Racing Guide 2018

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We Are
Research, Technology
Experience, Passion.

The Company

AiM is today a key player in motor sports and race data acquisition technology.
AiM core strength is its highly specialized technological background: more than 30 software/hardware developers and engineers on a total workforce of 80 people.

Completely internal development of:

- Hardware
- Firmware
- Software
- Mechanical parts

Sectors of activity

AiM designs laptimers, dashes and loggers for all kinds of racing vehicles: from kart to car, bikes, UTV, Jr. dragsters and even snowmobiles and F1 boats...

A Worldwide Distribution Network

More than 50 official distribution organizations all over the world attend our customers with aftermarket support.

A Technical Service on the Track

Our technicians give constant support on the track in the US, South America, Europe, Australia, Japan.

Technical Support and Seminaries

- Completely free of charge telephone support
- Lifetime warranty on all devices
- Tenth of seminars per year both in Europe and in the US
- Webinars published on all the most important arguments related to datalogging

Many Good Reasons For Choosing an AiM Dash Logger.

AiM
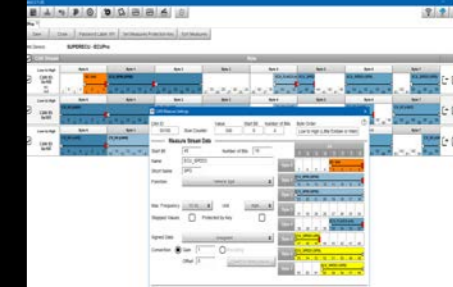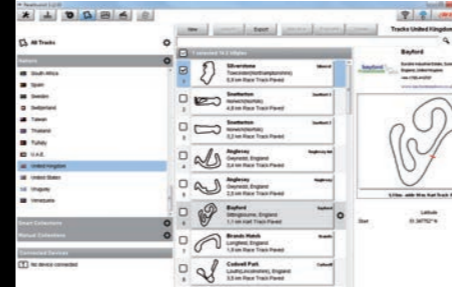
The most precise way to get lap times, and much more

The new GPS08 Module, included in all kits, receives data from two satellites constellations: GPS and GLONASS, updated ten times per second.

This guarantees great rapidity in locking the signal after switch-on and an extraordinary precision, which permits to sample lap times with a max. 2/100 second tolerance.

So even the predictive lap time will be much more reliable: in any moment of your race, you will know your time gap vs. your best lap with absolute precision.

Additionally, GPS08 samples position, speed and lateral/in-line acceleration at any point of the track: all the data needed for a precise evaluation of vehicle and driver behavior.

Each AiM system can rely on a database of almost three thousands tracks all over the world, constantly reviewed and enriched by our technicians, always automaticlally up do date"..

A great variety of data sources

■ **Analog inputs:** 0-5V, 0-12V, Thermocouples recorded up to 1000 Hz each
■ **Digital inputs:** Hall effect and VRS speed sensors
■ **ECU connection:** a 1,000+ protocols database, continuously updated and available on all systems, to receive CAN, K-line, RS232 data
■ **Second CAN:** to allow external units connection
■ **Expansion modules:** all systems performance can be expanded adding all the analog/digital sensors you may need, lambda probes, SmartyCam HD on-board camera
■ **GPS inputs:** speed, acceleration, track position with outstanding precision
■ **Internal channels:** 3D accelerometer and 3D gyro, sampling data up to 1000Hz. All data are recorded with millisecond precision, so as to guarantee perfect synchro of samples, which is necessary for a correct data analysis.

A software-integrated ECU Driver Builder

For those who wish to define their own ECU driver, RS3 provides a Driver Builder, a powerful tool to perform that task.

