

# ADL2 Advanced Dash Logger



PAGE



Race smart.

## THE COMPANY



**MOTEC** was founded in 1987 with the aim of providing world class products, superior customer service and the most advanced technology available.

A strong commitment to delivering the best possible solutions, state-of-the-art hardware and user friendly software has earned **MOTEC** international recognition as a leader in engine management and data acquisition systems.

As automotive technology continues to evolve, **MOTEC** reinforces its dedication to research and development with an innovative range of products and sophisticated software, all backed by an outstanding package of total customer support and an exceptional two year product warranty.

## DATA ACQUISITION

In today's fiercely competitive motorsport environment, data acquisition systems have become one of the most powerful tools to success. Using sophisticated analysis software and data collected from a variety of sensors, the behaviour of a vehicle can be comprehensively investigated, the effects of changes evaluated in detail and improvements made.

By recording and analysing information about temperature, speed, acceleration, strain and movement, users can gain valuable insights into performance and reliability, resulting in more efficient testing and tuning and greater predictability on race day. This information can also be used to determine pit stop strategy, to assess and compare driver technique and to ensure maintenance schedules are met.

For immediate feedback, data can be monitored live back in the pits via telemetry and in the vehicle's cockpit on the **MOTEC** Dash Logger.

## THE MOTEC DIFFERENCE

The **MOTEC** brand represents smart engineering, dedicated research and development and an uncompromising approach to quality. **MOTEC** insists on using first class components and superior manufacturing processes to ensure the highest levels of performance and reliability.

### ENVIRONMENTAL PROTECTION

**MOTEC** Dash Loggers are built tough to withstand the extreme conditions of a diverse range of applications worldwide; from circuit racing and oval tracks to harsh deserts and rugged rally stages; from Top Fuel drags and high speed boats to the ultimate in sports cars and bikes, even industrial environments.

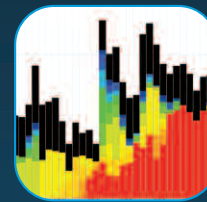
Each ADL2 is robotically assembled and dipped in liquid silicone to fully encapsulate the components and circuit board. This military grade coating protects the surface mounted technology from damaging environmental contaminants such as moisture and dust, and improves resistance to vibration.

The 79 pin Autosport connector with gold plated contacts enhances connection reliability while a robust aluminum enclosure provides further protection and a strong mounting solution.

### FLEXIBILITY

The ADL2 adapts to virtually any application, enabling users to tailor a system to their specific needs. All aspects of the Dash Logger are fully configurable, including sensor types, the allocation of sensors to inputs, channel selection, logging speeds, warning alarms and the control of auxiliary devices such as pumps, valves and solenoids.

The ADL2 can be connected to any **MOTEC** ECU, as well as many other engine management systems.



### ALL-IN-ONE DISPLAY, LOGGER & CONTROLLER

Separate products are often required to perform logging, controlling and display functions. **MOTEC's** ADL2, however, delivers seamless integration of all three. The one compact unit provides a complete solution, reducing space, weight and installation requirements.

### EXPANSION CAPABILITIES

An optional 50 I/O upgrade may be enabled in the field to give users immediate access to greater input and output capability. The ADL2 can also connect to one or two **MOTEC** E888 or E816 expansion devices at 200Hz, allowing for up to 40 extra inputs and 16 extra outputs. Additional channels can be added via CAN and RS232.

The ADL2 can be further expanded using **MOTEC's** new Central Logging system\*, which has been developed to meet the ongoing demand for high speed, high resolution data logging. The ACL (Advanced Central Logger) will increase logging capacity to the storage limits of flash memory cards - in excess of 1Gb - with fast ethernet download.

### FREE SOFTWARE & UPDATES

With **MOTEC** Dash Loggers, both the operating software and data analysis software are free. Updates are available at no cost via the website, giving users access to the latest features for the life of their equipment.

**MOTEC's** groundbreaking new **i2** data analysis software offers unparalleled versatility to users of all levels.

\*Due for release in 2006. Contact **MOTEC** for details.

## ADL2 ADVANCED DASH LOGGER



Proven on two wheels and four, on land and on water, from 4 second quarter miles to 24 hour endurance events, **MOTEC** Dash Loggers are renowned for outstanding accuracy and reliability.

The ADL2 is an evolution of **MOTEC's** original Advanced

Dash Logger, which has earned international recognition across a broad range of motorsport disciplines. It is a sophisticated display, fully programmable data logger and powerful controlling device in the one lightweight unit, accommodating over 200 channels derived from a mixture of Analogue, Digital, RS232 Serial and CAN bus data channels.

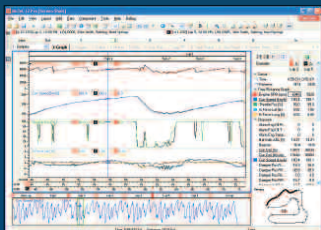
### CHANNELS MAY INCLUDE:

- Infrared tyre temperatures
- Suspension positions
- Suspension forces
- Ride heights
- Vehicle yaw
- Hydraulic pressures
- Fuel flow and fuel used
- Driveshaft speed
- Throttle position
- Exhaust Gas Temperatures
- Boost pressure
- Brake rotor temperatures
- Damper velocities
- Chassis strain
- G Forces
- Tyre slip angle
- Fuel and Oil Pressures
- Wheel speeds
- Engine RPM
- Steered angle
- Lambda
- Air temperature

The ADL2 directly supports up to 28 analogue inputs, 12 digital/speed inputs, 8 auxiliary outputs and 2 Wideband Lambda (air/fuel ratio) inputs.

## DATA LOGGING

Readings taken from analogue, digital, serial, CAN or calculated channels are stored in the ADL2 for download and analysis using **MOTEC's** *i2* software.



Channels can be selected independently and logged at various rates up to 1000 samples per second. The sample rate requirement depends on the channel; for instance, engine temperature doesn't need to be logged at the same rate as damper

position, allowing users to maximise the memory available without compromising the quality of the data being logged.

**MOTEC's** ADL2 uses non-volatile flash memory which can operate in stack or circular buffer mode, in accordance with user defined start and stop parameters.

The standard 8MBytes of logging memory can be upgraded to 16MBytes through a convenient password system. This data is quickly retrieved via USB at a speed of approximately 500kBytes/second.

## DISPLAY



The ADL2's high contrast, reflective LCD screen has been custom designed for easy viewing in direct sun and artificial light, with an optional adjustable backlight for maximum visibility in low light or at night time. High temperature tolerance ensures consistent reliability in all conditions.

The display has three programmable modes which operate independently of each other; Practice, Warm Up and Race. This allows relevant details to be shown to the driver at the appropriate time without unnecessary onscreen clutter.

The 70 segment curved bar graph can be configured to display any channel, with optional peak hold and shift markers. Each numerical item is programmable to show any value and can be overridden by user defined conditions.

Thirteen alphanumeric digits along the bottom of the screen can be used to display channel values, messages and warning alarms. There are 20 text lines available which can be scrolled using an external button, plus four programmable overrides.

Lap times can be displayed when the Dash Logger is used in conjunction with a **MOTEC** Lap Beacon (or driver activated switch).

## SPECIAL FUNCTIONS

The ADL2 can calculate and display additional information including: Lap Time Gain/Loss, Lap Number, Minimum Corner Speed, Maximum Straight Speed, Fuel Used, Fuel Remaining, Laps Remaining, Trip Distance and Odometer. It also features a sophisticated engine log and tell-tale system.

## WARNING ALARMS



Alarms are extremely beneficial in alerting users to potential concerns with the vehicle. They can be displayed on the ADL2 screen as a visible warning for the driver and also stored in the logging memory.

An alarm can be set for any analogue, digital, serial or calculated channel. Limits are fully programmable and may include up to six conditions to ensure that they are only activated at the correct time.

When an alarm condition has been detected, a message can be shown on the display and an auxiliary output activated. These outputs may be used for warning lights or the control of other devices.

The alarms remain active until they are either acknowledged by activating a switch or removed automatically following a user definable period of time.

## OUTPUTS

The ADL2's auxiliary outputs can be configured to operate in different modes to control a wide variety of devices. These modes include On/Off, light, frequency, duty cycle or a combination of duty cycle and frequency.

Users may wish to program these outputs to activate shift lights, thermo fans, oil and fuel pumps, nitrous injection, automatic timers and devices requiring PID control.

## SENSOR CONFIGURATION

Each input channel on the ADL2 can be configured with the sensor type and calibration for the appropriate sensor. Common sensor calibration data is incorporated in **MOTEC's** Dash Manager software for users to simply select and assign to a channel. For other sensors, a custom calibration can be created and saved for use in subsequent installations.

