Product overview

CANoe Test Package EV
Interoperability

ISO / IEC 15118
Part 2
Technical protocol
description and
Open Systems
Interconnections
(OSI) layer
requirements

ISO / IEC
15118
Part 3
Technical protocol
description and
Open Systems
Interconnections
(OSI) layer
requirements

Compatibility ?

EV

EVSE
Overview

- **CANoe Test Package EV** provides **conformance/interoperability** tests for **electric vehicles** (EV)
  - Tests implemented with vTestStudio in CAPL (source code included)
  - Separate licenses for each standard CCS, GB/T and CHAdeMO
  - Available only as subscription license (period 12 months)

- **Current release** 1.0
  - Support of CCS tests for **DIN 70122**
  - According to CharIN implementation guide for CCS
  - Support of other CCS protocols with next releases

- **Requirements** (CCS standard):
  - CANoe 12.0 SP2 (or later) with the Options .Ethernet and .Smart Charging
  - vTESTstudio 4.0 SP2 or later
  - VT System with VT7870 (interface hardware for communication)
  - Integration of third-party hardware (power sink/source)
CANoe Test Package EV

Workflow

- Generate CANoe Test Package EV
- Build vTESTstudio project
- Open CANoe
- Configure and run Test Execution & HW control
- Test Unit
- Generate Test Report
CANoe Test Package EV

Setup generator

- Selection of protocol
- Extraction of test cases as vTESTstudio project
- Generation of ready-to-run CANoe configuration with test cases and simulated EV
- Setting of output folder for vTESTstudio project and CANoe installation folder
vTESTstudio

- Implementation with test tables and CAPL
- Preparation and completion customizable to SUT
- Arrangement of test cases according to test specification
- Consideration of CharIN implementation guide
- Traceability to requirements from protocol specification
- Visibility of variant dependencies (PICS/PIXIT)
CANoe Test Package EV

CANoe

- Tracing of communication
- Interpretation of message details
- Selection of testcases for execution
- Setting of variant dependencies (PICS/PIXIT) for different SUT

PICS = protocol implementation conformance statement
PIXIT = protocol implementation extra information for testing
VT7870 is supported by default

Usage of 3rd party hardware possible ...
  - Via CharIN API supported by the CANoe Test Package EV
  - Via direct integration (e.g. source/sink) by using generally supported interfaces in CANoe (e.g. LXI)

Easy extension with additional I/O hardware possible

Scalable test system from component test (ECU) to system test (EV) possible
Demonstration Test Set-up

Vector VCCU

Control
Pilot

VT System incl. Devolo dLAN®
GreenPHY module on VT7870

CANoe.Eth.SCC

Optional: providing real power

Controllable Power Supply

vTESTstudio Built Test Units

Simulation of charging station
Test automation

SCC over Ethernet

VN56xx
For more information about Vector and our products please visit

www.vector.com

Author:
Jan Großmann
Vector Germany

Vector North America Contact:
Jeff Koncsol