Among other functions, you will also find:

■ Possibility to define simple or multiplexed frames
■ Totally flexible fields format, from 1 to 64 bit, Little or Big Endian
■ Possibility to define ASCII codes associated to individual fields
■ Possibility to convert the received values, defining Gain and Offset
■ Password protection to share protocols with other developers
■ Software key definition to hide the desired fields to end-users, while maintaining them available for authorised technicians analysis.
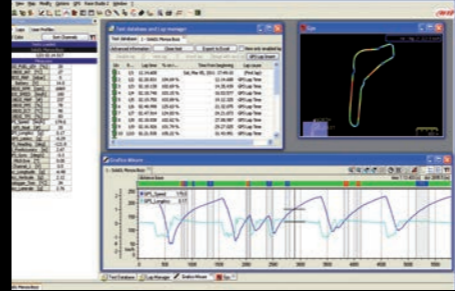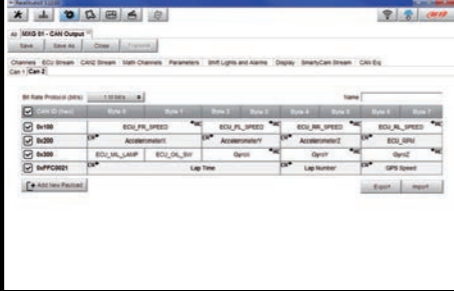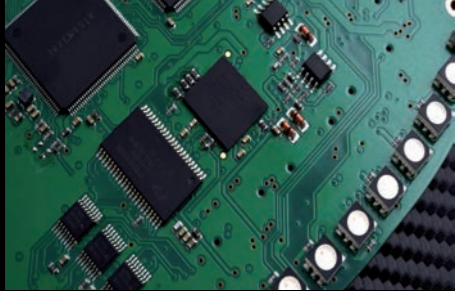
Huge memory for data recording

A 4GB internal memory means recording data for hundreds of racing hours.

Should it be not enough, an external SD card module is available.

CAN data output

It is also possible to define a CAN messages to be transmitted at the desired frequencies via one of the two available CAN ports.

The message can include any of the available channels, coming from direct connections as well as from expansions, ECU, GPS or internal math channels.

WiFi, The easy and fast data download

The ever increasing amount of data are recorded within the logger in ZIP format.

This way the file size can be greatly reduced, so as to allow a much faster data download.

The WiFi module included in all systems (EVO4S MXS Strada, MXsl excluded) makes interaction between the AiM logger and your PC quite easy, up to 50 meters away: being able to download data leaving the PC in the van, instead of moving it close to the car, can be a very convenient and time-saving solution.

Race Studio 3 the powerful software for analysis

Race Studio 3 is the heart of all AiM systems. With RS3 you can manage all activities related to:

Configuration: you can create, modify, delete, import and export configurations with all channels, ECU drivers, Math channels, Display Pages, Digital outputs, Alarms, Shift Lights and all the expansions you need. You will also be able to manage the map of all your racing tracks and compare two laps watching the video recorded by SmartyCam HD cameras.
Analysis: you can also analyse all data on your PC: graphs, histograms and tables will help you study your performance, providing an objective support to avoid mistakes and improve performances.
And - last but not least - Race Studio 3 comes for free with all systems and all its updates are freely downloadable from AiM website or, if you wish, from the dedicated 'Web updates' option available in RS3 Start Page.

AiM APP

AiM App running on iOS platforms and can communicate with all loggers with WiFi connectivity. Once the WiFi antenna of the user's telephone is connected on the same network where the logger lies, the users will be able to perform the following operations:
- Live Measures: real time displaying of the values sampled by the sensors configured on the logger;
- Firmware Upgrade: upgrading the firmware on the logger by using the phone (firmware being downloaded from AiM web site);
- Tracks Creations: creation of new tracks by mean of the touch screen of the telephone;
- Tracks Update: ensuring the last version of tracks from AiM website is on the device;
- WiFi settings: modification of the logger WiFi parameters;
- Device Blinking: device identification in order to find out exactly the device of interest;
- Data Analysis: simple and essential data analysis for the downloaded tests.

Digital output

Different type of digital output signals are available.
These go from low side switches at 1Amp to turn on external LEDs, fans or pumps to high power outputs ranging from 5Amp to 10Amp each. These can be used to drive headlights, high beams and large loads more in general, replacing relays and fuse box functions.

Each ouput is monitored so to detect faults or warning conditions, delivering a diagnostic feedback to the driver or the team.

The activation of these outputs is user configurable, every input signal can be combined to define the activation/deactivation strategy.

A constant, professional after market assistance

All our systems are guaranteed for years, until the electronic components are available on the marketplace.
Which means that - whenever a system is down for reasons not linked to bad usage by the user - it will be fixed for free. Even if bought five-six years before.