While **MOTEC** provides a wide range of sensors and accessories, this flexibility gives customers complete freedom of choice.

## COMMUNICATION

### CAN (CONTROLLER AREA NETWORK)

The CAN bus is a high speed communication standard, operating at speeds of up to 1 Mbit. CAN allows many devices to be connected by a common bus, enabling the sharing of information as part of a larger system. CAN devices include engine management systems, sensors and multi-channel input/output modules.

### SERIAL

The RS232 serial port is programmable up to 57600 baud and can be used as both a telemetry data output port and a serial data input port.

As a telemetry port, devices such as modems, GSM and satellite phones, radio modems etc. can be used to facilitate remote connection.

As a serial data input port, serial communications devices can be connected for display and logging purposes. These include Engine Management Systems (**MOTEC** and other), GPS Systems or other serial communication devices. Information may be simultaneously received from one device and transmitted to another.

## DASH MANAGER SOFTWARE

**Dash Manager** software is used to configure the ADL2 and to download the logged data. Display preferences, data logging settings and inputs and outputs are stored in a Configuration File which can be modified offline as required and later resent to the ADL2. Conditions, tables, timers, alarms and overrides can all be created to activate outputs, warnings and displays.

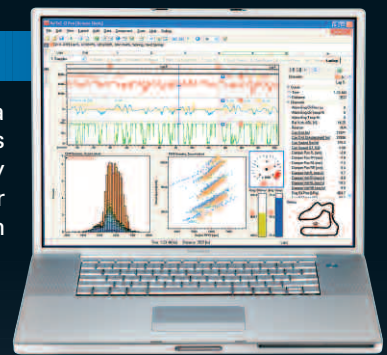
User friendly online help is integrated throughout the software, giving operators access to the power of the ADL2 without requiring advanced levels of computer knowledge or intense training.

## i2 SOFTWARE

**MOTEC's** all new **i2** data analysis software allows users to comprehensively analyse and manage their data once it has been downloaded from the ADL2.

Developed over a number of years with valuable input from race teams worldwide, **i2** offers a state of the art user interface and an extensive package of advanced analysis tools.

There are two levels of functionality - **i2 Pro** and **i2 Standard**. **i2 Pro** requires the *Pro Analysis* ADL2 upgrade while the **Standard** version is free for all users. Those familiar with **MOTEC's** original *Interpreter* program will notice significant advances in this new generation software.



### COMPLETE CUSTOMISATION

The increasing diversity of **MOTEC** users in recent years has prompted a need for software that easily adapts to individual preferences. **i2's** unprecedented levels of customisation allow users, both professional and amateur, to tailor data management tools to suit their specific requirements.

### PROJECTS

Projects are central to the management of data in **i2**, particularly when dealing with multiple vehicles or motorsport categories. They store user settings, workbooks, maths and many other customisations. The menus and terminology for each Project have been adapted to suit that type of application, for example Circuit Racing, Drag Racing or Rally.

### WORKBOOKS & WORKSHEETS

**i2's** Workbook and Worksheet structure is flexible and intuitive, allowing users to systematically organise their data into logical layouts. The software is equipped with templates that can be tailored to individual requirements for optimum data analysis efficiency.

Each Worksheet can contain any combination of analysis components including graphs, histograms, scatter plots, FFT plots, mixture maps, reports and various gauges, all of which can be individually customised.



### GLOBAL CHANNEL PROPERTIES

Many channel properties such as colour, display units and min/max scales can be changed globally, allowing users to maintain consistency across all data components.

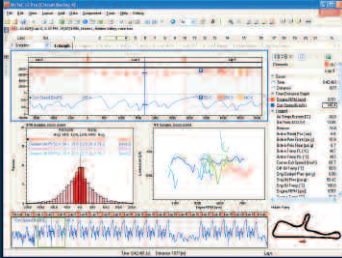
To switch display units, e.g. from metric into imperial, **i2** can perform Automatic Unit Conversion to update all instances with your preferred option.

## USER DEFINED TRACK SECTIONS

Any number of sections may be defined by the user, allowing reports to be based on different sections of the track. These sections can then be used by components, such as Section Time Reports, Track Reports and Channel Reports.

