



Company Profile - Timeline

AVS specializes in developing M2M technologies concerning vehicle diagnostics, remote fleet management and telemetry applications for both the repair industry and for the sectors of Transport, Industry and Education. Additionally undertakes the design of completely custom implementations (either small or bigger projects) and turn-key solutions for special or complex needs of its partners, taking into consideration and leveraging the appropriate technological structures in order our projects to perform in the highest degree of efficiency.

The continuous research of AVS in vehicle technologies and the interconnection of electronic vehicle control units (vehicle networking) since 2000 in conjunction with its experienced and passionate R&D department, contributed to the development of devices (hardware + software) for both the aftermarket and for OEM requirements.

The purpose of AVS is the provision of solutions and services characterized by high efficiency, low cost, combined technologies, flexibility, and high degree of customization.

Hardware Development:

- design of digital & analog circuits for embedded systems
- production and component engineering
- design for testability
- mechanical design + mechanical samples with our in house CNC
- design & manufacturing capabilities for test positions of our products
- design of multi layer printed circuit boards with components on both pcb sides and use of SMD fine pitch components
- Different RF modules: Zigbee, Bluetooth, WiFi, GSM/GPRS, GPS
- Communication Interfaces: USB, RS485, RS232, CAN, Ethernet, K/L in automotive, PWM/VPWM in automotive, I2C, SPI
- Storage media used: SD cards, Compact Flash, SPI flash
- Use of Low cost PIC, 8051 series microcontrollers or high power ARM7 microcontrollers
- soldering capabilities for sample production or rework of fine pitch SMD component (0.5mm pitch)

Lab Equipment:

- 6.5 digit multimeters
- digital power supplies
- 4Gsa/s digital storage oscilloscopes
- small reflow oven for sample production
- microscopes
- digital soldering equipment and hot air rework station
- High voltage (6KV) test stations
- CNC equipment
- High speed logic analyzers

Software development in embedded systems:

- Usage of RTOS (real time operating system)
- Development tools for PIC, 8051, ARM via JTAG
- Assembly & C programming tools
- Usage of different stacks for USB, Ethernet, SD

Parallel Diagnostic Devices Series for Vehicles (1997-2000)

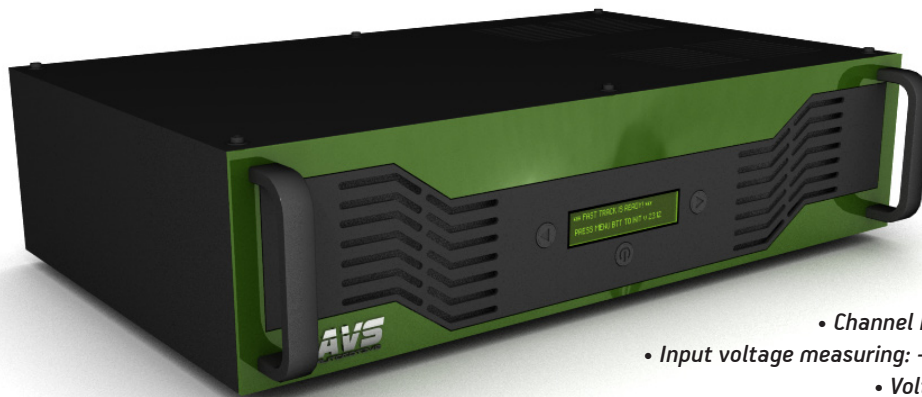
AVS began in 1997, having an active software development department, developing parallel communication protocols for vehicle malfunction diagnosis, via automatic Breakout Box devices (B.O.B.). Offering technical consulting services for fault tracing to ministry of Transportation. These B.O.B. devices used to transform analog signals that taken manually from engine sensors to communication protocols automating the whole process of diagnosis.

Then, its activities were expanded to hardware development and more specifically, to parallel diagnostics devices, to cover the demands of the modern vehicle fleet.

The finest machine from this series, with multiple functions, is the SHARPTRACK 128. It is an innovative tool, which could connect to the ECUs with wires, receive input – output signals and compare them with standard values, from the vehicle manufacturer. Moreover, its additional equipment includes a compact flash card, for flight recording, a USB port, LCD screen and special keyboard. This particular device was internationally presented in Automechanica Frankfurt 2002. It had a major impact in education sector, since the majority of educational organizations and universities around Greece, adopted this specific device.

