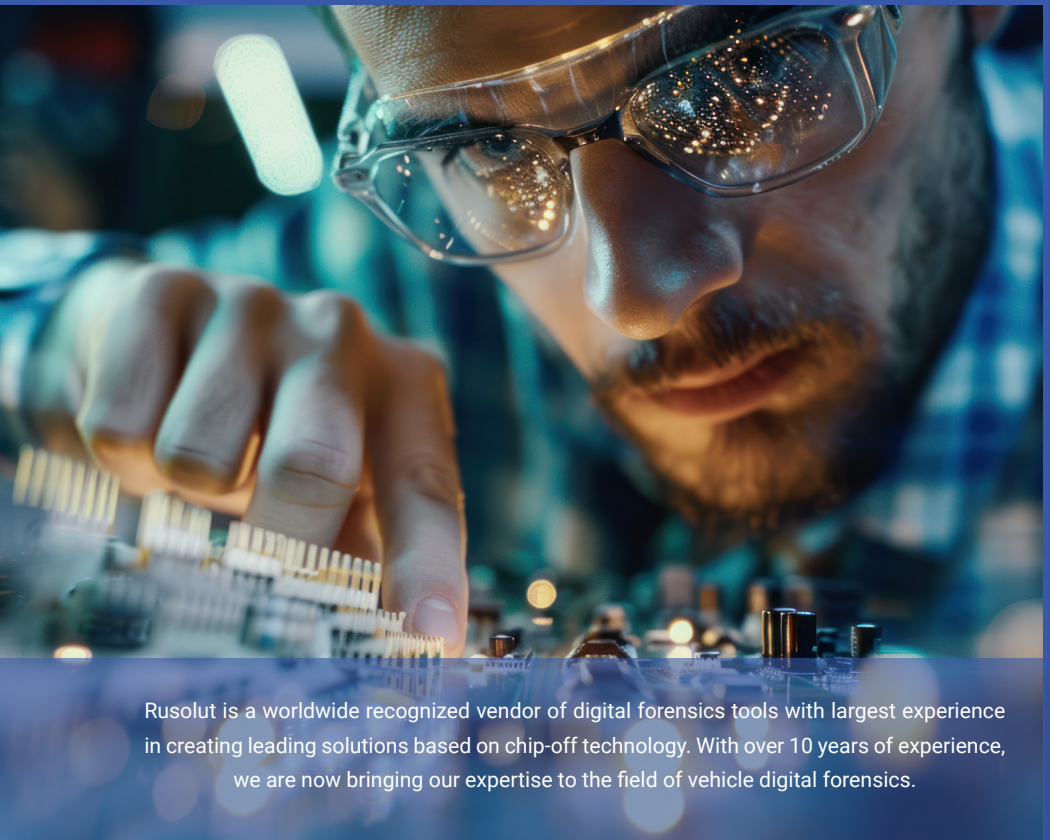




## **VEHICLE DATA RECONSTRUCTOR (VDR)**

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REVOLUTIONIZING DIGITAL FORENSICS SOLUTION FOR VEHICLES



Rusolut is a worldwide recognized vendor of digital forensics tools with largest experience in creating leading solutions based on chip-off technology. With over 10 years of experience, we are now bringing our expertise to the field of vehicle digital forensics.

## DISCOVER THE FUTURE OF VEHICLE FORENSICS

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The Vehicle Data Reconstructor (VDR) is developed to set a new standard in digital forensics for vehicles. Designed to surpass existing solutions, VDR ensures comprehensive, reliable, and efficient data acquisition of crucial digital evidences from vehicles, providing forensic experts with easy-to-use tool with extensive possibilities and advanced features.



# UNMATCHED CAPABILITIES

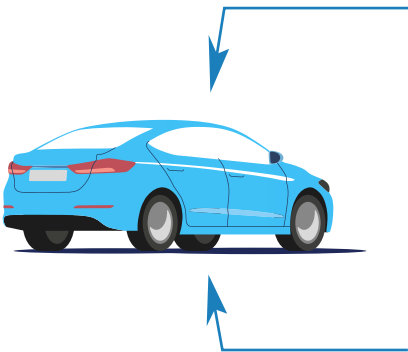
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The Vehicle Data Reconstructor is engineered to function in all conditions - whether the vehicle is functioning or not, crashed, drowned, or burnt - VDR requires only the infotainment system or other telematic/wireless modules for examination, enabling labs to manage multiple cases the same time without needing the entire vehicle.

Works with **ALL Vehicles** that use modules designed by vendors, such as: Bosch, Ford, Magnetti Marelli, Harman, Harman Becker, LG, Continental, TechniSat, Panasonic, GM, Preh, Peiker, Alps electronics, Clarion, Delphi, Johnson control, Alpine, Novariant, etc. Our research methods and efficient support team allows to add new devices within hours/days.

## COMPREHENSIVE DATA ACQUISITION

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### VEHICLE-RELATED DATA

- ✓ **Vehicle System Data:** VIN, serial and part numbers, FW version, MAC/IP addresses, etc.
- ✓ **Events:** WIFI/Bluetooth/USB connections, vehicle power on/off, start/stop, reboots, door/light data, odometer, fuel consumption, system logs, etc.
- ✓ **GPS navigation data:** routes, tracklogs, POIs, trackpoints, destinations, GPS sync events, saved locations, etc.
- ✓ **Built-in applications:** Traffic, weather, radio, etc.