## FULLY CONFIGURABLE REPORTS

Track and Channel Reports may be configured to display information such as min, max, average and standard deviation of any channel across any section of the track.



## CURSOR & ZOOM LINKING

After loading a log file into *i2*, users may wish to zoom into certain sections of data for closer analysis - a single lap or one particular corner, for example.

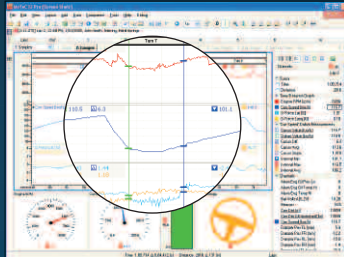
By linking the zoom levels and cursor movement across

multiple components such as graphs, histograms and scatter plots, the displayed data will shift in accordance with the selection, updating all components consistently. This feature ensures that users are always viewing accurate and up to date information for each channel.

## DUAL CURSOR MEASUREMENTS

Differential measurements can be made by placing two, independently controlled cursors on the one graph.

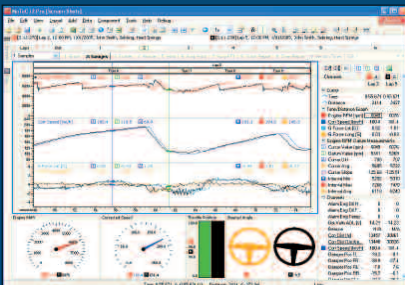
*i2* automatically calculates the difference in channel value between the two cursors, as well as min, max, average and time/distance differential. Comparisons can also be made simultaneously across multiple overlays.



## OVERLAYS

Overlays are useful in comparing the data from several laps or multiple sessions at the same track. Data may be from one driver or a comparison between two or more.

Whilst being equally effective in highlighting problematic areas, overlays can help to identify the best performance through a section of track. For example, users wanting to see the highest speed achieved through a particular section would display the speed trace then add a series of overlays, looking for the peak.



## GRAPHICAL OVERLAY ALIGNMENT

Overlaid laps can be dragged graphically into position with the mouse, giving users fine control over data alignment.

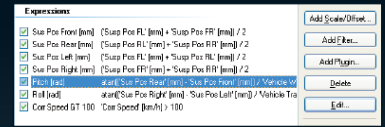
## FAST 'ON DEMAND' MATHS PROCESSING

*i2*'s Maths system uses an 'on demand' calculation mechanism to reduce data load times. Maths channels are only calculated as needed so you are never left waiting for unnecessary data. This is especially important when users are in a hurry and need answers fast.

## MATHS EQUATIONS

*i2* allows Maths equations to be entered in a clear and concise format.

Drawing on an extensive list of inbuilt functions (to which users may add), and logical conditions, any number of new channels can be derived.



	A	B	C	D	E	F	G	H
Time	Start	End	1st Lap	1st Lap	1st Lap	1st Lap	1st Lap	1st Lap
10:30 AM	11:30 AM	2:30 PM	11:30 AM	11:30 AM	11:30 AM	11:30 AM	11:30 AM	11:30 AM
Channel Name	Units							
10 Vehicle Count	Units							
11 Track Front	mm	2000						
12 Track Rear	mm	1500						
13 Track Middle	mm	1000						
14 Track Middle Front	mm	500						
15 Track Middle Rear	mm	500						
16 Static Weight Front	kg	250						
17 Static Weight Rear	kg	250						
18 Static Weight Mid	kg	250						
19 Static Weight All	kg	750						
20 Roll In Data Front	W/turn	250	250	250	250			
21 Roll In Data Rear	W/turn	300						
22 Spring Rate F1	W/turn	250	300					
23 Spring Rate R1	W/turn	300	250					
24 Spring Rate M1	W/turn	300	250					
25 Mean Rate F1	g	0.1						
26 Mean Rate R1	g	0.1						
27 Mean Rate M1	g	0.1						
28 Mean Rate All	g	0.1						
29 Mean Rate Roll In Front	g	0.1						
30 Mean Rate Roll In Rear	g	0.1						

## SETUP SHEETS

*i2*'s setup sheets allow vehicle setup parameters such as spring rates, gear ratios etc. to be recorded for each log file.

These values can then be used in Maths to create vital analysis channels.

The setup sheets are stored in a spreadsheet, giving users a great deal of flexibility in how they use the data.

