What is VX1000?

The VX1000 System is a scalable solution with top performance for your ECU measurement and calibration tasks. It can be used in the vehicle – both in the cabin and in the engine compartment – on test benches and in the laboratory. Especially when developing ADAS ECUs, this allows you to control raw data captured by high-resolution radar sensors in combination with XCP data, e.g. object/tracking lists. The system forms the interface between the ECU and a measurement and calibration tool such as CANape. For high data throughput with minimal impact on ECU runtime, data is accessed over the microcontroller-specific data trace and debug ports. The VX1000 Base Module is connected to the PC over XCP on Ethernet, an OEM-independent ASAM standard that is widely used in the automotive industry. The VX1000 measurement hardware is connected to the ECU via a POD (Plug-On device). Depending on the available microcontroller interface, either the data trace or a copying method can be used to acquire measurement data.

Overview of Advantages

> Powerful measurement and calibration access to internal ECU data with maximum transmission rates
> Very small POD to connect to the ECU debug interface
> Easy and quick integration into the ECU software
> No impact on ECU run-time with data trace measurement method
> Interface to numerous development tools by third-party suppliers via the standardized ASAM protocol XCP on Ethernet
> Special functions for engine controllers such as Calibration Wake-Up and Calibration RAM Supply
**Functions**

- Very high measurement data throughput of more than 100 MByte/s for XCP data and radar raw data with the data trace measurement method and up to 3 MByte/s with the data copying method
- Measurement of fast signal cycles (>10 µs for data trace, >40 µs for data copying method)
- Measurement configurations with up to 100,000 signals can be processed
- Precise generation of DAQ time stamps in the ECU
- ECU cold start measurement (First Loop DAQ)
- Calibration of ECU parameters without address range limitations
- Calibration memory page switching
- Automatic overlays when calibrating parameters in flash memory
- Stimulation or bypassing with short latency times
- 100/1000 Mbit/s Ethernet connection to the PC
- Galvanically isolated power supply with wide input voltage range
- POD power supply via the VX1000 Base Module
- Optional: Flash programming, even for “brain-dead” ECUs
- Optional: 1 x FlexRay and up to 5 x CAN (FD) via XL Driver Library interface for CANape/CANalyzer/CANoe and custom applications
- PC tools for easy configuration and for software updates

**Supported Microcontrollers**

**Infineon**
- XC2000 product line
- TriCore TC1xxx (ED)
- TriCore AURIX TC2xx (ED)
- TriCore AURIX TC3xx (ED)
  (DAP, DAP2, HSCT, Aurora)

**NXP/ST**
- PowerPC xPC55xx/56xx/57xx/58xx
  (JTAG Nexus Class 2+, Zipwire, Nexus AUX, Nexus Aurora)

**Renesas**
- RH850
- V850E2
  (JTAG Nexus Class 2+, Nexus Aurora)

**Texas Instruments**
- TMSx70
  (RTP/DMM)

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**VX1000 Base Module Variants**

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1 = FlexRay monitoring optional  
2 = FlexRay optional

**More information:** [www.vector.com/VX1000](http://www.vector.com/VX1000)