2008-07 Release Announcement Vision(Plus)

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1. Revision Chart

A revision is a new edition of the document and affects all sections of this document.

Date	Person	Version	Modification
2008-04-28	**Jürgen Oberhofer**	1.0	Initial Version.
2008-05-05	**Jürgen Oberhofer**	1.1	Work in of review findings.

2. Overview

Title	Type	Prog.Sys.	Module
RS232/USB Memory Stick Automatic Application Download	New Add-On	CoDeSys	RTS (jffs)
RS232/USB Memory Stick CoDeSys Library	New Add-On	CoDeSys	Library
RS232/USB Memory Stick Logging	New Add-On	CoDeSys	Library
Support for 8.4” Sharp LQ084V3DG01 Display	New Add-On	All	UBoot/Linux
Support for 10.4” NEC NL8060BC26 Display	New Add-On	All	UBoot/Linux
RS232 Driver / Digital Input Driver	New Add-On	All	Linux/Ramdisk
Special CAN Driver	New Add-On	All	Ramdisk
Improved CANopen Support	New Add-On	CoDeSys	Library / PLC Config.
EEPROM – Blocked Read / Write function	Bug fix	All	Linux

3. Introduction

3.1 Purpose and Scope

This document describes all the new features, new functions and bug fixes which will be available with the next software release 2008-07 for Vision(Plus).

Note:

Downward Compatibility means: existing applications can be downloaded to ECU of 2008-07 release.

4. New Features

4.1 Automatic CoDeSys application download with RS232/USB Memory Stick

Description:

The RS232/USB Memory Stick is equipped with a 512 MB MMC Flash Card. This allows the user to copy the CoDeSys application for the vehicle or even any other file from the PC to the RS232/USB Memory Stick (USB connector side).

The RS232/USB Memory Stick can be connected to RS232-Modem (COM1) or RS232-2 (COM3) of Vision(Plus). On startup, Vision(Plus) checks if a RS232/USB memory stick is connected. If so, the automatic download of the application starts.

Use case:

For an update of CoDeSys Vision(Plus) application no PC / Notebook is needed anymore. Service personnel can make an update of CoDeSys Vision(Plus) application without PC / notebook. Only a RS232/USB memory stick with the correct application is needed.

New Vision(Plus) SW modules:

JFFS (jffs-rrv.bin) v3.2

Affected variants:

All CoDeSys variants. (Ordering Code: TTC-Vis x x x x x CD NA x x, x = don't care)

Downward Compatibility:

Compatibility with older versions is given. If no RS232/USB Memory Stick is found on the RS232 interface, Vision(Plus) will process with the boot process.

Fig. 1: RS232-USB Memory Stick

4.2 File functions with RS232/USB Memory Stick

Description:

A CoDeSys library is provided, which gives access to the MMC flash card of RS232/USB Memory Stick. Following functions will be provided:

- Copy file from Vision(Plus) to RS232/USB Memory Stick.
- Copy file from RS232/USB Memory Stick to Vision(Plus).
- Create directory on RS232/USB Memory Stick.
- Read text file from RS232/USB Memory Stick to internal CoDeSys variables.
- Write content of CoDeSys variables to text file on RS232/USB Memory Stick.
- Read directory structure of RS232/USB Memory Stick.
- Set LEDs of RS232/USB Memory Stick.

Use cases:

- New bitmaps / xml Files / applications are transferred from RS232/USB memory stick by vehicle operator command to Vision(Plus).
- New text files generated by Vision(Plus) are copied to RS232/USB memory stick.

New Vision(Plus) SW modules:

New CoDeSys library.

Affected variants:

All CoDeSys variants can use the new CoDeSys libraries without the need of updating Vision(Plus).
(Ordering Code: TTC-Vis x x x x x CD NA x x, x = don't care)

Downward Compatibility:

Compatibility with older versions is given.

4.3 RS232-USB Memory Stick Logging

Description:

A CoDeSys library is provided, which implements an event-trigger logging function. A log entry is performed if a rising edge is enabling the CoDeSys library function. Each log entry can store up to ten 32 bit values.

Use cases:

- Logging of important vehicle sensor or internal variables to RS232/USB Memory Stick triggered by a CAN event message.

New Vision(Plus) SW modules:

New CoDeSys library.

