Remote D-PDU API

Remote Vehicle Communication via Standardized D-PDU API (ISO 22900-2)

What is a D-PDU API?
The D-PDU API is a standardized programming interface for accessing a vehicle communication interface (ISO 22900-2, VCI). It abstracts from the underlying VCI hardware as well as from the implementation of the communication protocol (UDS and others). The D-PDU API is especially designed for diagnostic and flash applications of any kind. An application based on this standardized interface may therefore work with different VCIs from different vendors.

What is a Remote D-PDU API?
The Vector Remote D-PDU API enables a geographic separation between the D-PDU API based application and the vehicle connected to a PC via VCI. The computer with the D-PDU API based application (“Diagnostic Expert”) and the PC coupled with the VCI (“Access Point”) are connected via the Internet. In this way, the Vector Remote D-PDU API enables the use of a D-PDU API-based application over any distance: from the test setup in the laboratory next door to the vehicle on the other side of the world.

Overview of Advantages
Ready to Use
> Uncomplicated download of the access point software from the Vector homepage
> Installation of the access point on an existing PC (on the VCI) without admin rights
> The use of the access point does not require a separate license and is free of charge.

Flexible Use
> With the Remote D-PDU API, an existing diagnostic tester or flash tool communicates with a vehicle, system or ECU at any location.
> No preparation is required for use except for downloading, installation of the access point and subsequent connection setup.
> The Vector Remote D-PDU API registers itself on the PC in the same standard-compliant manner as any other D-PDU API. Typically, the user can configure which D-PDU to use

Protected and Safe - but very Easy to Use
> The computer with the D-PDU API based application and the access point communicates via a secure connection. This connection is initiated by the user of the remote access point, the expert from the remote can connect to it after entering the temporary session ID.
Start-up and System Integration in Cooperation Projects

In cooperation projects, different systems of different companies from different locations are often integrated in one vehicle. In such cases, commissioning is particularly difficult, as the systems must first be optimally coordinated. It would be useful if the experts of all the systems involved were to work together during commissioning. However, it would be far too expensive for all experts to travel to the site.

With the Remote D-PDU API, experts can be called in spontaneously from a distance if a problem occurs. Ideally, the cause of the error can be quickly identified and steps to resolve it can be agreed.

Problem Vehicle in the Workshop

In the workshop there are situations in which even the specialist cannot find the cause of the problem without the help of an expert. At the same time, the vehicle owner no longer wants to give up their vehicle. However, locating and correcting such faults is typically difficult and time-consuming - especially when support is provided exclusively by telephone.

It would be useful for the expert to be able to use their special diagnostic tester remotely to examine the vehicle, supported by the workshop employee on site. Or their tool for updating the software.

With the Remote D-PDU API, an expert can do just that from a distance. Ideally, the cause of the problem can be quickly identified and steps to resolve it can be agreed.

More Information:

www.vector.com/remote_d-pdu_api_en

> The two computers do not communicate directly with each other, but via a Vector Remote Online Service. This is secure and at the same time compatible with most common firewall settings.

> Confidential data such as diagnostic data, procedures and flash data remain on the expert’s computer and are not transferred to the remote computer.

Functions

Supported Bus systems:
- CAN, CAN FD

Supported Standard:
ISO 22900-2:2017

Supported ISO 22900-2 Protocols:
- ISO UDS on CAN (ISO_15765_3_on_ISO_15765_2)
- KWP2000 on CAN (ISO_14230_3_on_ISO_15765_2)
- ISO RAW CAN (ISO_11898_RAW)
- ISO OBD on CAN (ISO_OBD_on_ISO_15765_4)

Supported Network Interfaces
- The Vector Remote D-PDU API can be used with Vector’s CAN interfaces.
- Alternatively, the VN8810 Intelligent Diagnostic and Flash Device VN8810 can be used with the Remote Access Point at the point of use. In this case, the VN8810 serves as a VCI to the vehicle.
- On request, the connection of VCIs from other suppliers is also possible. Please contact us.

Application Areas

Vehicle on a Test Drive
During the test drive an unusual behaviour occurs, which only happens in a very special driving situation. A close analysis by an expert or developer would be useful, but they are rarely around.

With the Remote D-PDU API, an expert can now use their diagnostic tester from a distance to investigate the fault, even while driving. Ideally, the effect of a fault elimination operation can be verified immediately in the repeated driving situation.

Vehicle in Production Plant
A serious problem with a vehicle, a system, an ECU or with a new software version occurs on the production line. A close analysis by an expert or developer would be useful, but they are rarely around.

With the Remote D-PDU API, an expert can also use their diagnostic tester remotely to investigate the fault, even in production. Ideally, the cause of the problem can be quickly identified and troubleshooting measures can be ensured.