YOGITECH

YOGITECH's *e*Verification Components (*e*VCs) 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 Verisity'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 *e*VCs are interoperable with further releases of Verisity's Specman Elite, avoiding eventual work misalignments between verification teams and projects. **YOGITECH**'s proven protocol expertise assures a high reliability of its *e*VCs that are all *e*Reuse Methodology (*e*RM) compliant. **YOGITECH**'s *e*VCs 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.

LIN 2.0 *e*VC

LIN 2.0 *e*VC is the reliable solution for verification of LIN IP and LIN networks. It is adherent with latest LIN 2.0 specifications and it includes all possible kind of frames including unconditional, event triggered and sporadic frame and all mandatory and optional configuration frames. The highest functional coverage is achieved by a complete built in set of predefined coverage items. The *e*VC also embeds a powerful protocol checker fully compliant with LIN 2.0 specification.

LIN 2.0 *e*VC includes a database of LIN frames easily constrainable to match real frames and an extensive test suite covering the majority of the possible LIN scenarios. A Node Capability file parser is also provided to enable a rapid and easy configuration of the *e*VC. Combined with the automatic configuration of the LIN network, first test can be launched very rapidly by the user. An optional mixed-signal environment is also available for the verification of the physical layer (transceiver).

MAIN FEATURES

- Adherent to LIN 2.0 Specification. All frames are supported including mandatory and optional configuration.
- Protocol Checker fully compliant with LIN 2.0
- Functional Coverage Measure.
- Database of predefined LIN configuration Sequences.
- Configurable as Master/Slave (or Monitor only). Master can send random traffic and do the complete configuration of the network.
- Hook to build user scoreboard
- Self-Test option to run test cases on the *e*VC without the need of a simulator.
- Optional mixed-level verification environment usable together with Specman Elite.

DELIVERABLES

- Core Files, *e*VC Inner Layer encrypted. *e*VC Upper Layer fully configurable by the user.
- Support Files. Predefined LIN Sequences.
- Documentation. Comprehensive User Guide including Release Notes. FAQ.
- Parsing of Node capability file to automatically generate the configuration of the *e*VC.
- CoVerificationLink pre-defined to directly link the application program interfaces (API) to the *e*VC.
- Online Support Service. Fast bug fixing. General problem solving. Direct interaction with the product's development team.
- Training on demand.

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PARTNERS

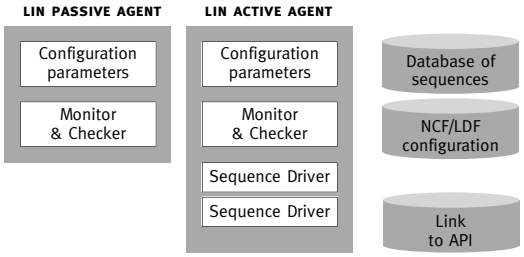
Verification Alliance

LIN 2.0 *e*VC

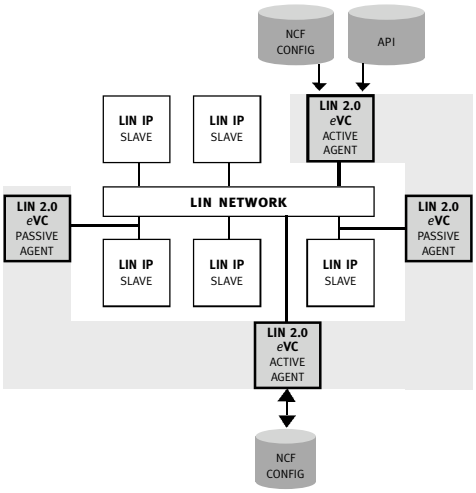
*e*VC Architecture

LIN 2.0 *e*VC provides much more than a simple BFM. It is a fully *e*RM verification component composed by master and slave LIN agents, able to generate and inject frame header (for master) and analyse header and send the appropriate response frame (for slave and master). All parameters defined in LIN specification (such as response space, inter byte space, etc.) are defined in the *e*VC and can be easily constrainable to emulate real traffic.
LIN 2.0 *e*VC includes a monitor that logs all traffic information and collects items for test functional coverage. The embedded protocol checker is a runtime tool checking LIN rules of the current bus traffic. If some wrong conditions are detected during simulation the checker prompts the user about the error and prints a message about the violation. These rules can be extended and customized by the user.

LIN 2.0 *e*VC Architecture



System-Level verification with LIN 2.0 *e*VC



*e*VC Usage

LIN 2.0 *e*VC can be used to verify from module-level LIN interfaces up to a complete LIN network with several nodes. In fact, LIN 2.0 *e*VC is easily configurable due to a comprehensive top-level structure: LIN 2.0 *e*VC master and slave agents can be used to initiate and receive transactions at all different abstraction levels while the monitor and protocol checker can be used to verify the protocol compliance and to collect data for data logging and performance analysis.
A top-level sequence generator that generates and controls all possible different verification scenarios can manage all verification components.
A co-verification link is pre-defined to directly link application program interfaces (API) to the *e*VC.
The optional mixed-signal verification environment is tightly linked with Specman Elite and allows the verification of the physical layer. LIN 2.0 *e*VC works with both Verilog, VHDL or SystemC DUT and with all HDL simulators supported by Specman Elite.

Licensing

Yogitech's *e*VCs are distributed with a simple floating license which allows for multiple *e*VCs instantiations. Each Specman Elite license requires a separate *e*VC licence.