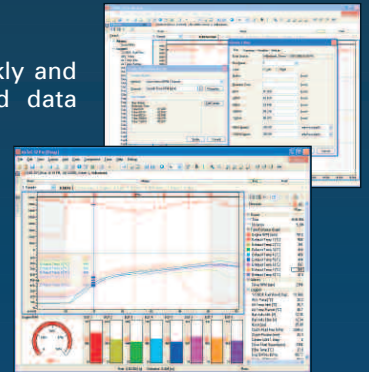
## DATA EXPORTING

Data may be exported from many components including: Time/Distance Graphs, Histograms and Reports.

## DRAG RACING AUTO RUN INSERTION

The auto insert feature quickly and precisely aligns the logged data against the actual run.

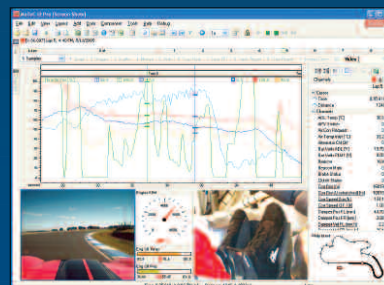
Users simply enter in the time slip details and *i2* automatically determines the start of the run in the data. Users can also make notes pertaining to the run, such as weather conditions.



## VIDEO

*i2* allows users to link multiple video streams (e.g. from in-car cameras), with logged data, enabling synchronised playback of footage alongside other analysis components.

Multiple camera angles can be viewed concurrently, and when overlay data is selected, these views update to show a side by side comparison.



No special hardware is required; users simply set up an existing video capture device, then link the footage with their logged data later.

## OPTIONAL UPGRADES

The **MOTEC** ADL2 has field updateable options facilitated by a convenient password enabling system. This simple process allows users to purchase upgrades as they are needed.

Upgrade options include 50 Inputs/Outputs, Pro Analysis (required for **i2 Pro**), 16 Mbyte Logging, Telemetry Support, remote Logging and dual Wideband Lambda Measurement.

### INPUT/OUTPUT UPGRADES

ADL2 Advanced Dash Logger	30 I/O (Standard)	50 I/O (Optional)
Analog Voltage Inputs	10	20
Analog Temperature Inputs	4	8
Analog Voltage Inputs (0 to 1V)	2	2
Wideband Lambda (uses 0 to 1V pins)	2 (opt)	2 (opt)
Digital Inputs	2	4
Switch Inputs	4	4
Speed Inputs	4	4
Auxiliary Outputs	4	8
CAN Bus	100+	100+
Serial RS232 (ECU, GPS etc.)	100+	100+

See opposite for a detailed list of standard and optional features. The **MOTEC** SDL (Sport Dash Logger) is an alternative unit for those with more moderate requirements. Specifications for both models are shown for comparison purposes.

## ACCESSORIES

### SENSORS

A wide range of sensors is available for use with the ADL2 including: linear potentiometers, accelerometers, strain gauges, ride height sensors, gyro sensors, tyre slip angle, pressure sensors, temperature sensors (resistive, infrared and thermocouple), hall and magnetic speed sensors, Lambda and many others.

### LAP BEACONS

**MOTEC's** Lap Beacon Transmitter and BR2 Receiver offer superior optics, low power consumption and a high channel count (990) to eliminate accidental crossover with other racers' beacons.

Multiple beacon capability allows users to generate split times by placing several **MOTEC** transmitters around the track, or by taking advantage of existing master beacons.

### SHIFT LIGHTS & WARNING LIGHTS

**MOTEC** gives you full flexibility and control over multiple, gear dependant, staged shift lights. In addition, users can set up an intelligent warning system that illuminates a single light to alert the driver to a warning message on the ADL2.

### WIRING

Two wiring options are available for the ADL2:

- Standard (vehicle style) wiring loom for specific permanent installations
- Custom wiring looms for complex installations.

## TELEMETRY



**Telemetry Monitor Software** enables real time viewing of data via direct serial communication, GSM modems or radio modems. Data can be viewed in various formats such as charts, bar and XY graphs, dial gauges, numerics, lights and scroll charts. All parameters are user definable.

## MOTEC SUPPORT & TRAINING

**MOTEC** is committed to delivering the highest level of customer service. Our worldwide team of support personnel and trained dealers provide expert technical assistance and advice on the most suitable **MOTEC** system for each application. Product information, diagrams and free software downloads are available at the website.

