

The OLDtronic Monitor has been designed as a replacement for the TAGtronic System Monitor (V5). TAGtronic System Monitor was designed to work in the DOS operating system on particular laptops using PCMCIA cards that are no longer available. The OLDtronic Monitor will run on the latest versions of Windows using a generic USB device to communicate to the ECU, the intention being to 'future proof' the system to enable these old TAGtronic ECU's to be used long into the future.

Compatibility

The OLDtronic Monitor will work with the following ECU's:

- GCU-121 Gearbox controller (McLaren MP4/7, Alfa DTM etc.)
- TAG2.12F Engine controller (McLaren MP4/8, 9 & 10, Jordan J195, J196 etc.)
- MCU-100 Chassis controller (McLaren MP4/8, 9 & 10, Jordan J195, J196, Sauber, Alfa DTM etc.)
- TAG3.8 Engine controller (Porsche GT2, Porsche GT1, Alfa BTCC, Randlinger DTM, Dauer, Ken Matsuura F3000)
- TAG3.12 Engine controller (McLaren F1, McLaren F1-GTR, BMW V12 LM/LMR, Ruf, Kia)
- CEC Car equipment controller (McLaren F1)
- TAG2000 Combined chassis and engine controller (McLaren MP4/11-14, Jordan J197 J198 J199, Prost AP01 AP02, Arrows A19 A20)
- PCU-2 Dash
- PCU-3 Dash

Principle Uses

As an owner of a car with a TAGtronic ECU, the OLDtronic Monitor will be invaluable when checking the correct operation of your car. By connecting to the car you will be able to:

- See all the measured values such as pressures, temperatures, revs etc.
- Look at logged minimum and maximum values to see where temperatures peaked, for example.
- Inspect the operation of all the strategies such as fuelling, ignition, gearbox, throttle etc.
- See if any faults have been detected by the system.
- Clear any faults and check whether they re-occur.
- Download any logged data and see what happened on track.
- Save a snapshot of all the values to a log-file and e-mail it to an expert for further analysis.
- Program and tune the ECU.
- Through the use of generic Windows desktop sharing tools, allow an expert to use OLDtronic Monitor across the Internet.

Base Monitoring Functions

The OLDtronic Monitor offers familiar monitoring functions in the same layout as the old System Monitor, therefore you can tab through different pages to look at different strategies, look at sensor errors and time triggered event errors:

The left screenshot displays the 'Main Screen' with the following data:

- Engine/Car Status:** Revs CK(1) = 0 rpm, Scaled Idle = 0 rpm, Engine Status = *3, Vehicle Speed = 0 km/h, VBatt at Coil = 14.0 V, Twater = -29.0 °C, Tair = -40.0 °C, Toil = 0.0 °C, Tgearbox = -50.0 °C, Gear = *
- Ignition/Injection:** Ignition LEFT 0.0, RIGHT 0.0 *CK, Dwell 0.0, Qtotal 0.00, 0.00 cmm, t inj near 0.00, 0.00 ms, t inj far 0.00, 0.00 ms, %F 0.0, 0.0 %, InjInjRetard 0.0, 0.0 *CK, BVC NEAR 0.682 ms, FAR 0.0, End Angle 0.0, 0.0 *
- Lambda:** Sensor NOK LEFT(3) 0.00, RIGHT(1) 0.00, Active False, Fuel Lean, V_sens 0.424, F_ctrl 0.00
- Acceleration:** Extra Bung = 0.00, delta_t_load = 0.00 ms/s, Active Left No, Right No
- Pot Adjustments:** Q Global 100.0% * Global 0.0 *, %F 0.0% * Cam 0.0 *, End Near 0.0 * Idle Sp 0rpm, End Far 0.0 * Spare 2048

The right screenshot displays the 'Fuelling Calculation' screen with the following data:

- Out of Start Fuelling:** Q load 0.00 cmm, Global 0.77, HFM 1.00, Emissions 1.00, Throttle 1.15, Knock 1.00, Warm Up 1.98, Accel Enrich 1.00, Reinstatement 1.00, ASE 1.00, Q total 0.00 cmm, Lambda front 1.00, Lambda rear 1.00
- Start Fuelling:** Basic Start Q 70.00 cmm, Start Adjustmen 3.43, Global Adjustme 0.77, HFM Correction 1.00, Q Start 131.0 cmm, Repeat Detected False
- Preinjection Pulse:** Basic Start Q 70.00 cmm, Pre Injection A11 71, Global Adjustme 0.77, HFM Correction 1.00, Q Pre Injection131.0 cmm, Pulse Done False
- Misc:** ASE repeat False, t after start 0 s, Ign after start 0, Ign after stall 0, Ign last run 0, Time Bet. Starts-day h:m:s *35081
- Engine/Car Status:** Revs CK(1) = 0 rpm, Engine Status = *3, Vehicle Speed = 0 km/h, Twater = -29.0 °C, Tair = -40.0 °C, VBattery = 14.0 V

The left screenshot displays the 'Events' screen with a list of error messages:

- 01/01/1990 03:53:56:E-1017:Analog err - Fuel pTemp 0006 0006 0001
- 01/01/1990 03:53:56:E-1018:Analog err - Manifold pTemp 0002 0002 0001
- 01/01/1990 03:53:56:E-1019:Analog err - Crankcase pTemp 0002 0002 0001
- 01/01/1990 03:53:56:E-6010:Bus A receive timeout CCCC 07FF 0041
- 01/01/1990 03:53:56:E-4007:Analog err - Drum Position 000A 000A 0001
- 01/01/1990 03:53:56:E-4014:Analog err - Trumpet Position 0002 0002 0001
- 01/01/1990 03:53:56:E-4004:Analog err - Left Rear Brake Disc Temp 000A 000A 0001
- 01/01/1990 03:53:56:E-4005:Analog err - Right Rear Brake Disc Temp 000A 000A 0001
- 01/01/1990 03:53:56:E-4008:Analog err - Differential Pressure 0001 0001 0001
- 01/01/1990 03:53:56:E-400C:Analog err - Pit Rat 000A 000A 0001
- 01/01/1990 03:53:56:E-4010:Analog err - Differential pTemp 0008 0008 0001
- 01/01/1990 03:53:56:E-4011:Analog err - Left Rear Brake pTemp 000A 000A 0001
- 01/01/1990 03:53:56:E-4012:Analog err - Right Rear Brake pTemp 000A 000A 0001
- 01/01/1990 03:53:56:E-4013:Analog err - Oil Tank pTemp 000A 000A 0001
- 01/01/1990 03:53:56:E-2005:Analog err - Longitudinal Accel 000A 000A 0001
- 01/01/1990 03:53:56:E-200D:Analog err - Lateral Accel 0006 0006 0001
- 01/01/1990 03:53:56:E-2056:Analog err - Oil Pressure 0001 0001 0001
- 01/01/1990 03:53:56:E-2056:Analog err - Fuel Collector Pressure 0001 0001 0001
- 01/01/1990 03:53:56:E-2057:Analog err - Gearbox Pressure 0001 0001 0001
- 01/01/1990 03:53:56:E-205A:Analog err - Oil pTemp 000A 000A 0001
- 01/01/1990 03:53:56:E-205B:Analog err - Fuel Collector pTemp 000A 000A 0001
- 01/01/1990 03:53:56:E-206A:Analog err - Water Temperature 000A 000A 0001
- 01/01/1990 03:53:56:E-205E:Analog err - Pneumatic High pTemp 000A 000A 0001
- 01/01/1990 03:53:56:E-206E:Analog err - LF Stroke diag. 0005 0005 0001
- 01/01/1990 03:53:56:E-2060:Analog err - Gearbox pTemp 000A 000A 0001
- 01/01/1990 03:53:56:E-206F:Analog err - RF Stroke diag. 0005 0005 0001
- 01/01/1990 03:53:56:E-2070:Analog err - LR Stroke diag. 0005 0005 0001
- 01/01/1990 03:53:56:E-2071:Analog err - RR Stroke diag. 0005 0005 0001
- 01/01/1990 03:53:56:E-2062:Analog err - Water pTemp 000A 000A 0001
- 01/01/1990 03:53:56:E-2063:Analog err - Pneumatic Bottle pTemp 000A 000A 0001
- 01/01/1990 03:53:56:E-2073:Analog err - Clutch lvdg diag. 0005 0005 0001
- 01/01/1990 03:53:56:E-2065:Analog err - Hydraulic pTemp 000A 000A 0001
- 01/01/1990 03:53:56:E-2058:Analog err - Pneumatic Low pTemp 000A 000A 0001
- 01/01/1990 03:53:56:E-2067:Analog err - Clutch pTemp 000A 000A 0001
- 01/01/1990 03:53:56:E-2068:Analog err - Oil Temperature 000A 000A 0001