Affected variants:

All CoDeSys variants can use the new CoDeSys libraries without the need of updating Vision(Plus).
(Ordering Code: TTC-Vis x x x x x CD NA x x, x = don't care)

Downward Compatibility:

Compatibility with older versions is given.

4.4 Support for 8.4" Sharp LQ084V3DG01 Display

Description:

The driver support for 8.4" Sharp LQ084V3DG01 display amplifies the display product range that can be controlled by Vision(Plus). This transmissive color TFT-LCD panel can display graphics and texts on a 640 x RGB x 480 dots panel.

New Vision(Plus) SW modules:

UBoot (boot-rrv.bin), Linux kernel (kernel-rrv.bin).

Affected variants:

New variants with customer boot logo will be generated on customer request.

Downward Compatibility:

Compatibility with older versions is given.

4.5 Support for 10.4" NEC NL8060BC26 Display

Description:

The driver support for 10.4" NEC NL8060BC26 display amplifies the display product range that can be controlled by Vision(Plus). This transmissive color TFT-LCD panel can display graphics and texts on a 800 x RGB x 600 dots panel.

New Vision(Plus) SW modules:

UBoot (boot-rrv.bin), Linux kernel (kernel-rrv.bin).

Affected variants:

New variants with customer boot logo will be generated on customer request.

Downward Compatibility:

Compatibility with older versions is given.

4.6 RS232 Driver / Digital Input Driver

Description:

All available variants of Vision(Plus) are hardware configured to support:

- 1x RS232 Modem

- 1x RS232
- 1x RS485
- 1x LIN
- 1x RS232 Debug
- Digital Inputs I10, I11, I12, I13 not available

New variants can be generated on customer request to support:

- 1x RS232 Modem
- 2x RS485
- 1x LIN
- 1x RS232 Debug
- Digital Inputs I10, I11, I12, I13 not available

Or

- 2x RS485
- 1x RS232
- 1x LIN
- 1x RS232 Debug
- Digital Inputs I10, I11, I12, I13 available

The new RS232 / Digital Input Driver supports those new possible variants.

Use cases:

Applications that do not need a RS232 with modem control lines can use I10, I11, I12 and I13 as digital inputs.

New Vision(Plus) SW modules:

Linux (kernel-rrv.bin), Ramdisk (rd-rrv.bin) v1.4

Affected variants:

New variants will be generated on customer request.

Downward Compatibility:

Compatibility with older versions is given, as new variants will be generated on customer request.

4.7 Special CAN driver

Description:

A modification of the standard Vision(Plus) CAN driver implements a “restart” function of the CAN communication. The driver counts failed send commands. If they exceed a preset limit it will reset the device.

Use cases:

In case of a short circuit to 24V on one of the CAN lines, the CAN driver restarts.

New Vision(Plus) SW modules:

Ramdisk (rd-rrv.bin) v1.5

Affected variants:

This special CAN driver is only activated on customer request. On standard ramdisk v1.4 this function will be disabled.

Downward Compatibility:

Compatibility with older versions is given, as new variants will be generated on customer request.

4.8 Improved CANopen Support

Description:

Following functions will be supported:

- CANopen Master and CANopen Slave functionality
- Standard Slave EDS file
- Periodic PDOs
- Network Variables
- Heartbeat Message
- Nodeguarding

Use cases:

A CANopen, e. g. a CANopen joystick, can be simply integrated into the CAN network with Vision without the need of implementing low level CAN functions.

New Vision(Plus) SW modules:

CoDeSys PLC Configuration, Libraries.

Affected variants:

All CoDeSys Variants. (Ordering Code: TTC-Vis x x x x x CD NA x x, x = don’t care)

Downward Compatibility:

Compatibility with older versions is given.

5. Bug fixes

5.1 EEProm Driver – Blocked Read / Write Function

Description:

In rare situations a bug in the SPI interface of the linux kernel caused a blocking of a single one byte read call for more than 3 seconds.

New Vision(Plus) SW modules:

Linux kernel (kernel-rrv.bin)

Affected variants:

All CoDeSys variants. (Ordering Code: TTC-Vis x x x x x CD NA x x, x = don't care)

Downward Compatibility:

Compatibility with older versions is given, as the bug fix does not touch the application interface.