

Data Sheet | DriveRecorder3

Version: V1.4

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1 Overview

DriveRecorder3 is a powerful and flexible tool for monitoring, recording and replaying CAN message-based data. Besides the CAN messages DR3 is able to record and replay a synchronized video stream. A freely configurable CAN data interpretation allows a flexible handling of CAN messages. Raw and interpreted CAN data is displayed in various grid views. A radar-orientated three-dimensional view renders objects and guide-lines in a very customizable way. Moreover, the pure CAN data transceiving devices the DR3 supports smartmicro technologies like CAN via (W)LAN, CAN via RS485 and the HiLBox (for recording sensor raw data also).

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1.1 DriveRecorder3 Graphical Overview

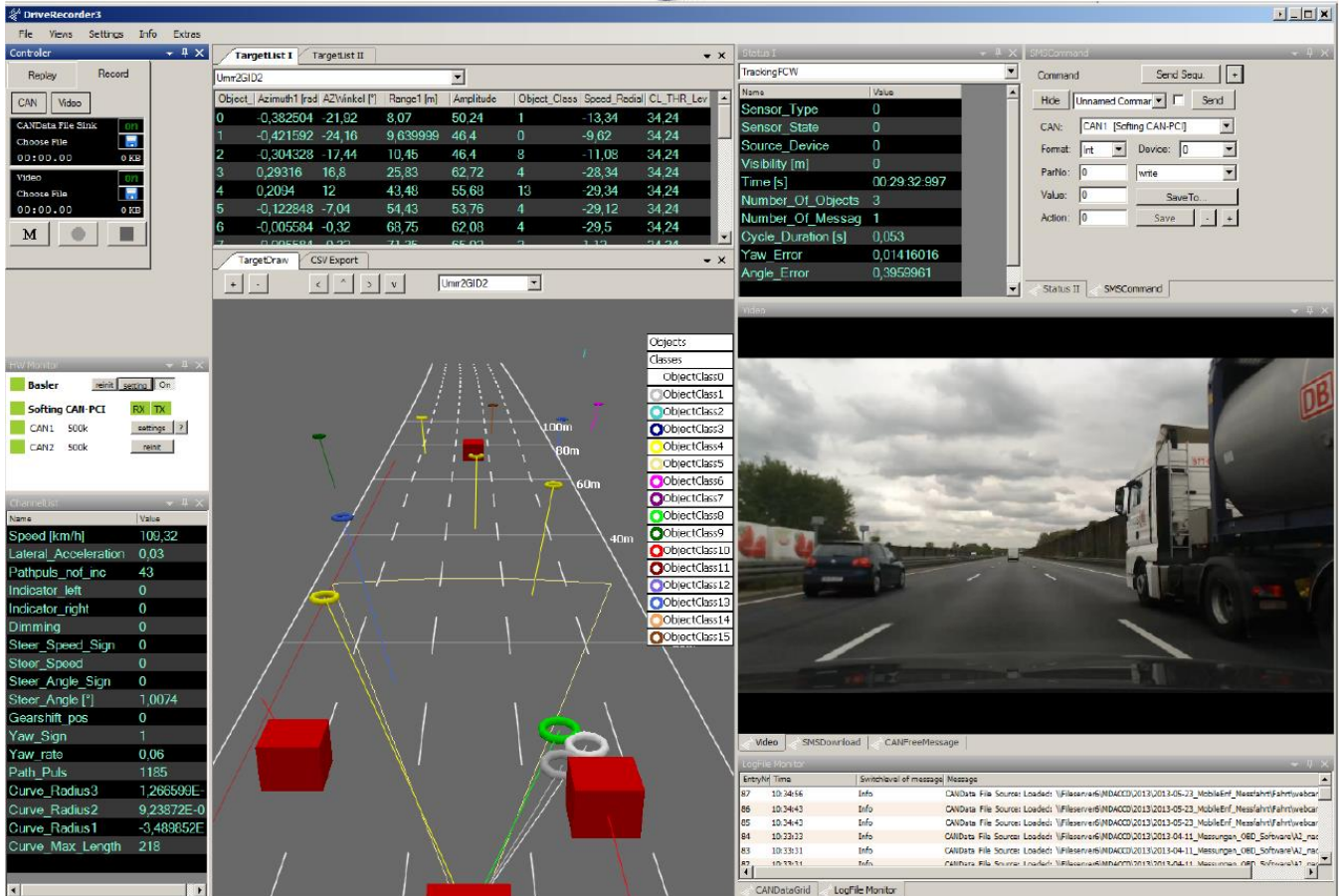


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1.2 DriveRecorder3 Graphical Overview