With Sharptrack 128 AVS introduced:

- Data transfer in real time, for one, two, five, ten and twenty channels, in the PC via USB
- Storage in real time of one, two, five, ten or twenty channels in compact flash
- Programming from the computer for 4 different configurations, for use after logging off from the PC (test drive)
- Data transfer to the PC of the values stored in the compact flash, via USB, for further process
- Selection of any combination of channels for measuring, through the software
- Selection of separate voltage scale, for all the analog channels, independently
- Software update of the microcontroller, from the PC



Hardware Specifications:

- Channel Numbers: 128, expandable with + 64 more
- Input voltage measuring: -250V.. +250V, -25V.. +25V, -0.25V.. +0.25V
 - Voltage scale selection, through the software
- Input electrical resistance of analog channel: 100K Ω
 - Electrical resistance measuring: 0-25K Ω
- Selection option, between voltage and electrical resistance measuring in all channels, through the software
 - CAN 2.0B controller with speed up to 1Mbit/s
- Compact removable Flash 64Mb for realtime data storage
 - Compact construction

AutoExplorer1 Series - Diagnostic Devices for Vehicles (2000 -2008)

AVS develops the new series of diagnostic devices utilizing serial communications, the AutoExplorer1 series. It is an innovative solution as some of the characteristics of the series is its small size, and the ability to Auto Switch Channels (ACS-Automatic Channel Switching) which was later adopted by many manufacturers of diagnostic equipment. Furthermore customized adapters for older vehicles designed in order to fit directly to the main diagnostic unit without the need of extra cabling. Lastly, the series has the option of wireless connectivity with the PC via Bluetooth.

AutoExplorer1 Series 3:

With AutoExplorer1-Series 3, AVS introduced in 2000:

- The smallest diagnostic device of the market
- Automatic Channel Switching (no need for manual selection of channel diagnosis)
- Special Adapters designed to fit exactly in 16pin interface of the device without the need of external equipment inbetween.
- Presented officially for Europe in Automechanica Exhibition 2002 in Germany

AutoExplorer1 Series 4:

With AutoExplorer1- Series 4, AVS introduced in 2003:

- Capability of wireless communication with the PC via Bluetooth
- Maintained the Automatic Channel Switching
- Official Presentation for Europe in Equip Auto 2003 (France)

AutoExplorer1 Series 5:

With AutoExplorer1- Series 5, AVS introduced in 2004:

- New compact design
- All-in-one construction including all communications (ISO, J1850,CAN and wireless interface) in a single board
- Official Presentation for Europe in Automechanica 2004 (Germany)

AutoExplorer1 Series 6:

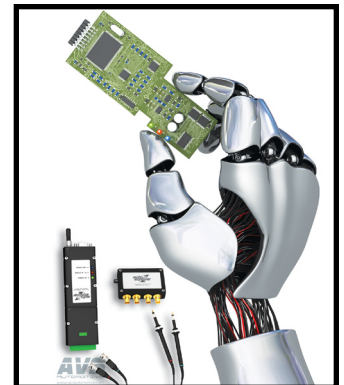
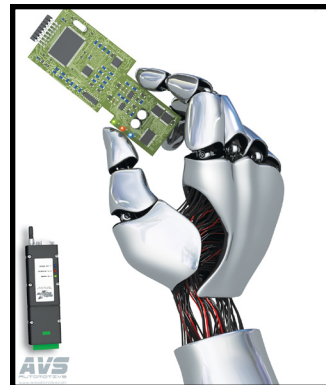
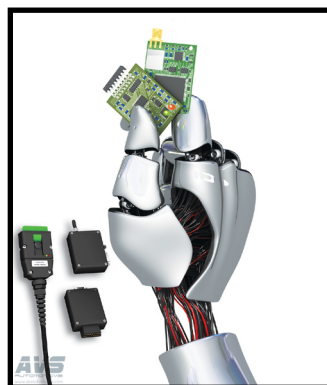
With AutoExplorer1- Series 6, AVS introduced in 2006:

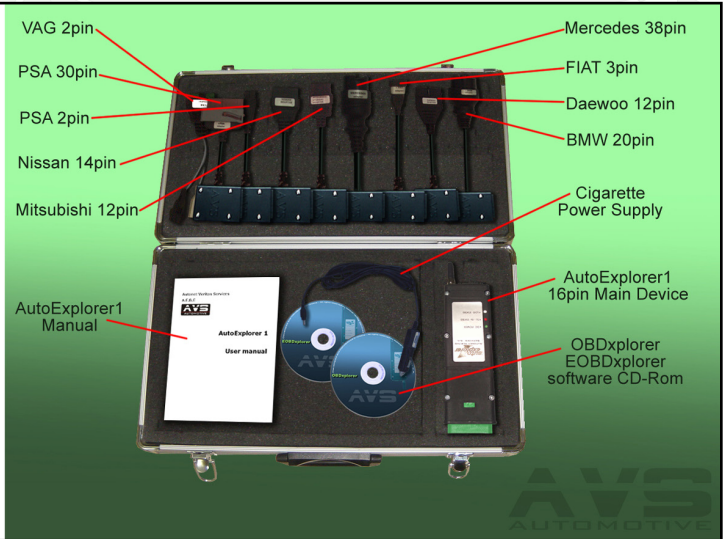
- External oscilloscope that operated exclusively via AutoExplorer1, allowed signals to be measured directly from sensors
- Official Presentation for Europe in Automechanica 2006 (Germany)

Technical Characteristics of the AX1 series:

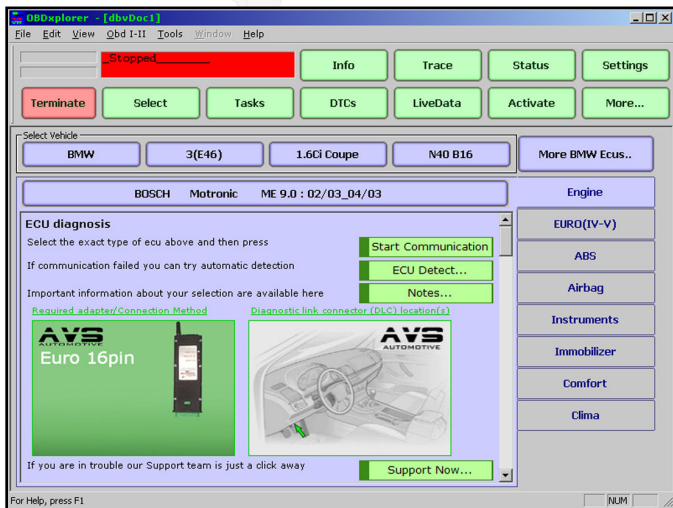
Supported Protocols:

- ISO 9141
- KWP SLOW (ISO 14230)
- KWP FAST (ISO 14230)
- J1850
- CAN Bus
- Small size
- Communication with PC, via RS232 port or Bluetooth
- Windows 95/98/ME/2000/NT/XP compatible software