**MOTEC** also conducts regular training seminars to help users make the most of their systems. Visit the website for details.

ALSO AVAILABLE FROM **MOTEC** - visit [www.motec.com.au](http://www.motec.com.au) for details



**ECUs:**  
**MOTEC's** range of ECUs includes: M4, M48, M400, M600, M800, M880 and M800 Plug & Play.



**SPORT DASH LOGGER:**  
The SDL is our entry level programmable Dash Logger.  
(See opposite for details)



**MINI DIGITAL DISPLAY:**  
The MDD is a compact satellite display for use with **MOTEC's** Dash Loggers or ECUs.



**LAMBDA METER:**  
Our fully configurable PLM accurately determines exhaust gas mixture for various fuels.



**SENSORS & ACC'S**  
A full range is available to suit individual applications. Contact your dealer for details.

A comprehensive **MOTEC** Product Catalogue is now available at [www.motec.com.au](http://www.motec.com.au) for free download.

DASH LOGGER FEATURES	ADL2	SDL*	DASH LOGGER FEATURES	ADL2	SDL*
<b>GENERAL</b>			<b>OPTIONAL FEATURES</b>		
Microprocessor: 32 bit high performance	✓	✓	50 I/O	✓	✗
Manufacturing Quality Standard	ISO9002	ISO9002	Wideband Lambda	Dual	Single
Power Supply	7V-22V 0.15A	7V-22V 0.15A	8Mb Logging Memory	(Standard)	✓
High RFI Immunity	✓	✓	16Mb Logging memory	✓	✗
Reverse Battery Protection and Battery Transient Protection	✓	✓	Backlight	✓	✓
Ambient Operating Temperature Range	-10° to 70°C	-10° to 70°C	Pro Analysis (required for <b>i2 Pro</b> )	✓	✓
Size: 180mm x 91mm x 18mm (excluding connector)	✓	✓	Telemetry, Remote Logging	✓	✗
Weight: 385gms (0.85lbs)	385g (0.85lb)	385g (0.85lb)	<b>SPECIAL FUNCTIONS</b>		
Autosport Connector	79 pin	37 pin	Access Passwords	✓	✗
Warranty: 2 year parts and labour	✓	✓	Preserved Channels	✓	✗
<b>DISPLAY</b>			<b>ACCESSORIES</b>		
Custom reflective LCD, high contrast, high temperature tolerance	✓	✓	USB Interface Cables	✓	✓
Backlit LCD	Optional	Optional	Beacon Transmitter and Receiver	Available separately	Available separately
Display any value from sensors, CAN bus, RS232 or calculations	✓	✓	<b>SOFTWARE</b>		
Display Modes	3	1	ADL2 <b>Dash Manager</b> Software	✓	✗
70 Segment Bar Graph with user definable range and channel source	✓	✓	<b>Sport Dash Manager</b> Software	✗	✓
Programmable Peak Hold and Set Point on bar graph	✓	✗	<b>i2 Standard</b> Data Analysis Software	✓	Logging required
4 Numeric Display Items	✓	✓	<b>i2 Pro</b> Data Analysis Software	Pro Analysis req'd	Pro Analysis req'd
13 Digit Alphanumeric Display Area - 1,2 or 3 channels per line	✓	✓	<b>Telemetry</b> Software	Optional	✗
Alarms	48	20	<b>i2 DATA ANALYSIS SOFTWARE</b>		
Display Overrides top, left/right	2	1	<b>ANALYSIS COMPONENTS</b>		
Number of Bottom Lines (overrides)	20 (4)	10 (1)	Graphs (number)	Unlimited	5
<b>INPUTS</b>			Graph - number of channels	Unlimited	10
Analogue Voltage Inputs	10 (20 Opt.)	8	Graph - Window Zoom	✓	✓
Analogue Temperature Inputs	4 (8 Opt.)	4	Graph - Overlapped Panels	✓	✗
Digital Inputs	2 (4 Opt.)	2	Graph - Variance	✓	✓
Speed Inputs	4	2	Graph - Min/Max/Avg, Filter, Scale & Offset	✓	✓
Switch Inputs	4	2	Graph - Dual Cursor for comparative measurements	✓	✗
Wideband Lambda channels	2 (Opt.)	1 (Opt.)	Graphical Errors & Status Display	✓	✓