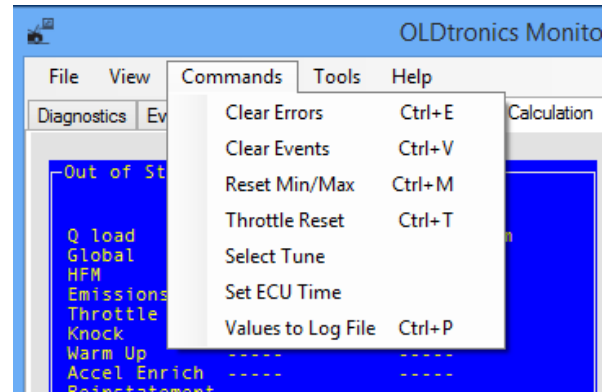
The right screenshot displays the 'Errors' screen with a table of error details:

Time Seen	ID	Description	Additional Info	Status
24/06/2015 17:22:24	E2492	Fuel Pump error	Open circuit	Current
24/06/2015 17:22:24	E0640	CAN error	Reset count	Current
24/06/2015 17:22:24	E1114	Oil pressure error	Value too High	Logged
24/06/2015 17:22:40	E1401	Throttle error	S/C to Gnd	Current
24/06/2015 17:22:40	E2011	V battery error	S/C to Gnd	Current
24/06/2015 17:22:40	E2212	Lambda Heater 2 error	Open circuit	Current
24/06/2015 17:23:02	E0604	FA	NVRAM lost	Logged

Base ECU Commands

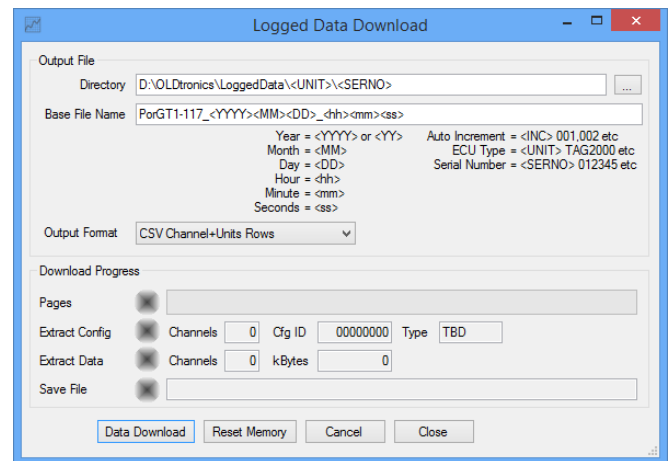
The OLDtronic Monitor provides control over the ECU required when running a car with the following commands:

- Clear the current and logged errors
- Clear the event display
- Reset the min/max values
- Set the ECU time to match the PC
- Reset the throttle zero position
- Select which tune to use - ROM or RAM.



Car Configurations

The OLDtronic Monitor requires a configuration to get the correct setting for the version running in the ECU, the configuration is different for each ECU type and each program version running in the ECU. Most users will just have one car running one version, this configuration is included in the base price for the OLDtronic Monitor. Additional car configurations can be purchased separately. Existing TAGtronic System Monitor users will have access to the necessary files to generate their own configurations for each of the cars they need to work on.



Data Acquisition Data

The latest version of ATLAS no longer supports the reading of data from these old ECU's, therefore this has been included in the OLDtronic Monitor program. The DATAlab (typically chassis data) and Telemetry (typically engine data) type data can be downloaded and saved in an open-format text file for reading into 3rd Party analysis tools.

Examples of exported data viewed in different analysis tools can be seen below.

