

WINTAX4 PRO

Data acquisition and analysis
Telemetry Level

Description

WINTAX4 PRO is a complete suite of data analysis tools developed for the most advanced levels of motorsport.

In addition to the full range of powerful analysis functions and display methods, WINTAX4 PRO is designed for a multi-user environment where data is shared and distributed over the trackside network.

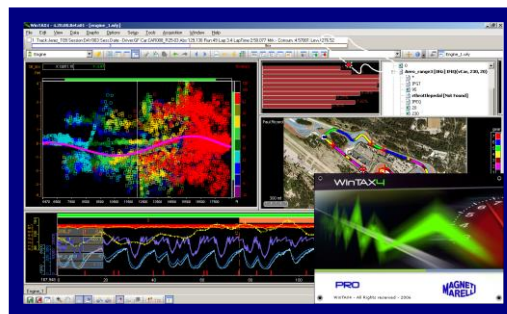
When combined with Magneti Marelli's ground-breaking Telemetry System, WINTAX4 PRO provides highly advanced real time analysis functions as well a standard interface to team's proprietary software applications.

Offering data protection, add-on modules and dedicated support to develop innovative and integrated solutions, Magneti Marelli's flagship data management tool is the ideal solution for the most ambitious development programmes.

All the characteristics of lower WinTAX4 levels are included in WINTAX4 PRO.

Main Features

- Multi channels time & distance graphs
- Multi axes 2d & 3d scatter plots
- Lap-by-lap advanced channels Report and Trend
- Circuit map and GPS data
- Histograms and PSD spectrum analysis
- Gauges, Bargraph and Diagnostics windows
- Real-time and post processing analysis simultaneously
- Multiple overlay and data comparison
- User customisable colour schemes, multi Users configurations, multi languages (*IT, UK, FR, JP, DE*)
- Import/Export User setup
- Advanced Maths channels with graphical editor
- Multiline Maths channels with support of complex statements
- Real-time Virtual Channels & Digital Filters
- External Math channels definition
- Advanced real-time Events, Alarms and Conditions
- Export to ASCII/CSV/Excel®/Matlab® and bin format
- Excel® shortcuts
- Download data from MM loggers (Eth & Card)
- Data protection



Benefits

- Compatibility with third party systems thanks to WinTAX openness: Import data and extra modules allows you to use WinTAX with any external system
- Advanced windows display for a deep data analysis
- Customisable screen layouts and graphs
- Fast mode: customisable accelerators for repetitive operations

Operating System Compatibility

- Compatible with: Windows® XP Windows® Seven, Windows® 8, Windows® 8.1, Windows® 10
- Compatible with Dual & Quad Core processor

Advanced Features

- Data Video Synchronisation
- Real Time data acquisition from CAN Lines
- OLE/Automation inter-process communication protocol. VBScript, JScript
- Import/export from ASCII format
- Import/export from Matlab format
- Google Earth Map Integration
- Library interface for reading/writing WINTAX4 archives
- Library interface for reading/writing real-time fluxes from third party systems
- WTS real-time telemetry server for garage data distribution
- Data advanced protection: real-time & post-process
- Global channels parameters settings
- Optimised data formats for excellent performances
- Extensive Help with context sensitive links

Typical Applications

F1, WRC, Le Mans Endurance Series, DTM, MotoGP, Superbike, GT, Rally, Touring Car

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Technical support

This level of license includes the following items:

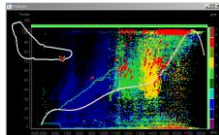
- Possibility to develop custom solutions
- Continuous dedicated support (advice, feasibility studies, fixes)
- Annual renewal includes confidential updates and fixes
- Multi-user license

Main Characteristic

The main screen area of WINTAX4 can contain any combination of graphs or reports in which logged data may be represented in a variety of different ways. Commonly-used combinations of windows can be saved as user defined Layouts.

Analysis Windows

Graphs windows allow to display data against time&distance with many styles (e.g. overlapped or tiled).



Advanced scatter 2d/3d waveforms with multi-axes, best-fit line and filtering conditions allows to perform complex analysis.

Direct link to export data in a Excel[®] spreadsheet (mouse click).

Maths Channels

Maths channels are generated from user-defined combination of logged or real-time data channels. Very intuitive math editor with 'auto compose' and 'debug formulae' utilities.

- Multiline expressions with statements support
- Advanced trigonometric, algebraic, Boolean and digital filters are available (IIR, FFT, Butterworth etc.).
- Fast math processing: maths channels are calculated 'on demand', this ensures excellent performances.
- Math libraries can be shared between Users.
- External Math functions through optional DLL module.

Events, Alarms & Conditions

Advanced checks for automated monitoring of Engine&Chassis can be displayed into waveforms as graph symbols or as multiline reports in post processing or real-time mode both.

VBScripts & JScript

The internal *scripting¯o* engine makes WinTAX4 fully open to standard applications for Input /Output. Data sharing to/from Excel[®] or Matlab[®] is, for example, very intuitive.

VBScript[®], JScript[®], programming languages are supported.

WinTAX4 can be also controlled by other applications allowing automatic procedures useful for example at dyno.

Circuit & Google Earth

WinTAX4 allows to calculate and display an accurate trajectory of the vehicles on the circuit. The circuit map is auto-created from basic logged channels as acceleration, speed and distance or via GPS coordinates.



Track report channels, useful to identify brakes and acceleration areas, can be displayed over Google Earth background image.

Real-Time analysis

Each waveforms can switch from post-processing to real-time mode with quickly configurable shortcuts.

Each Layout may contain post and real-time windows.

Advanced 'real-time freeze' & and 'real-time compare' utilities.

WTS (WinTAX Telemetry Server)

WTS is the new real time telemetry data distribution infrastructure. The system distributes real-time live telemetry fluxes over the garage network to an unlimited number of PC clients in a very efficient and reliable way.



Matlab & Simulink Integration

WinTAX4 provides powerful possibilities for interfacing with Matlab and Simulink

Import & Export from ASCII and Matlab

WinTAX4 provides the possibility to import data saved in any proprietary formats. This allows to make the system fully open and flexible in I/O.



VMS: ECU Virtualization

Simulink-based models of the on-board ECU, running on PC allow the user to simulate or compare controls and strategies in off-line mode against logged data.



External Components

A large suite of external modules, like R&W DLLs, link with commercial weather stations make WinTAX4 at the top ranking of race data analysis tools.

Minimum PC requirements

- Processor: 1 gigahertz (GHz), recommended 4GHz or faster
- RAM: 1 gigabyte (GB) , recommended 4GB or greater
- Hard disk space: at least 2GB free
- Ethernet TCP/IP network interface 10/100/1000 Mbit/s

For further information, please contact: