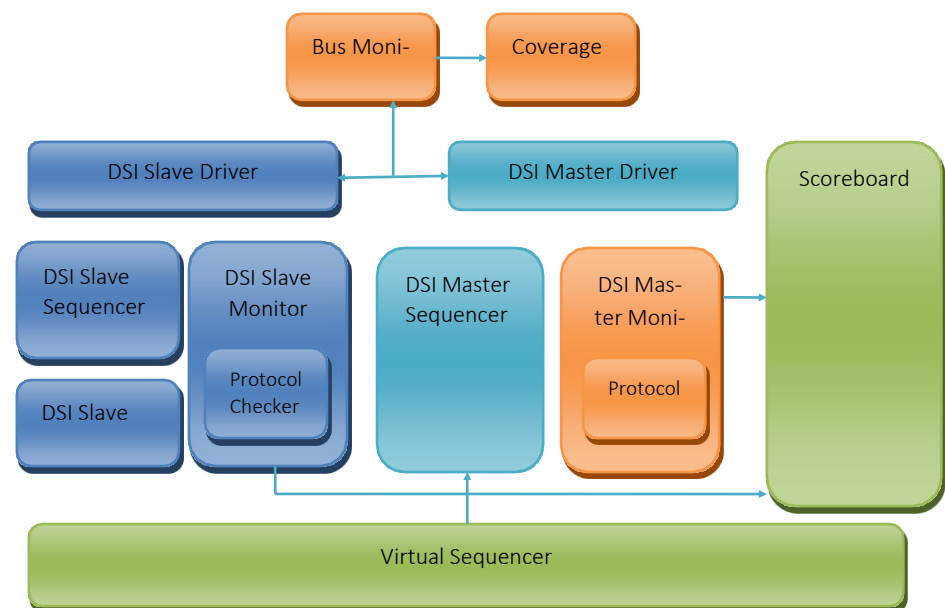
# asureVIP

## MIPI DSI UVM VIP

Tessolve Semiconductors' asureVIP for MIPI DSI enables constrained random metric driven verification of IP level or SOC level verification of this protocol specification. MIPI DSI VIP offers flexibility, excellent product support, while UVM support allows reusability, fully configurable, coverage driven verification.

This UVM VIP has extensive constrained-random stimuli generation capabilities, configurable monitors and checks to ensure protocol compliance for Host as well as Peripherals. Pre-defined coverage bins enable easier extension and coverage collection.

### Block Diagram



MIPI DSI

## Overview

VIP: MIPI DSI

Compliance: MIPI Alliance Specification  
for Display Serial Interface  
Version 1.02.00 dated  
28 June 2010

Language: System Verilog

Methodology: UVM 1.1

Simulators: Cadence Incisive, Mentor  
Questa, Aldec Riviera-PRO

## Deliverables

- CSIX UVM VIP
- Sample Testbench
- Sample Scoreboard
- Sample Virtual Sequencer
- VIP User Guide

## Key Benefits

- Highly Flexible, Independent and Configurable MIPI DSI UVM VIP
- Less TAT in integrating into SOC Verification environments
- Excellent product support

## Technical Specifications

- Complete Host and Peripheral Verification support
- Peripheral Features for HOST Verification:
  - Command and Video mode support
  - Error Detection
  - Support All DSI Packet types
- HOST Features for Peripheral Verification:
  - Fully scalable lanes
  - Error Injection (Word count, ECC and Checksum)
  - Generate all types of Packets
- Long and Short Packet support with constrained randomization
- 1-4 Virtual Channel Support
- Multi-Lane distribution and merging
- Complete API support for software testing

## Other VIPs Available

- **ARM:** AXI, APB, AMBA ACE and CHI
- **Hi-Speed Interface:** Ethernet (10/100/1000MB & 10GB), PCIe RC and EP, USB 3.0 Host and Device, CSIX and SPI
- **Memory and Storage:** SDCARD 4.0, DDR 4/3, LPDDR 4/3 and ONFI
- **MIPI:** DPHY, DSI, LPDDR, MPHY, SMBUS, RFFE and Unipro
- **Universal Serial I/O:** CAN, GPIO, I2C, UART, SPDIF, I2S, SMBUS, SPI and TDM

## Independent Verification Service

Tessolve can deliver an independent verification service that not only reduces development costs and time-to-market, but also improves product quality.

## Proven Implementations

Use asureVIP with the confidence of knowing that they have been successfully deployed by leading SoC companies around the world.

## About Tessolve

Tessolve Semiconductors Private Limited provides services and products to organizations developing complex products in the microelectronics and embedded software and systems industries.

Tessolve operates globally with offices in the UK, France, Germany, India, Singapore the USA plus a network of international partners.

**asureVIP™** Download the FREE "Sample VIP Code"  
visit: [www.tessolve.com](http://www.tessolve.com)

The Tessolve and asureVIP logos are trademarks of Tessolve. All other product or service names are the property of their respective owners. This document is subject to change without notice. The information in this document is provided "as-is" with no warranty, express or implied, including without any warranties of merchantability of fitness for a particular purpose. ©2020 Tessolve Semiconductors Private Limited. Document number: VIP-AMBA-AXI-2020114