The screenshot displays the DriveRecorder3 software interface, which is divided into several functional areas:

- Controller (Top Left):** Includes 'Replay' and 'Record' buttons, along with file selection options for CAN and Video data.
- Targetlist I (Top Center):** A table listing detected objects with the following columns: Object, Azimuth1 [rad], AZWinkel [°], Range1 [m], Amplitude, Object_Class, Speed_Radial, and CL_THR_Ler.

Object	Azimuth1 [rad]	AZWinkel [°]	Range1 [m]	Amplitude	Object_Class	Speed_Radial	CL_THR_Ler
0	-0,382504	-21,92	8,07	50,24	1	-13,34	34,24
1	-0,421592	-24,16	9,639999	46,4	0	-9,62	34,24
2	-0,304328	-17,44	10,45	46,4	8	-11,08	34,24
3	0,29316	16,8	25,83	62,72	4	-28,34	34,24
4	0,2094	12	43,48	55,69	13	-29,34	34,24
5	-0,122848	-7,04	54,43	53,76	4	-29,12	34,24
6	-0,005584	-0,32	68,75	62,08	4	-29,5	34,24
7	0,005584	0,32	71,35	65,03	3	1,19	34,24
- TargetDraw (Middle Left):** A 3D graphical view of a road scene with sensor beams (red and green) and detected objects (red and green cubes) overlaid on a road model.
- Objects (Middle Right):** A list of detected objects categorized by class, from ObjectClass0 to ObjectClass15.
- Status I (Top Right):** A panel showing various sensor and system parameters:

Parameter	Value
Sensor_Type	0
Sensor_State	0
Source_Device	0
Visibility [m]	0
Time [s]	00:29:32.997
Number_Of_Objects	3
Number_Of_Messages	1
Cycle_Duration [s]	0,053
Yaw_Error	0,01416016
Angle_Error	0,3959961
- Video (Bottom Right):** A live video feed showing a road scene with a blue car and a white truck.
- Logfile Monitor (Bottom Center):** A log window showing system messages, including CAN data file sources loaded.

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2 Key Features

- Monitor, record and playback of CAN bus data and digital video data
- Supports several CAN hardware interfaces
- Interpretation of CAN bus data by a freely programmable CAN specification
- Visualization of raw and interpreted CAN data
- Visualization of sensor objects in 2D or 3D
- Synchronized playback of CAN bus data and video data
- Overlay of objects and video
- Sending of freely configurable CAN messages or defined sensor commands
- Download of sensor firmware

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3 Supported Hardware Interfaces

3.1 Supported CAN Bus Hardware Devices

- Lawciel CANUSB
- Softing CANCard2
- Softing CAN-AC2-PCI
- Softing CANUsb
- Softing CANpro USB
- Vector CANCaseXL
- Vector CANCardX
- Vector CANCardXL
- Vector VN-1610
- Vector VN-1630A
- Vector VN-1640

3.2 Supported Smartmicro Interfaces

- CAN via RS485 (needs RS485 to RS232, USB or PCMCIA converter)
- HILBox (2 CAN channels, 2 serial ports, data transmitted by Ethernet)
- CAN via LAN, CAN via WLAN

3.3 Supported Video Devices

DR3 tries to handle all video devices that are correctly recognized by DirectX.

Successfully tested cameras:

- Support of IP cameras
- Logitech Webcams
- DFK 21F04 (Firewire color camera)
- Basler ace
- IDS uEye CP

Successfully tested video grabber devices:

- ADSTech DVD Xpress DX2
- LogiLink Audio und Video Grabber USB 2.0
- Hauppauge USB-Live2 Analog Video Digitizer
- Terratec G3 USB 2.0

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4 System Requirements

4.1 Operating system requirements

- Windows Vista/7/10
- .NET Framework 3.5
- .NET Framework 4.6

4.2 Required hardware components

- 2 GHz CPU
- 1-16 GB RAM (recommended 16 GB)
- 40 GB hard disk (recommended SSD with 256 GB)
- Graphic card, supporting DirectX 9c
- Sound card, supporting DirectSound (optional)

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