### USER-RELATED DATA

- ✓ **Connected devices:** Smartphones, USB/SD cards, WIFI/Bluetooth logs, device list, timestamps, serial numbers, etc.
- ✓ **Smartphone synchronized data:** Device list, Calls, Phonebooks, SMS, Media, App data, etc.
- ✓ **Device identifiers:** Bluetooth/WIFI MAC addresses, phone names, WIFI access point info, installed apps.

# WHY CHOOSE RUSOLUT VDR?

## Universal Functionality

VDR operates in all scenarios, even in case of severely damaged vehicles or non-functional systems, needing only the infotainment system or telematic/wireless module, not the entire car.

## VDR Report Manager

The standalone software for data analytics, timeline and report generation from multiple cases with support of most common formats: PDF, XLSX, HTML, KML, CSV.

## 100% Read-Only Forensic Access

Guarantees clean, unaltered data acquisition with no risk of adding or modifying data or recording any events during examination.

## Firmware Version Independence

Data access is not hindered by the system's firmware version, ensuring seamless data acquisition no matter what version is used.

## Deepest possible access to the data

Beyond information from the file system, VDR reads data from previous versions of files and from obsolete NAND blocks, significantly expanding forensic analysis capabilities.

## Fastest Data Acquisition

Achieves the fastest data extraction speeds – up to 10 MB/s for NAND chips and up to 50 MB/s for eMMC chips.

## Support of Proprietary and Embedded File Systems

Supports a range of proprietary file systems, including QNX, YAFFS, UBIFS and other FTL-based embedded file systems

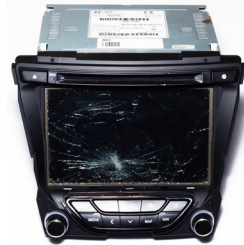
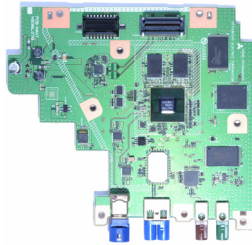
## Non-Invasive Adapters

Utilize solderless adapters combining Chip-off approach advantages and non-invasive data acquisition without causing damage to the vehicle.

# HOW DOES IT WORK?

1

Data acquisition is performed either via chip-off or solderless adapter whether it's NAND or eMMC for all systems based on supported memory chips such as TSOP48, BGA63 (two sizes), BGA100, BGA153/169, BGA137, BGA107 and a universal adapter.



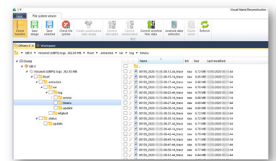
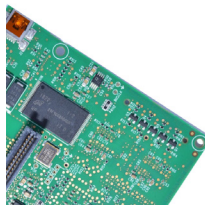
2

During physical image acquisition process the raw dump of the memory is extracted and converted into file system.



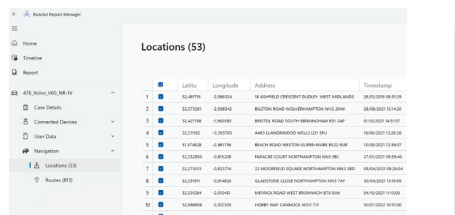
3

Files are analyzed and data is parsed according to the vehicle model and electronic unit. The case package is extracted for further analytics and report generation



4

A standalone data analytics and report generation software „VDR Report Manager“ is used to process data case package and generate report.



# WHAT'S INCLUDED

- ✓ Powerful software for physical dump acquisition and further vehicle data extraction, including parsers for File systems: QNX6, UBIFS, YAFFS2, FAT12,FAT16,FAT32,exFAT, Ext2, Ext3, Ext4, NTFS, HFSX, others embedded systems based on FTLs.Embedded FTLs
- ✓ Vehicle Data Reconstructor Report Manager - Forensic managing and report generating tool
- ✓ VNR software
- ✓ Rusolut Reader for reading NAND chips and adapters control
- ✓ Set of chip-off adapters for NAND Flash and eMMC memory chips: TSOP48 NAND, BGA63 11x9 NAND, BGA63 13x8.5 NAND, BGA100 NAND, BGA107 NAND, BGA137 NAND, BGA162 NAND, BGA100 14x18 eMMC, BGA153/169 11.5x13 eMMC, BGA153/169 12x16 eMMC, BGA153/169 14x18 eMMC, Soldering adapter
- ✓ Non-invasive ISP NAND and eMMC adapters enabling direct data extraction from memory chips similar to the chip-off method but without the need to unsolder the chips, thus preserving the integrity of the system without any destroys\*
- ✓ VNR adapters: TSOP48 ZIF, LGA52 ZIF, BGA100, BGA152, Monolith
- ✓ Widest database of solutions for vehicle electronic modules
- ✓ 1 year of Support Subscription

\* The number of adapters is updated at the time of purchase

# VDR SUPPORT SUBSCRIPTION INCLUDES:

- 1 Vehicle Data Reconstructor & VNR software updates
- 2 New vehicle solutions & database updates
- 3 Hardware upgrades: Any new ISP modules and adapters released during the subscription period. Fedex Priority shipping service included.
- 4 Technical support for vehicle forensics cases and other devices.
- 5 Priority Research and development for unsupported vehicle electronic modules on demand. Ability to send dumps or physical devices for priority research. Custom adapters and solutions are developed and supplied to the customer (where applicable).