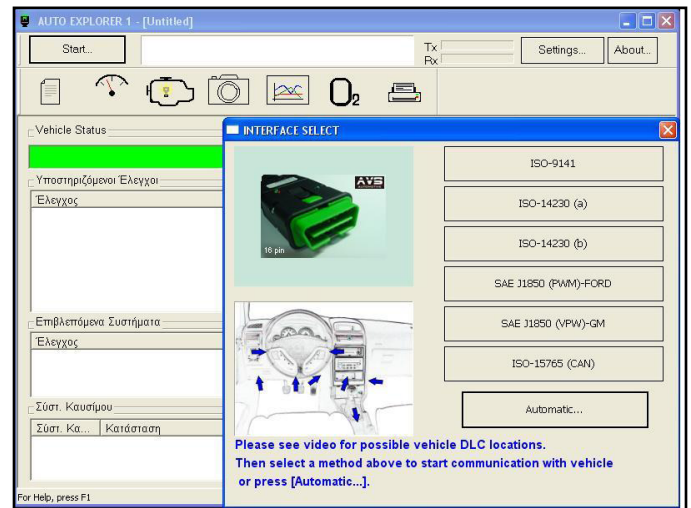




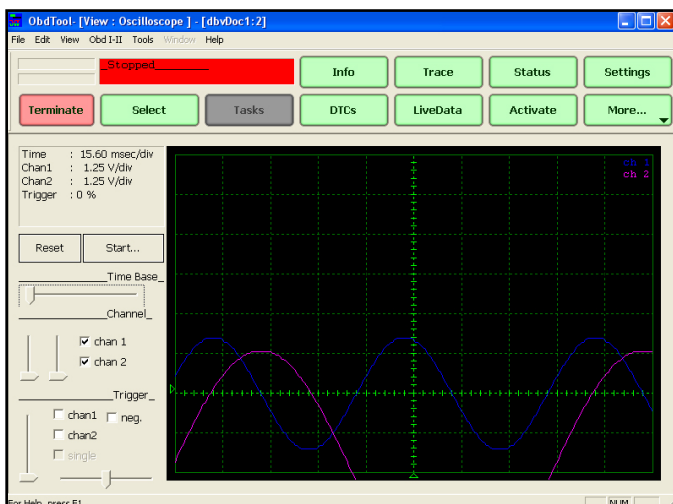
AutoExplorer1 Full Set



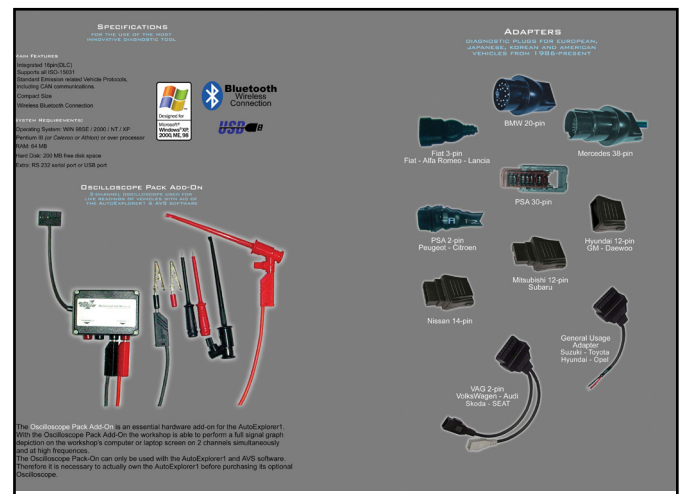
Software interface of main application OBDxplorer



Software Interface for EOBD compliant communications



Software interface of the external oscilloscope



External Oscilloscope + Additional vehicle adapters

AutoExplorer100 Series - Diagnostic Devices for Vehicles (2009 - today)

AutoExplorer100 series is a series of diagnostic devices for cars, trucks and heavy duty vehicles, the successor of AutoExplorer1 series.



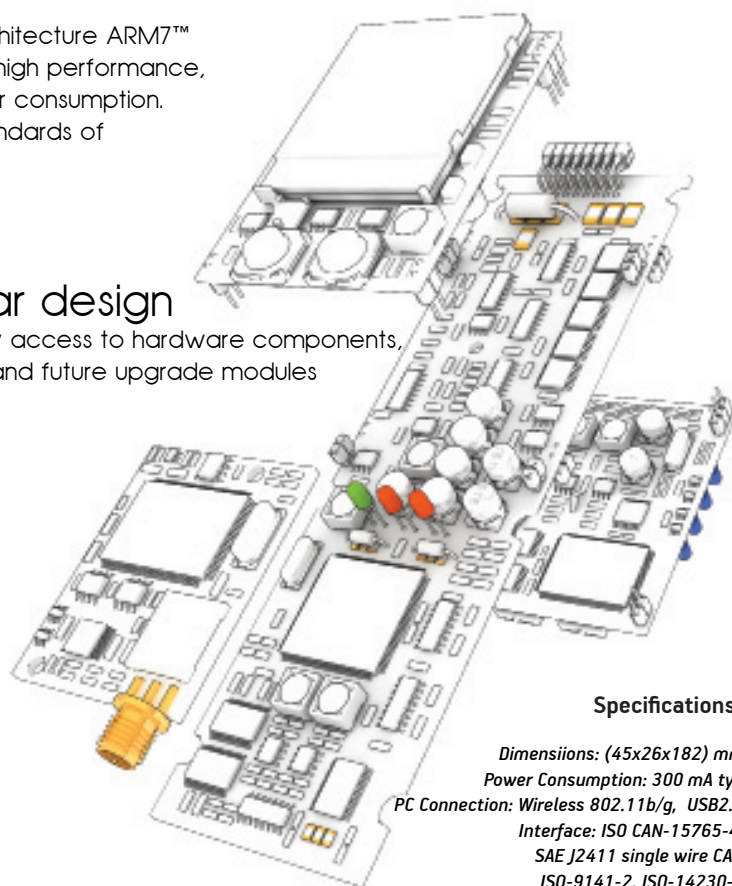
Innovations:

ARM®

Powered by the 32-bit RISC architecture ARM7™ processor family, specialized in high performance, real-time processing, low power consumption. it is compatible with today's standards of automotive industry protocols.

