

YOGITECH's eVerification Components (eVCs) are scalable, configurable, plug-and-play, pre-verified and extensible verification environments that can be readily integrated into your design. They maintain full compatibility with Verity's Specman Elite test bench automation tool providing a solid basis in order to realize a complete, reliable and re-usable verification strategy increasing the verification team's productivity and the product's quality. Being **YOGITECH** in the Verification Alliance, its eVCs are interoperable with further releases of Verity's Specman Elite, avoiding eventual work misalignments between verification teams and projects. **YOGITECH's** proven protocol expertise assures a high reliability of its eVCs that are all eReuse Methodology (eRM) compliant. **YOGITECH's** eVCs are exhaustively documented and tested. Through YOSS (**YOGITECH's** online support service), the company provides online support, documentation downloads, FAQ, examples and enquiries in a timely manner.

ATAPI 6 Device eVC

ATA standard specifies the AT Attachment Interface between host systems and storage devices. It provides a common attachment interface for system integrators, suppliers and manufacturers of intelligent storage devices. It includes the Packet Command feature known as the AT Attachment Packet Interface (ATAPI).

ATAPI 6 Device eVC is the most reliable solution in the market for the verification of ATAPI Host units. It is fully compatible with ATA/ATAPI 6 protocol and supports PIO, Multiword DMA and Ultra DMA timings. The highest level of abstraction is achieved by using the embedded complete ATA/ATAPI 6 commands database. The detailed functional coverage measure is obtained by a complete built-in set of predefined coverage items. The eVC also embeds a powerful protocol-checker, fully adherent with ATA/ATAPI 6 specification. ATAPI 6 Device eVC supports any ATA/ATAPI 6 command and includes a database of predefined sequences and an extensive test suite covering most of the possible scenarios.

Worldwide customers are using ATAPI 6 Device eVC in many verification environments both at module, and system level: this makes ATAPI 6 Device eVC the most reliable solution for the verification of ATAPI based systems. ATAPI 6 Device eVC can be combined with ATAPI 6 Host eVC, available in Yogitech's eVC catalogue, to build a complete ATAPI 6 verification environment.

MAIN FEATURES

- _ ATA/ATAPI 6 protocol compatible.
- _ Layered architecture, verifies from low level to protocol flow.
- _ Supports PIO (0-4), MDMA (0-2) and UDMA (0-5) timings.
- _ Supports insertion of random or deterministic pauses and stops in DMA transactions.
- _ Supports PIO non data, PIO data in/out, DMA, Packet, Hardware/Software/Command reset and device diagnostic protocols.
- _ Built-in data and temporal assertions.
- _ Protocol Checker fully compatible with ATA 6 Spec.
- _ Functional Coverage Measure.
- _ Built-in set of predefined coverage items.
- _ Supports interrupt, device selection, multiple device instantiations on the bus, diagnostic and faulty behaviour.

DELIVERABLES

- _ Core Files, eVC Inner Layer encrypted eVC Upper Layer fully configurable by the user.
- _ Support Files. Predefined Sequence database featuring ATA/ATAPI 6 standard and special commands.
- _ Built-in ATA and Packet commands database.
- _ Sample and extensive tests covering basic functionality.
- _ Documentation. Comprehensive User Guide including Release Notes. FAQ.
- _ Online Support Service. Fast bug fixing. General problem solving. Direct interaction with the product's development team.
- _ Training on demand.

ATAPI 6 Device eVC

eVC Architecture

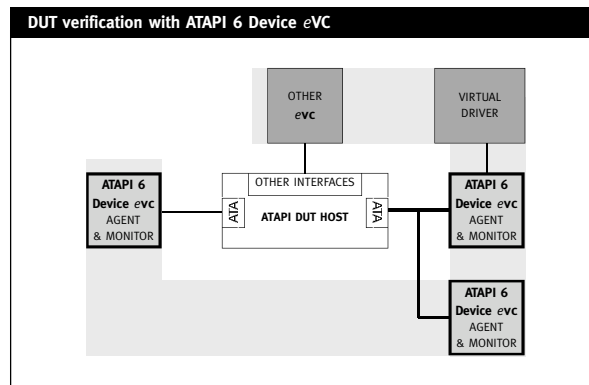
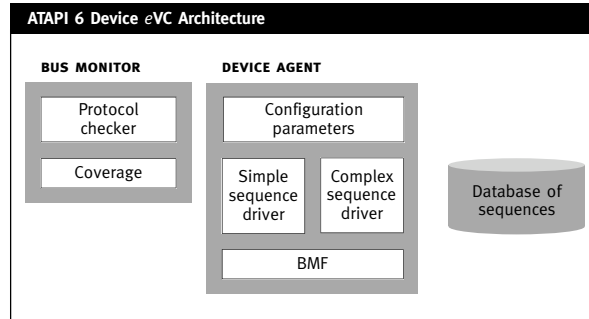
ATAPI 6 Device eVC provides much more than a simple BFM. It is an eRM verification component composed by a device ATAPI agent, capable of supporting the full set of ATA commands, using all possible timings. Each command can be customized by the user in order to create particular scenarios. ATAPI 6 Device eVC includes a monitor that logs all traffic information and collects items for test functional coverage. The embedded protocol checker is a runtime tool checking the ATA/ATAPI rules of the current bus traffic. If any wrong condition is detected during the simulation, the checker prompts the error and prints a message describing the violation.

eVC Usage

ATAPI 6 Device eVC can be used to verify the ATAPI Host controllers at module-level and in complex top-level verification environments. In fact, ATAPI 6 Device eVC is easily configurable due to its comprehensive top-level structure and can react to the traffic from any ATAPI Host controller DUT. Two different modes are available: complex mode and simple mode. The former is the normal behaviour of the eVC, while the latter can be used when the user needs to test only the lower level of the protocol. The monitor and the protocol checker can be used to verify the protocol's compatibility and to collect data for logging and performance analysis. The eRM compliance assures that multiple instances of the verification components can be effectively managed by a top level virtual sequence driver that can generate and control all different possible verification scenarios.

Licensing

Yogitech's eVCs are distributed with a simple floating license which allows for multiple eVCs instantiations. Each Specman Elite license requires a separate eVC licence.



The product described in this document is subject to continuous development and improvements. Software licenses are subject to availability. Yogitech reserves the rights to make any changes in this document and related product in any time without prior notice. No responsibility is accepted for errors or omissions.