Any doubt, call or email us: all around the world you will find an AiM technician ready to assist, for all the time needed and with no additional cost.
In case of bugs (which sometimes occurs: racing conditions are so terribly different that something can be missed), you will be put in touch with the engineers who developed the system, who will listen to you to determine what did not work. Shortly, the problem will be analysed and solved.
Even on track our technicians are with you to help using correctly our systems, changing configurations, suggest solutions or just replacing a broken sensor.

Find your local dealer browsing the huge list of AiM partners all over the world
www.aim-sportline.com - Contact Section.

5" MXS 1.2
6" MXP
7" MXG 1.2

The color TFT dash Loggers for motorsport in three different display sizes

- 5"/6"/7" High Contrast TFT Display
- Fully user configurable Multi page Display
- RGB alarm LEDs and icons
- 10 RGB LEDs shift lights array
- WiFi connectivity, to PC and iPhone App
- 3 CAN ports
- Connection with industry leading 1,000+ ECUs, K-Line, RS232 protocols
- Three - axis accelerometer + gyroscope
- 8 analog (thermocouple, 0-5V, 0-12V) inputs at a max of 1000 Hz each
- 4 digital speed inputs
- Coil RPM input
- Lap signal input
- 2 One Amp digital outputs
- Analog Camera Input
- Realtime fully configurable math channels
- GPS 08 GPS + Glonass receiver
- Automatic track recognition at power on

The same core, but three display sizes to have the best solution for every application

Fully compatible Dash Loggers, with the same core, same connectors, same features, but available in different sizes: 5", 6" or 7", all of them with High Contrast TFT display, whose brightness is managed by an ambient light sensor, in order to keep the light at the best level.

5" MXS 1.2 **6" MXP** **7" MXG 1.2**

13

Fully configurable Display

The TFT Dash Loggers offer the possibility to freely configure up to 8 different pages.
You may choose among a wide range of styles, and every field may show the channel you wish.

Math channels

The dash loggers can be configured to display processed values (i.e. brake bias, calculated gear) in real time.
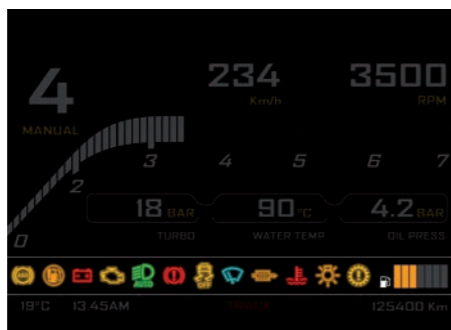
Fully configurable Alarm/Event Icons

You may define icons for giving information about any event or alarm. A wide database of the most popular ones is available in the configuration software.

WiFi Connectivity

Configure, calibrate and download your data wirelessly over a secure 802.11 WiFi connection.

Camera Input, also for Mirror Camera

An analog camera input is available, to swap your display into a mirror camera, through pushbutton command or event management.

CAN output

With the CAN Output you can send messages directly to an existing CAN network in order to improve the range of vehicle control possibilities.

Analog/digital inputs

MXG/MXP/MXS analog inputs are recorded up to 1000 times per second each. You can connect and monitor all kinds of sensors, like:

■ Ratiometric potentiometers
■ Pressure sensors
■ Thermo-resistances
■ K-type thermocouples

... and many others, all your custom sensors included. They also feature digital inputs:

Speed signals
From the ECU, from the GPS and from the wheel sensors.
RPM
From the ECU stream or from a digital input connected to a square wave signal (8 to 50 V) or to a low voltage (from 150 to 400 V) of the coil.
Lap signal
Lap and split times are sampled by the GPS or via optical receiver/transmitter.

ECU connection

MXG/MXP/MXS acquire data from the ECU of your vehicle.
The list of available ECU drivers, constantly updated and upgraded, includes 1,000+ different ECUs, either Stock and racing.
They are sorted by manufacturer/vehicle model: for each ECU you find the proprietary communication protocols, including the standard OBDII ones.
From a hardware point of view, AiM systems manage the following data lines: CAN, RS232, K-Line.

Second CAN line

The CAN2 line manages data coming from your additional modules (i.e. ABS, traction control, infrared temperature sensors and more...).