Modular design

Permits easy access to hardware components, for service and future upgrade modules



Onboard WiFi interface with detachable antenna use radio technologies to provide secure, reliable, fast wireless connectivity. It integrates seamlessly with your existing WiFi networks

Specifications:

Dimensions: (45x26x182) mm
Power Consumption: 300 mA typ
PC Connection: Wireless 802.11b/g, USB2.0
Interface: ISO CAN-15765-4,
SAE J2411 single wire CAN
ISO-9141-2, ISO-14230-4

Software
Compatibility



Desktop PC



Laptop



Tablet PC



PDA



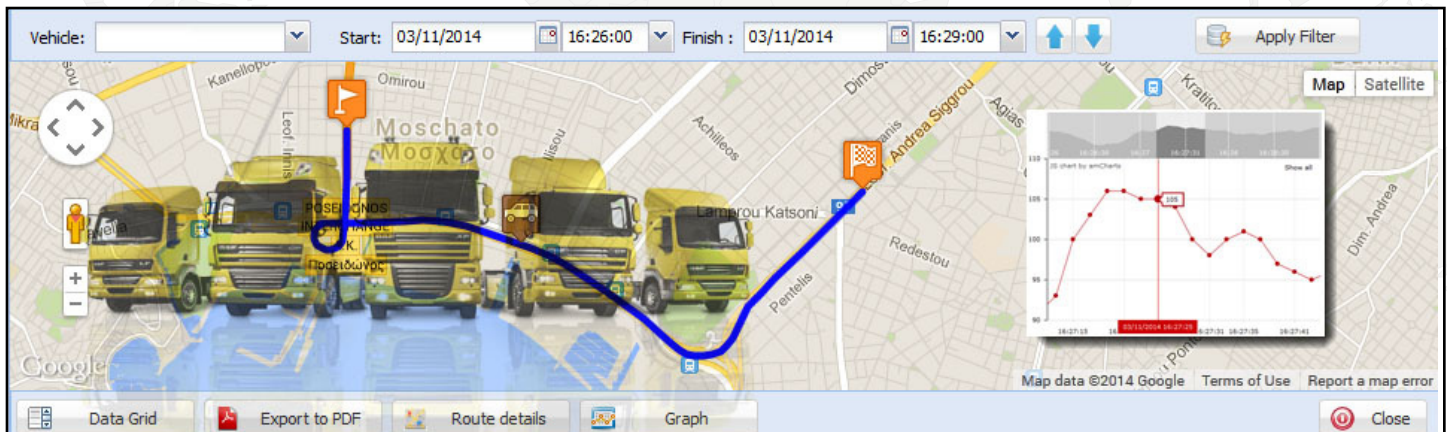
Diagnostic Features:

- Fuel Injector Programming
- Auto-adaptive Parameters Reset
- Idle Speed Adjustment
- Diesel Particle Filter (DPF) Replacement
- Transaxle Calibrations
- Gearbox Parameters Reset
- Airbag Codings
- Control Unit Coding
- Xenon Headlights Calibration
- Suspension Adaptation
- Dashboard Language Setting
- A/C Flaps Adaptation
- Built-In Oscilloscope / Live Data Monitoring / Graphical Analysis
- Read/Erase Fault Codes
- Full ECU Identification
- ECU Parameter/Status Reading
- Activations of electronic components in the vehicle.
- Steering Wheel Calibrations.
- Programming of time-based services (pads, FAP Filters, A/C Filters).
- Service Interval & Service Reminder Indicators Reset
- Servomotors Calibration
- Key and Remote Control Coding
- Engine Self-Test Procedures
- Throttle Adjustment
- Basic Settings Read/Alter Values
- Body Electronics Control



AVS TD Series - Telematic Devices (2010 - today)

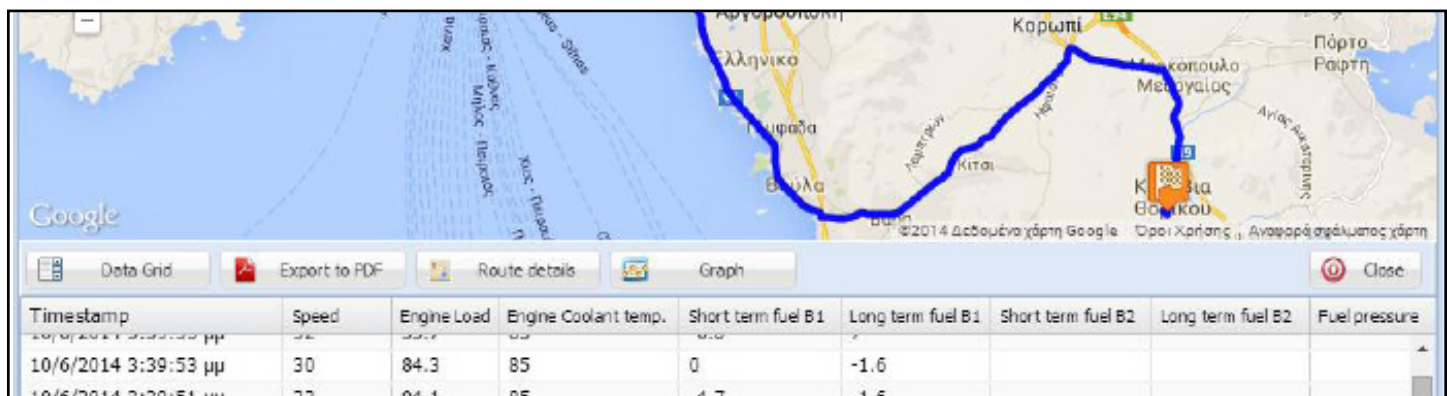
AVS offers a complete range of telematic devices that are a powerful and autonomous solution in telematics and remote fleet management. The software is able to run on any device running Windows (PC, Laptop, Netbook, PDA, Tablet etc).



Thanks to its open architecture, these systems can be customized to fulfil the exact needs of a fleet administrator.

- 3 in 1 device: AVS TD combines in the same device capabilities of vehicle tracking, remote diagnosis and monitoring of external sensors
- Engine Parameters Monitoring
- Display of vehicles on the map
- Identify vehicle drivers through system identification
- Panic button that sending alarm in the information center
- Detailed oscillator graphs of all the current measurements of the vehicle
- Analytic printable reports.
- Internal smart mechanism to define alerts and notifications in any case a parameter exceeded the limits the administrator set.

Video-demonstration of a truck in motion here: <http://www.avsautomotive.gr/downloads/route1-2014-05-26.mp4>



Range of Telematics Solutions:

AVS offers a complete range of telematic devices that are a powerful and autonomous solution in telematics, remote fleet management and custom monitoring solutions. The following are some "ready" solutions, but there is the capability of customizing our devices (both in hardware and software) according to clients' needs.

AVS TTG1000 - Tracker

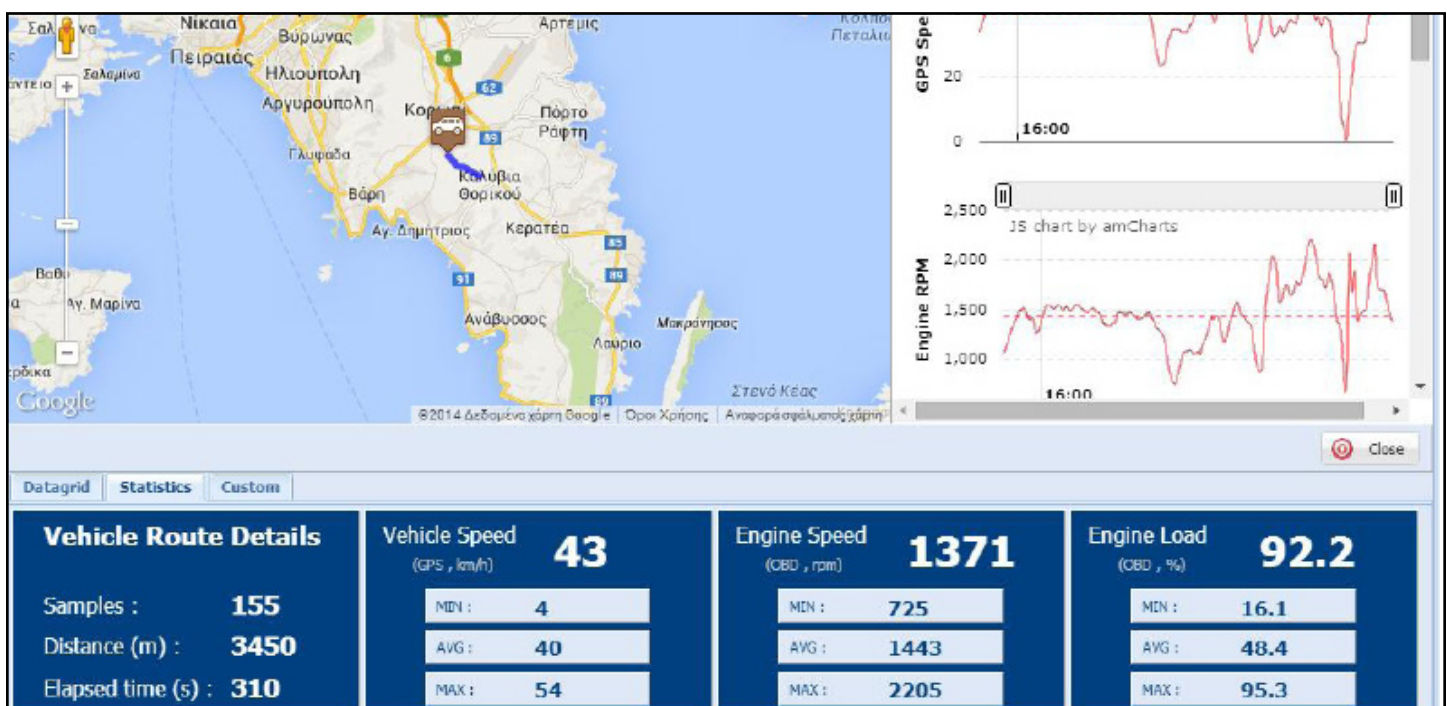
AVS TTG1000 is a small device that it connects to the vehicle and transmits the location of this vehicle any given time. It utilizes a GPS/GPRS system that help to track the vehicle in any location it may be. Its software could be handled via WEB in any PC or via a dedicated control panel that it is installed locally on the computer.