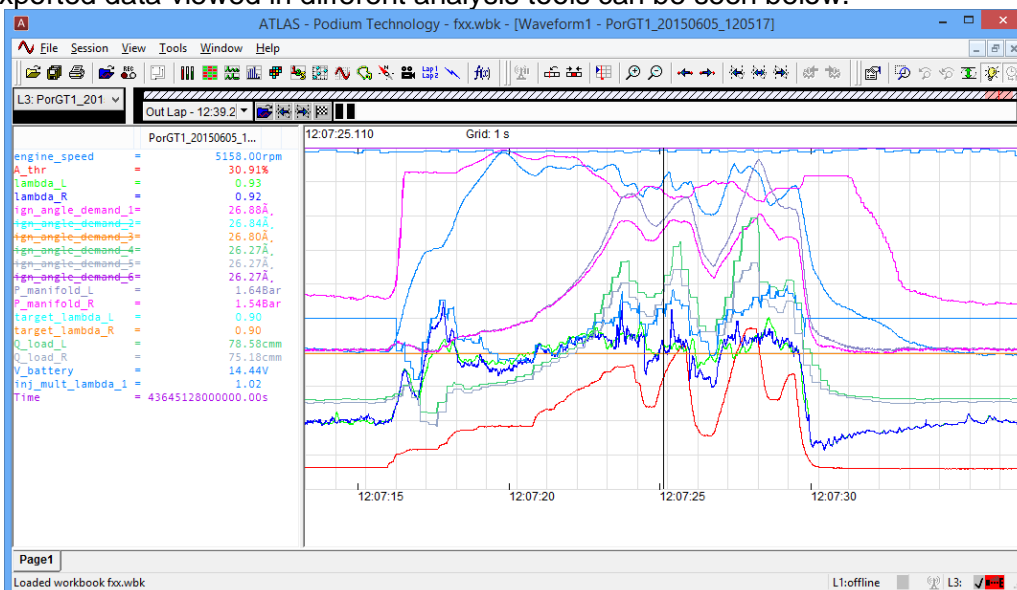


Figure 1: Exported Data Viewed in MAT ATLAS

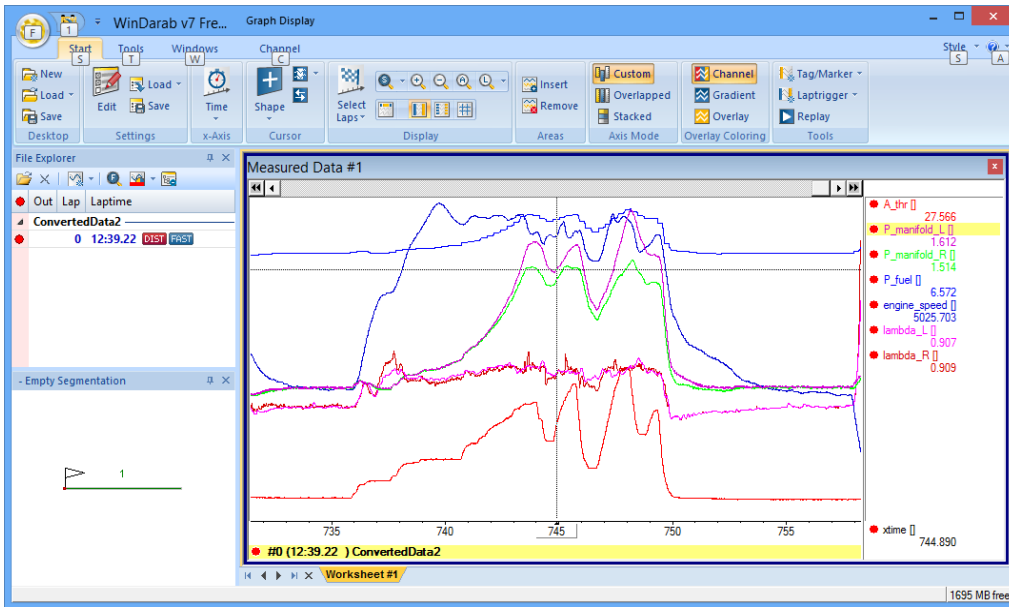


Figure 2: Exported Data Viewed in Bosch WinDarab (Free Version)

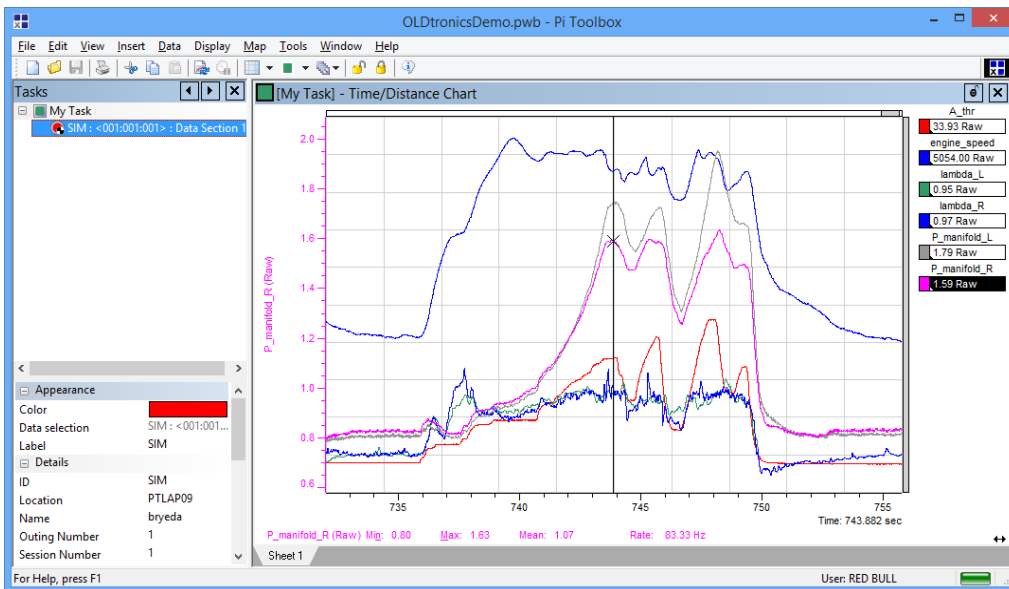
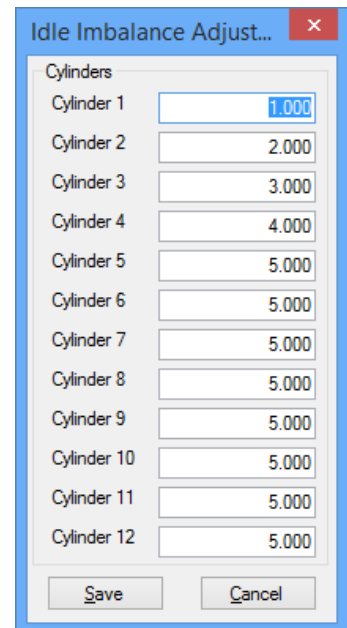
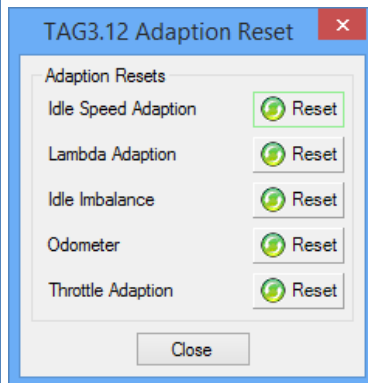
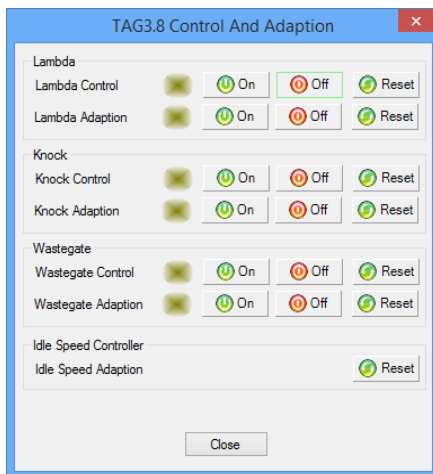