This feature meets the requirements of a growing number of racers, as the use of additional modules is becoming quite common in a number of series.
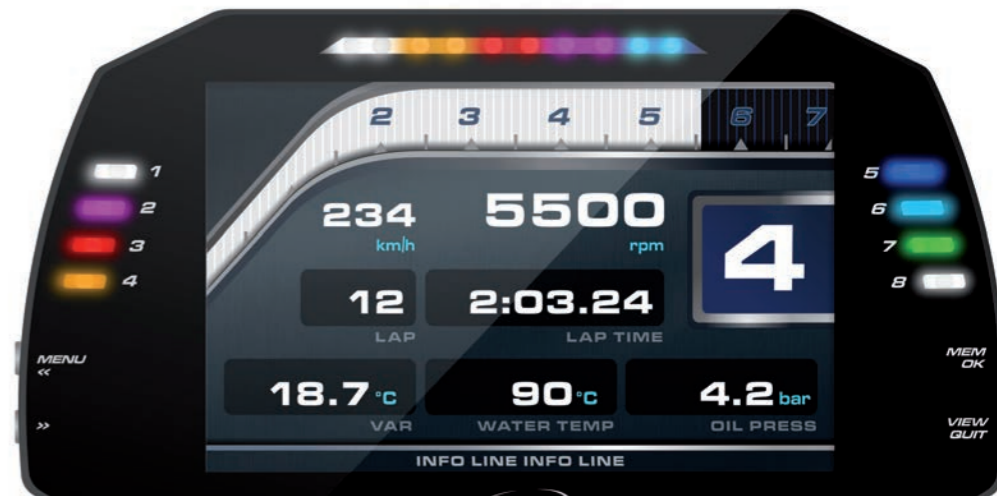
High contrast TFT display and an integrated Shift Light Array

A high contrast TFT display identifies MXG/MXP/MXS at first glance.
The choice among 5", 6" or 7" fits almost every kind of installation. An ambient light sensor keeps the backlight at optimum brightness levels. A ten LEDs shift light array is found in the MXG/MXP/MXS: a host of advanced multi-colored RGB shift light patterns that can be customized to your liking, and for each unique gear when required.

Internal accelerometer and gyroscope

The internal three-axial accelerometer and the gyroscope provide MXG/MXP/MXS a very powerful array of information, enabling you to quantify the dynamic characteristics of your vehicle.
Measuring acceleration forces and gyro rates can assist in determining how to improve your vehicle performances.

A Wide range of data sources
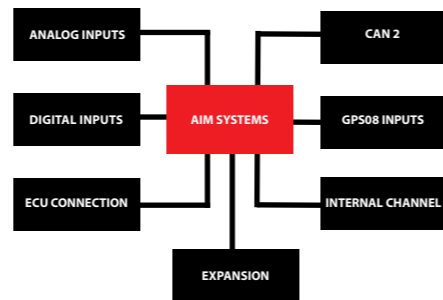
MXG/MXP/MXS have been designed to acquire and display data coming from your ECU, the internal accelerometer and gyro, as well as from the GPS08 Module included in the kit, analog/digital inputs and predefined math channels.

Performance and data acquired can also be incremented adding up to eight expansion modules.

Flexible Alarms

In addition to displayed icons, MXG and MXS feature 8/6 configurable RGB alarm LEDs: you choose the conditions, you choose the colors.

Select a solid alarm - or flashing one - and the flashing frequency, choose to have an accompanying text message, and set the alarm priorities.

Two digital outputs

Each of them can give an output of 1 A at 12 volts: they can be configured in order to be turned on/off depending on the strategy that has been set.

More Expansions

These are only some of the items that can be added to our MXG/MXP/MXS range for incrementing the performance and the data acquired.

16

17
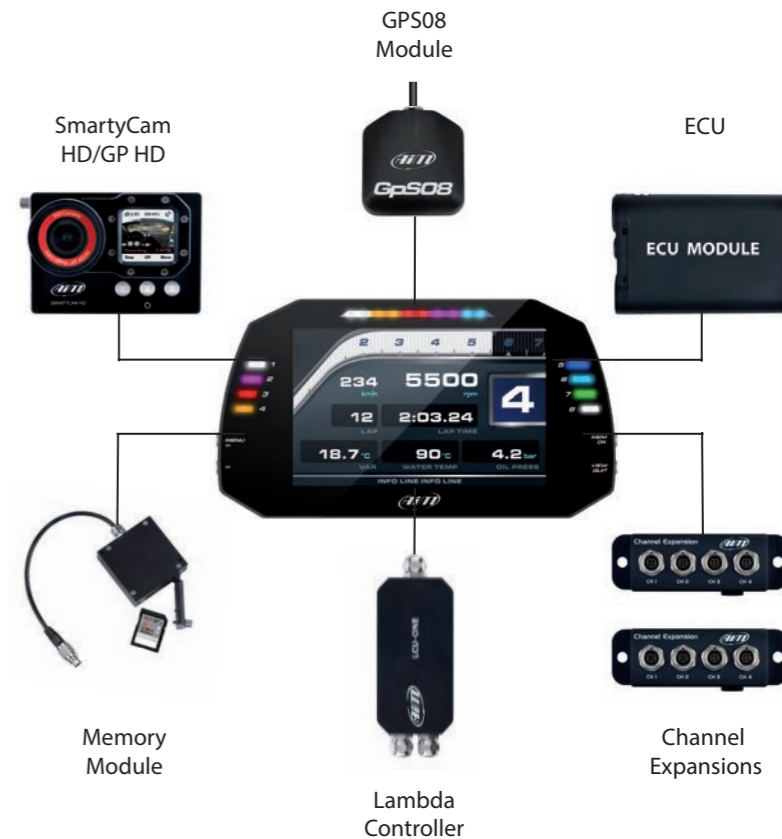
Technical Specifications

- Display	MXS: 5"TFT - MXP: 6"TFT - MXG: 7"TFT
- Resolution	800x480 pixels
- Brightness	700cd/m2 - 1,100 Lumen
- Ambient light sensor	Yes
- Alarm LEDs	MXS: 6 RGB freely configurable
	MXG: 8 RGB freely configurable
- Alarm display icons	Freely configurable
- Shift Lights	10 integrated freely configurable RGB LEDs
- CAN connections	3
- ECU connections	CAN, RS232 or K-line
- ECU compatibility	1,000+ industry leading ECUs
- Expansion CAN connection	GPS, Channel Expansion, Lambda Controller, SmartyCam HD
- Analog inputs	8 fully configurable, max 1,000 Hz each
- Digital inputs	4 Speed inputs, lap signal, coil RPM input
- Digital outputs	2 (1 A max each)
- Second CAN	Yes
- Accelerometer	Internal Three-axial ± 5g+Gyro
- Internal memory	4 GB
- Body	Anodized Aluminum
- Pushbuttons	Metallic
- Connectors	2 Motorsport connectors
- Dimensions and Weight	MXS: 169.4x97x23 mm - 530 g
	MXP: 189,6x106,4x24,9mm - 640 g
	MXG: 237x127.6x26 mm - 950 g
- Waterproof	IP65

5" MXS 1.2 STRADA
6" MXP STRADA

The compacts TFT Dashes for road use

- 5"/6" High Contrast TFT Display
- Fully user configurable Multi page Display
- RGB alarm LEDs and icons
- 10 RGB LEDs shift light array
- 2 CAN ports
- Connection with industry leading 1,000+ ECUs, K-Line, RS232 protocols
- 8 analog (thermocouple 0-5V 0-12V) inputs
- 1 digital speed input
- Coil RPM input
- Lap signal input
- 1 One A digital output
- Analog Camera Input
- Realtime fully configurable math channels
- GPS 08 GPS + Glonass receiver

Two display sizes and alternative layouts for the best road installation.

MXS Strada and MXP Strada feature two color display with great visual impact, configurable to show lap times and all the info coming from the Engine Control Unit, analog/digital inputs, pre-defined math channels and - optionally - the GPS Module.

The data sampling capability can also be incremented adding up to eight expansion modules.

5" MXS 1.2 STRADA   **6" MXP   STRADA**

Additional functions

These two dashes also provide:

■ a CAN Output, to send messages directly to an existing CAN network in order to improve the range of vehicle control possibilities.

■ a 1 A digital output to automatically run external systems, i.e. to switch on/off additional lights, to activate/de-activate a cooling fan or circulation pumps, etc. when a certain event happens.