AVS TDG1000 - Tracker/Diag for Cars

AVS TDG1000 is a small device for passenger cars and light trucks, that it connects to the vehicle and transmits the location of this vehicle any given time. Also it is able to communicate with the engine electronics and monitors the the actual values of the sensors of the engine. So, along with the location of the vehicle, we can monitor the readings of the engine sensors in real time.

AVS TDG2000 - Tracker/Diag for Trucks

AVS TDG2000 is a small device for trucks and heavy duty vehicles, that it connects to the vehicle and transmits its location any given time. Also it is able to communicate with the engine electronics and monitors the the actual values of the sensors of the engine. So, along with the location of the vehicle, we can monitor the readings of the engine sensors in real time.



Exhibitions, Awards and Sponsoring



AVS' innovative, all-in-one diagnostic interface hardware being presented (AutoExplorer100 series) , allowed the committee of the exhibition to place AVS among the industry's leaders.

Most of the technical innovations that AVS introduced to the automotive field, have been established as leading technologies of the diagnostic sector that being adopted by many manufacturers throughout the years.

- 2000: EXPA Autoshow (Greece)
- 2002: Automechanika Frankfurt (Germany)
- 2003: Equip Auto (France)
- 2004: Automechanika Frankfurt (Germany)
- 2006: Automechanika Frankfurt (Germany)
- 2009: Motortec (Greece)
- 2011: Automechanika Iberica (Spain)

Exhibitions, Awards and Sponsoring

motortec
automechanika
IBÉRICA

G7
GALERÍA DE INNOVACIÓN

G A L E R Í A D E I N N O V A C I Ó N 2 0 1 1
I N N O V A T I O N G A L L E R Y 2 0 0 1

Empresa / Company:

AVS Automotive S.A.

Categoría / Category:
EQUIPAMIENTO PARA DIAGNOSTICO DEL VEHICULO
VEHICLE DIAGNOSTIC EQUIPMENT

Stand:
Pabellón / Hall 10 Stand 10C07

Nombre del producto / Name of the product:

AutoExplorer100

Descripción:

Probador de Diagnóstico del Vehículo

Description:

Vehicle Diagnosis Tester

Aplicación, uso, utilidad:

Probador de diagnóstico para automóviles y camiones ligeros.

Application, use:

Diagnostic Tester for cars and light trucks.

Funcionamiento:

Way of using:

Aspectos novedosos y valor añadido:

Uno de los más pequeños probadores de diagnóstico en el mercado.
Conectividad inalámbrica con el vehículo (a través de WiFi).
La velocidad rápida de conexión con las unidades de control -
La comunicación tiene un máximo de 5 segundos.
Muy fácil de usar y navegar a través de su interfaz de software.