Figure 3: Exported Data Viewed in Pi Toolbox

ECU Specific Functions

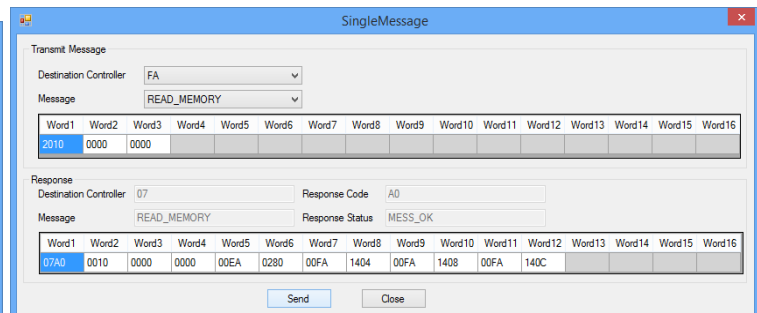
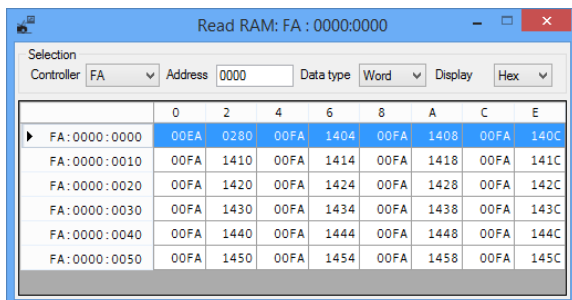
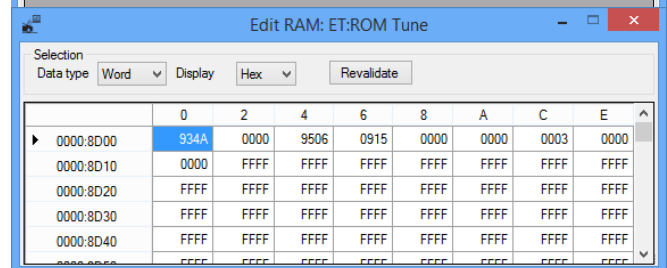
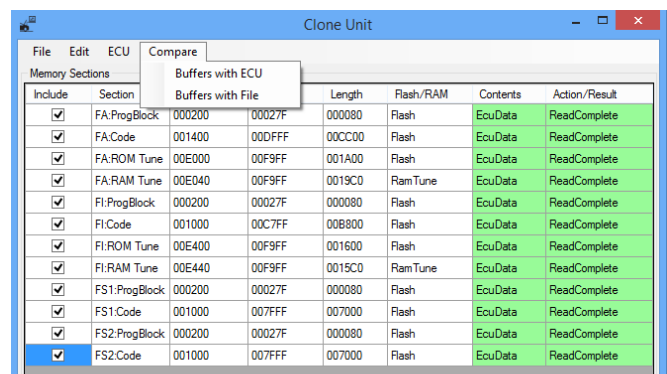
Certain functionality is ECU specific, these features are enabled when required by the supplied car configuration.



ECU Servicing and Test Tools

Several facilities have been included in the OLDtronics Monitor to enable ECUs to be serviced and tested, such as:

- Clone Unit: Read and save memory areas from a returned ECU for later restoration, prior to return. The ECU contents can be compared with a previously saved state to verify if anything has changed.
- Edit memory areas and re-checksum before downloading (e.g. hand editing unit or sensor calibration areas).
- Read Memory Window: Ability to read the ECU's memory.
- Single Message: Ability to send test messages.



ECU Interface

The OLDtronic Monitor is delivered with the necessary hardware to connect a PC/laptop to the car:

- USB to HDLC Interface, powered from USB cable (85 x 60 x 35mm)
- 0.9m PC to Interface cable
- 2m Interface to car cable (25-pin D-Type to 13-pin Mil Spec, Male)
- Option: Supply turnkey laptop and case

Ordering

The OLDtronic Monitor can be ordered by contacting:

OLDtronic
Sprytown
Lifton
Devon
PL16 0AY

Phone: +44 (0) 1566 784508

E-mail: sales@oldtronic.com

Price List

Part No	Description	Price GBP (Excl Taxes and Shipping)
OTMonBase	OLDtronic Monitor Software, one car configuration, USB/HDLC Interface and 2m cable from interface to car (13-pin CGK, male)	£3,850.00
OTMonConfig	Additional car configuration	£450.00
OTMonAcq	Enable reading of data acquisition memory and saving as text files for 3 rd Party data analysis tools such as MAT ATLAS, Pi Toolbox, Bosch WinDarab etc.	£950.00
OTMonTune	Enable OLDtronic Monitor to edit and program tune parameters and read/program legacy TAGtronic System Monitor Tune Versions and configurations. Not available to McLaren F1 customers.	£950.00
OTMonService	Adds the ECU Service and Test Tools (Cloning, Read-RAM and Single Messages)	£1,250.00
OTMonSys	Supply a laptop and case, install software and configuration for your selected components	£600.00

