

Project Name	VSI-2534 Extended Features
Project Number	PJ265

Document Number	DGD_000207
Document Title	VSI-2534 Extended Features
Document Version	0.3
Document Date	August 06, 2010
Document Status	Current
Document Type	Controlled

Approved By
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Distribution List
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1 Definitions and Abbreviations

SAE	Society of Automotive Engineers
J2534	A standard stipulated by SAE
ECU	Electronic Control Unit

2 References

SAE J2534 Document 04.04

3 Introduction

3.1 Purpose

The purpose of this document is to record the additional features of VSI-2534 that are not addressed in the SAE J2534-1 and are supported as a manufacturer specific extended features.

3.2 Scope

The scope of this document is to describe the additional supported features to help the user implement them in their J2534 application.

4 Tool Manufacturer Specific Features

4.1 PassThruIoctl

This function is used to read and write all the protocol hardware and software configuration parameters.

4.1.1 C / C++ Prototype

```
extern "C" long WINAPI PassThruIoctl
{
    unsigned long ulChannelID,
    unsigned long ulIoctlID,
    void *pInput,
    void *pOutput
}
```

4.1.2 Parameters

ulChannelID – Device ID assigned by DLL during PassThruOpen.
 ulIoctlID – Ioctl ID
 pInput – Pointer to input structure (see the IOCTL Section).
 pOutput – Pointer to output structure (see the IOCTL Section).

4.2 IOCTL Section

This table provides the details on the tool manufacturer specific IOCTLs available through PassThruIoctl function:

Value of IoctlID	InputPtr represents	OutputPtr represents	Purpose
READ_VIGNITION (0x10007)	NULL	Pointer to unsigned long	To measure the ignition voltage

4.2.1 READ_VIGNITION

The IoctlID value of READ_VIGNITION is used to obtain the voltage measured on the ignition from the pass-thru device. The calling application is responsible for allocating and initializing the associated parameters described in the table below. When the function is successfully completed, ignition voltage will be placed in the variable pointed to by OutputPtr. The units will be in milli-volts.

Parameter	Description
IoctlID	Is set to the define READ_VIGNITION.
InputPtr	Is a NULL pointer, as this parameter is not used.
OutputPtr	Is a pointer to an unsigned long.

5 Document Revision History

Document Version	Date	Owner	Description
0.1	February 17, 2009	Ming	First draft.
0.2	March 6, 2009	Ming	Changed a few wordings/typos.
0.3	August 5, 2010	PRuelle	Added doc#, removed 'Confidential' from footer, corrected 'Document Status' and 'Document Type'