Innovative aspect and added value:

One of the smallest diagnostic testers in the market.
Wireless connectivity with the vehicle (via WiFi).
Fast Connection Speed with Control Units - Communication takes up to 5 seconds.
Very easy to use and navigate through its software's interface.

Premios y Menciones recibidas:

Awards:

Otros aspectos:

Uno de los más pequeños probadores de diagnóstico en el mercado.
Conectividad inalámbrica con el vehículo (a través de WiFi).
La velocidad rápida de conexión con las unidades de control - La comunicación tiene un máximo de 5 segundos.

Others:

Real Time Live Data - Ability to monitor simultaneously all the Live Data (Actual Values) of the chosen control unit.
Works with any PC equipped with Windows XP/Vista/7 32 & 64 bit.

AVS
AUTOMOTIVE

Cooperación
messe frankfurt



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motortec 2011

motortec
automechanika
IBÉRICA

SHELL ECO MARATHON

AVS is official sponsor and supporter of the Greek participation of NTUA in SHELL's pan-European fuel saving contest, designing remote energy management through rigorous real-time monitoring. To achieve this, analog and digital sensors are mounted on the vehicle and being controlled via telematics technology.



PROMETHEUS TEAM

Prometheus team consists of undergraduate students and faculty members of the department of Electrical and Computer Engineering of the National Technical University of Athens. Pyrforos is the prototype electric vehicle developed by the team at the Laboratory of Electric Machines and Power Electronics, NTUA.

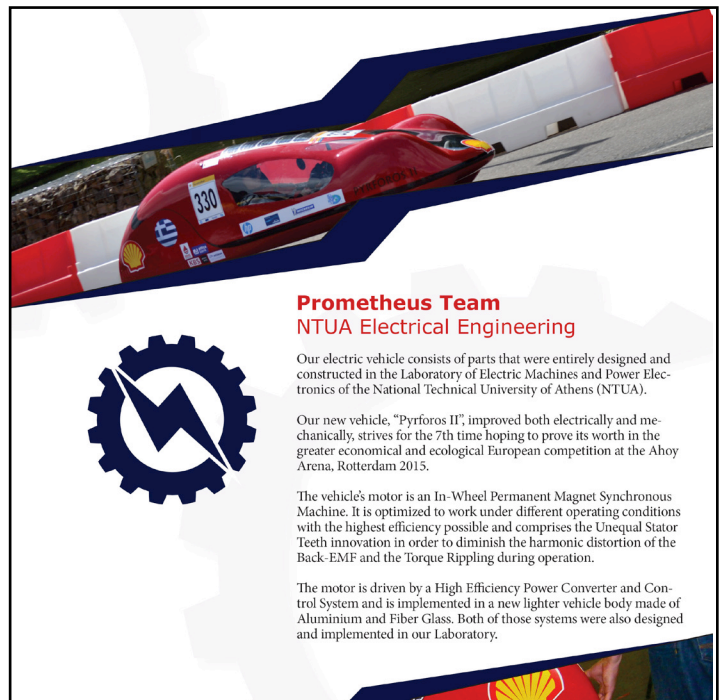
PREVIOUS PERFORMANCES & HIGHLIGHTS

During the Shell Eco Marathon 2013 competition, despite the tough conditions, Pyrforos managed to travel 316 km spending only one KWh of energy, amount that corresponds to 3061 km with one liter of equivalent fuel, ranking 13th among 36 participants in the "Plug-in Prototype" category. Prometheus team was awarded the 2013 "Best Team Spirit Award" among more than 180 participants.

The award was the offspring of hard work, serious commitment and effective cooperation between the team members. The provision of technical assistance to other teams and the promotion of the Greek culture rendered such a significant accomplishment feasible.

ENERGY EFFICIENCY, ECO-FRIENDLY TECHNOLOGY

- Design and construction of a custom-made electric vehicle.
- Continuous evolution and introduction of new eco-friendly, state-of-the-art technologies.
- Entire propulsion system implemented by members of the team in the Laboratory of Electric Machines and Power Electronics.



PARTNERS AND COLLABORATIONS

Since 2012 AVS Automotive is a member of the Corallia initiative (www.corallia.org), a technological cluster of collaborating companies that aim to innovate. Recently the cluster awarded with the Silver Reward of Excellence from ESCA (European Secretariat for Cluster Analysis).



Partners:

