

# VISION

Display and calibration tool

## Description

Vision is a flexible user interface for the configuration and monitoring of any electronic device supporting the Magneti Marelli proprietary communication protocol and is also equipped with a suitable communication line (eg. CAN, Ethernet, or Bluetooth). Vision permits one user to be connected as a client of several devices; one device can also support several Vision clients.

A customisable graphical user interface can display ECU measurement channels that are updated in real-time. The calibration (i.e. configuration or characteristics) of the unit can also be easily modified by using the same interface.

Additionally the entire ECU calibration data is encapsulated in a proprietary file format (with "PTA" suffix) which can be easily modified with an editor also incorporated within Vision. An automatic mapping procedure can be either controlled from the user's PC keyboard or from an optional potentiometer desk.

Vision supports an open architecture in order to permit integration with custom additional software tools. Public services are provided so that other applications can use Vision functions without needing to launch the main application therefore minimising resource allocation.

## Main Features

- Channels represented in *Display* and *Potentiometer* fields (Read or Read/Write)
- Configurability of screen layout according to the end user preferences (Pages/windows/channels)
- Proprietary communication protocol for a fast and reliable PC-ECU link
- Real time ECU monitoring
- Mapping functions
- Calibration management tools
- Communication support through RS232 for additional devices: potentiometer desk, dynamometric bench



## Benefits

- Connection via different physical links
- Customisable screen layouts
- Notification of out of range channels
- Support for user-defined diagnostics and alarms
- Real time graphical replay of channels
- Graphical editor and comparison tools for calibration tables
- Virtual Channels
- Links to external tools (e.g. Excel®, Matlab®, Simulink®)
- Support of OLE/Automation inter-process communication protocol
- ASAP protocol compliant
- Compatible with Windows® 2000/XP/Vista/Seven 32/64 bit

## Typical Applications

In all applications with Magneti Marelli proprietary protocol on board

SOFTWARE

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## Main characteristics

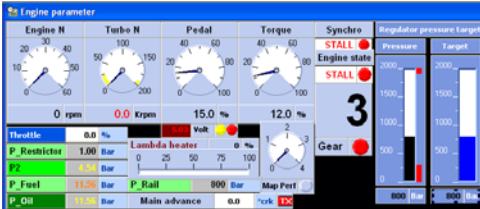
### Setup

Vision display interface can be easily customised according to user preferences.

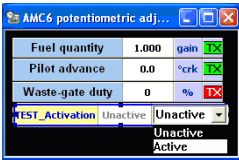
The working area permits the user to define the layout channel data within windows, and subsequently the position of the window within a page. The user add many pages to the interface such that each page allows the user to easily monitor a specific aspect of the system.

### Displaying channels

The Channel display mode presents each channel as a label followed by its instantaneous value, measurement unit and an optional graphical representation. Values are re-read at each refresh cycle.

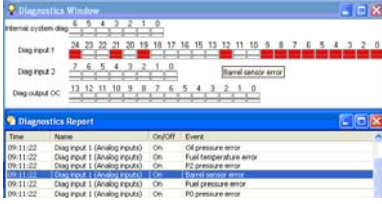


### Potentiometer channels



Potentiometer mode allows the user to enter a replacement value for a specific channel which is then transmitted to the electronic device.

### Diagnostic and Alarm window



The Diagnostic window displays messages decoding the bit mapped diagnostics generated by the electronic device.

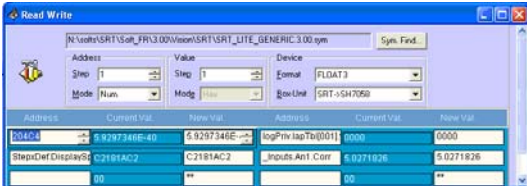
The Alarm window displays messages when a channel (from the "Channel List")

exceeds the configured alarm level thresholds.

Report windows show the timestamp of events (both active and memorized).

### Read/Write window

This window allows the users to read/write any software variable allocated in the unprotected regions of ECU memory.



For further information, please contact:

### Oscilloscope

The Oscilloscope window displays the channel data as a graph to allow the trend to be observed.

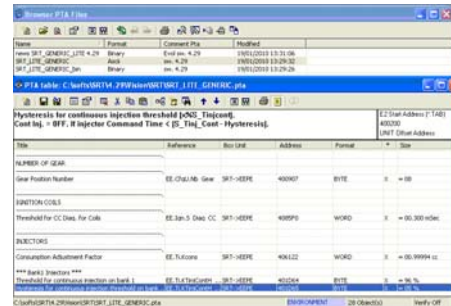


### Maths channels

Virtual channels may be computed from user defined functions applied to acquired channel data.

### Calibration and Configuration

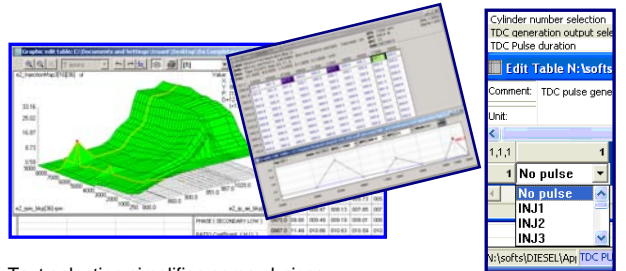
Vision can read and write the contents of the non-volatile memory of the device which is used to store the calibration data.



The editor interface allows the user to extract calibration data from the ECU and also to perform comparisons with other data sets.

Data may be displayed in numerical or graphical format. Moving on the graphing waveform the numeric window is auto updated and vice-versa

The graphical map allows a 2D or 3D representation as well as the ability to compare with other data.



Text selection simplifies some choices.

### Minimum PC requirements

- PC Pentium 1.0 GHz
- Ethernet-TCP/IP network interface
- RAM: 1.0 GB; Free Disk Space: 1 GB

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