Expansion Units:			Gauges (Configurable)	✓	✓
E888: 8 AV Inputs, 8 Thermocouples, 4 Digital (20 inputs)	2 x 20 (Opt.)	8 Thermocouples only	Histogram (number), Colour Channel, Gating	Unlimited	2
E816: 16 AV Inputs, 4 Digital (20 inputs)	2 x 20 (Opt.)	✗	Histogram – number of channels	Unlimited	1
<b>OUTPUTS</b>			Suspension Velocity Histograms (number), Multi Channel	Unlimited	✗
Digital Outputs Switched output or PWM	4 (8 Opt.)	4	FFT (Fast Fourier Transform) (number), Multi Channel	Unlimited	✗
PID Control	✓	✗	Scatter Plots (number), Colour Channel, Gating, Trend Line with Coefficients	Unlimited	2
E888 Expansion Unit (8 outputs)	2 x 8 (Opt.)	✗	Scatter Plot – number of channels	Unlimited	2
E816 Expansion Unit (8 outputs)	2 x 8 (Opt.)	✗	Mixture Map (number), Gating, Gear Shift Filter	Unlimited	1
Gear Dependant Shift Lights	✓	✗	Mixture Map – number of channels	Unlimited	2
<b>INTERNAL SENSORS</b>			Track Map Report (number)	Unlimited	1
Battery Voltage	✓	✓	Track Map Report – number of user channels	Unlimited	0
Internal Temperature	✓	✓	Rainbow Track maps (number)	Unlimited	0
G Force - Lateral and Vertical	✗	✓	Section Times Reports (number)	Unlimited	1
Speed, Lap Distance, Trip Distance and Odometer	✓	✓	Channel Reports (number)	Unlimited	2
Lap Timer and Number	✓	✓	Synchronised Video	✓	✗
Lap Time Gain/Loss	✓	✓	Overlays (number)	Unlimited	1
Timers (0.01s, 0.1s or 1s resolution)	✓	✗	Graphical Overlay Alignment	✓	✓
3D Tables	16	2	Zoom Link Selectable	✓	✗
2D Tables	16	2	Animation	✓	✓
Maths Functions	✓	✗	Edit Lap Beacons & Lap Times	✓	✓
Gear Detection	✓	✓	Lap Stretching	✓	✓
Fuel Prediction	✓	Incremental fuel used only	Track Section Editor (Standard Sections)	✓	✓
User Conditions	✓	✗	User Defined Track Sections	✓	✗
Running Min/Max	✓	Max corner and straight speed	Basic Maths – Smooth, Scale & Offset	✓	✓
Memory (Non-Volatile Flash)	8Mb (16Mb Opt.)	8Mb (Optional)	Wheel Lock Correction	✓	✓
Logging Rate	1-1000 samples/sec	1-200 samples/sec	Maths Expressions	✓	✗
Selectable Anti-aliasing Filter	✓	✗	Multiple Maths Files, Plain Text Maths Editor, Maths Import / Export	✓	✗
Selectable Cycle Through Logging Memory	✓	✗	Maths Plugins (Maths Module)	✓	✗
Quick Erase Function	✓	✓	Data Export (Graph, Histo, Scatter & Reports)	✓	✗
Logging Start/Stop Parameters	Selectable	Limited conditions	Vehicle Setup Sheet (Session Constants) (Excel)	✓	✗
Fastest Lap Logging	✓	✗	Units Conversion	✓	✓
Status Channels	✓	✗	Details Editor	✓	✓
Engine Logs	4	1	Compare Details (side by side)	✓	✓
Engine Log Conditions	6	2	User Definable Projects	✓	✗
Tell-tales	14	✗	Application Profiles (Circuit Racing etc)	✓	✓
Diagnostic Log	✓	✗	User Definable Worksheet Layouts	✓	✗
Pro Analysis (required for <b>i2 Pro</b> )	Optional	Optional	Global Channel Colours & Channel Scales	✓	✓
Remote Logging, Telemetry	Optional	✗	Make Reference Lap	✓	✓
USB/CAN Communication	✓	✓	Channel Mapping (Name & Units), Channel Aliases	✓	✓
CAN Communication Templates	16	6	View Device Configuration	✓	✓
RS232 Communication Template	✓	✓			
Remote Control Channels	✓	✗			



[www.motec.com.au](http://www.motec.com.au)

**MOTEC RESEARCH CENTRE**

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