

VX1000

Professional Measurement and Calibration Hardware with extremely high Transmission Rates

Properties Overview

- > Extremely high measurement data throughput of up to 5 MByte/s
- > Minimal effect on ECU execution times
- > Calibration and bypassing function with very short latency times
- > Flash programming of "brain dead" ECUs

Application Areas

The VX1000 family is a modular measurement and calibration solution with extremely high performance. It can be used in the vehicle (suitable for engine compartment), on test benches, and in the laboratory. The system acts as an interface between the ECU and a measurement and calibration tool such as CANape. For maximum data throughput with minimal effect on ECU execution time, data is accessed utilizing microcontroller-specific data trace or debug interfaces.

You can connect the VX1000 system directly to a PC via XCP or Ethernet which is a manufacturer-independent ASAM standard widely used in the automotive industry.

Functions

- > DAQ event triggering by a single memory write access
- > Only minor modification of ECU code needed
- > Minimal influence on ECU execution times
- > Option for generating time stamps in ECU

- > Read/Write access to ECU internal memory without address limitations
- > Very short stimulation and bypassing latency times
- > Flash programming of "brain dead" ECUs
- > 100 Mbit/s Ethernet connection to PC
- > PC tool for configuration and software updates

Modular Concept

The VX1000 family consists of the following components:

- > VX1100 – Base Module
- > VX1200 – ECU Interface Module as Base Module plug-in
- > VX1300 – Cable
- > VX1400 / VX1500 – Microcontroller-specific POD (Plug-On Device)

When used in the engine compartment, a POD is either tightly coupled to the ECU housing or even resides within. The POD is then connected to the VX1100 Base Module with a plugged-in ECU interface using a cable of up to 5 m in length.

POD and cable are designed for the tough automotive environment. They resist high temperatures and have watertight connectors. The POD can be mechanically and electrically adapted to the ECU based on your requirements.



VX1110 Base Module



VX1450 Generic POD

VX1241A Serial ECU Interface



VX154x Serial PODs

Engineering Services

We offer engineering services to adapt the POD mechanical and electrical to your ECU.

Please contact us at:

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Supported Microcontrollers

- > Freescale PowerPC MPC55xx
with Nexus Class 3 Development Port for Data Trace
- > Texas Instruments TMSx70 with RTP/DMM for Data Trace
- > Infineon TriCore TC17x7(ED for Data Trace) with DAP
- > Other microcontrollers upon request

Performance Data

- > Meas. data throughput: up to 5 MByte/s
- > Bypassing latency time: 300 µs
- > DAQ signals: 50,000
- > DAQ events: 256
- > Minimum event cycle: 50 µs
- > Trace memory range: 512 kByte

Overview of Components

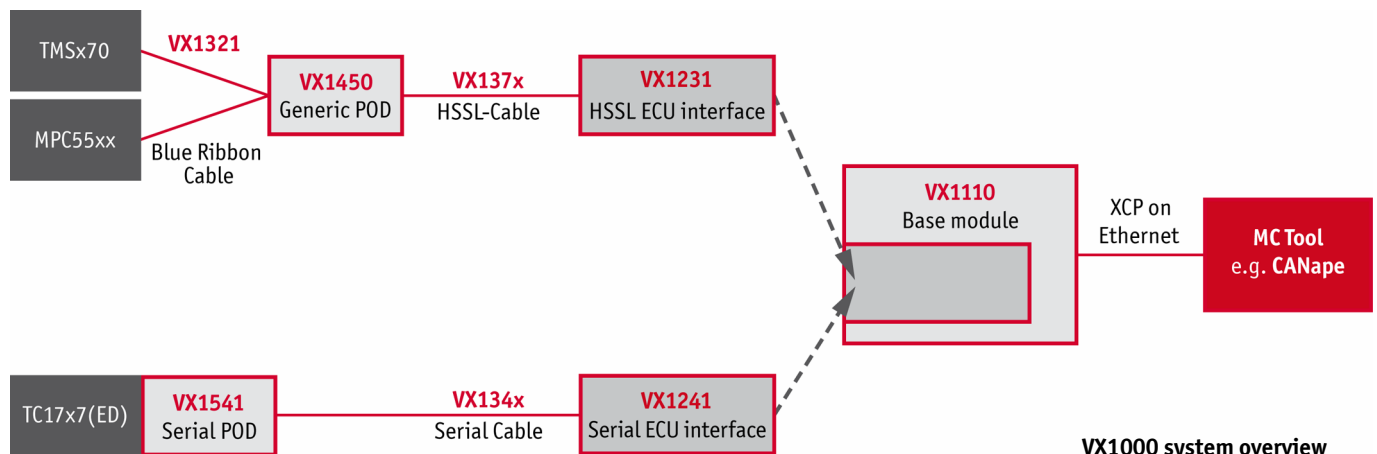
- > **Base Module**
VX1110 Base Module
- > **ECU Interface**
VX1231 HSSL ECU interface (High-Speed Serial Link)
VX1241A Serial ECU interface
- > **POD (Plug-On Device)**
VX1450 Generic POD (RTP/DMM, Nexus-Trace)
VX1541A Serial POD (TriCore DAP)

> **Cable**

VX1321	Blue Ribbon Cable	Length: 0.25 m
VX1342	Serial Cable	Length: 2.00 m
VX1345	Serial Cable	Length: 5.00 m
VX1372	HSSL-Cable	Length: 2.00 m
VX1375	HSSL-Cable	Length: 5.00 m

Technical data of VX1000 System

VX1100 incl. VX1200	Dimensions (L/W/H) Weight Temperature range Input voltage Current consumption	143 x 170 x 48 mm 770 g -20°C to +70°C 7 to 48 VDC 600 mA @ 12 V
VX1321	Temperature range	-10°C to +90°C
VX134x	Temperature range	-40°C to +125°C
VX137x	Temperature range	-40°C to +105°C
VX1450	Dimensions (L/W/H) Weight Temperature range Power supply Power consumption	100 x 72 x 30 mm 240 g -40°C to +85°C from base module ≈ 1.6 W
VX1541A	Dimensions (L/W) Temperature range	15 x 21 mm -40°C to +125°C



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