■ a CAN2 line, managing data coming from your additional modules (i.e. ABS, traction control, infrared temperature sensors and more...).

High contrast TFT display

They feature a high contrast TFT display: its visual quality is always optimal as its ambient light sensor keeps the backlight at the best brightness levels.

The MXS Strada is also available in the "Street Icons" version (fuel, oil, water temp., etc.).

Automotive alarm icons can also be displayed on the screen, for street applications.

Watch your data in customized pages

MXS Strada and MXP Strada show, together with RPM scale, all the data you need, like speed, water temperature and oil pressure, laptimes and much more...

You can choose the custom pages you wish defining which data to be shown, their end of scale and measure units.

Browsing pages is quite easy using the pushbuttons.

Technical Specifications

	MXS 1.2 STRADA	MXP STRADA
- Display	5" TFT	6" TFT
- Resolution	800x480 pixels	800x480 pixels
- Contrast	600:1	600:1
- Brightness	700cd/m2 - 1,100 Lumen	700cd/m2 - 1,100 Lumen
- Ambient Light sensor	Yes	Yes
- Alarm LEDs	6 RGB freely configurable	-
- Shift Lights	10 freely configurable RGB LEDs	10 freely configurable RGB LEDs
- CAN connections	2	2
- ECU connections	CAN, RS232 or K- line	CAN, RS232 or K- line
- ECU compatibility	+ 1,000 industry leading ECUs	+ 1,000 industry leading ECUs
- Expansion CAN connection	GPS, Channel Expansion, Thermocouples expansions, Lambda Controller, SmartyCam HD	GPS, Channel Expansion, Thermocouples expansions, Lambda Controller, SmartyCam HD
- Analog inputs	8 fully configurable, max 1,000 Hz each	8 fully configurable, max 1,000 Hz each
- Digital inputs	1 speed input, lap signal, coil RPM input	1 speed input, lap signal, coil RPM input
- Digital outputs	1 (1 A max)	1 (1 A max)
- Second CAN	Yes	Yes
- Body	Anodized Aluminum	Anodized Aluminum
- Pushbuttons	Metallic	Metallic
- Connectors	2 AMP connectors	2 AMP connectors
- Dimensions	169,4x97x23mm	189,6x106,4x24,9mm
- Weight	480g	640g
- Power consumption	400 mA	400 mA
- Waterproof	IP65	IP65

MXsl

The power and compact module Dash completely configurable

- 5" TFT Display
- 800x480 pixels Resolution
- 600:1 Contrast
- 700cd/m2 - 1,100 Lumen Brightness
- Ambient light sensor
- 6 configurable RGB Alarm LEDs
- 10 configurable RGB LEDs Shift Lights
- 2 AMP connectors
- CAN, RS232 or K-Line Connection to 1,000+ industry leading ECUs
- 3 CAN connections
- 8 fully configurable analog, digital, pull up on/off - Max 1,000 Hz each
- External modules connection: GPS Channel Expansions, Thermocouple Expansions, Lambda Controllers, SmartyCam
- 2 Low Side Digital Output (1A max)
  - 8 High Side Digital Outputs (5A max)
  - 2 High Side Digital Outputs (10A max)

The Power module Dash

MXsl is a completely configurable 5" dash controller that, beyond the typical features of a dash, like ECU connection, analog / digital Inputs, GPS management etc., offers 10 useful High-Power Outputs that can be used for directly powering motors, lights, fans, pumps, electronic devices, without any necessity of conventional relays and fuses.
The harness becomes extremely simplified and the flexibility is the status of art.

It detects shortcuts, overcurrents and open circuits, recording the faults for a complete diagnosis and giving, if required, the proper information on the screen.

Each output can be configured to be activated by a combination of math channels, analog/digital inputs, pushbuttons or ECU fields, programming even the maximum absorbed current.

RIGHT INDICATORS LIGHT	ABS LAMP
LEFT INDICATORS LIGHT	BAD FUEL
HORN	CHARGE CONDITION
HIGH BEAM	ENGINE FAIL
LOW BEAM	AUTO LIGHT
REAR FOG LIGHT	BRAKE ALARM

CAN CONNECTION

ABS LAMP
BAD FUEL
CHARGE CONDITION
ENGINE FAIL
AUTO LIGHT
BRAKE ALARM
ESP OFF
WIPER
GPF
ECT HIGH
OIL PRESSURE
AUTOMATIC GEAR

RIGHT INDICATORS LIGHT
LEFT INDICATORS LIGHT
BRAKE LIGHTS
DRL
HORN
HIGH BEAM
LOW BEAM
REAR FOG LIGHTS

Technical Specifications

- Display	5"TFT
- Resolution	800x480 pixels
- Contrast	600:1
- Brightness	700cd/m2 - 1,100 Lumen
- Ambient light sensor	Yes
- Alarm LEDs	6 RGB freely configurable
- Shift Lights	10 integrated freely configurable RGB LEDs
- CAN connections	3
- ECU Connections	CAN, RS232 or K-Line
- ECU compatibility	+ 1,000 industry leading ECUs
- Expansion CAN connection	GPS, Channel Expansions, Thermocouple Expansions, Lambda Controllers, SmartyCam
- Inputs	8 fully configurable: analog, digital, pull up on/off - Max 1,000 Hz each
- Speed Input	1
- RPM Input	1
- Digital outputs Low Side	2 - (1 A Max)
- Digital outputs High Side	- 10 protected (overcurrent, short circuit to gnd and to battery, overtemperature, open load detection, current fuse programmable)
	- Eight 5 A outputs, two 10 A outputs
	- Current sense
	- Output PWM capable (100 Hz to 400 Hz)
- Connectors	- 2 AMP connectors
- Dimensions	169.4x97x23 mm
- Weight	480 g
- Power consumption	400 mA without power output lines active
- Waterproof	IP65

MXL2
MXm

- High contrast LCD with graphical portion
- WiFi connectivity
- Connections with industry leading 1,000+ ECUs
- 3-axis accelerometer + gyroscope
- Coil RPM input
- 2 digital outputs
- Realtime fully configurable math channels

MXL 2

- Dual color backlight
- 6 configurable RGB alarm LEDs
- 10 RGB LED shift light array
- 3 CAN connections
- 8 analog inputs at a max 1000 Hz each
- 4 digital speed inputs
- Lap signal input

MXm

- 7 color backlight
- 2 configurable RGB alarm LEDs
- 5 RGB LED shift light array
- 2 CAN connections
- 4 analog inputs at a max 1000 Hz each
- 2 digital speed inputs

All the racing data you may ever need

MXm/MXL2 are the powerful AiM dashloggers providing all the info needed by racers: they sample and show key info like speed, laptimes, RPM, all temperature/pressure data you need and much more.
These have been designed with the aim to make configuration and usage smooth and easy either for amateurs and for people with sophisticated technical background.

A wide range of data sources

These dash loggers sample data come from your ECU, the internal accelerometer and gyro, as well as from the GPS08 module, analog/digital inputs and predefined math channels.

For the most demanding, the system can be connected to the lambda controller and to the SmartyCam.

MXL2

MXm

29

Integrated Shift Light Array

An integrated shift light is a hallmark of the MXL, but an even better 10 LED shift light array is found in the MXL2.
5 LED are those dedicated to shift light for the MXm.
Choose from a host of advanced multicolored RGB shift light patterns that can be customized to your liking, and for each unique gear when required.

Flexible Alarms

Six configurable RGB alarm LEDs for MXL2 or two for MXm.
You choose the conditions, you choose the colors.
Select a solid alarm - or flashing one - and the flashing frequency, choose to have an accompanying text message, and set the alarm priorities.

Data recall

At the end of each session, you can recall the summary of your best laps, with max/min RPM, speed and temperatures.

Sharp Liquid Crystal

High contrast LCD displays are featured by these two loggers, with an outstanding black to white ratio, the graphical LCD offers great flexibility in information display and alerts.
An ambient light sensor keeps the backlight at optimum brightness levels.

The MXL2 offers a dual colored backlight of high contrast white and red which can also be changed conditionally.
MXm features a wide 268x128 pixel graphical display.
The screen can be backlighted in one of the seven available colors.

Choose your own data layout

You can organize this huge quantity of data defining your custom pages, choosing among a wide library of page styles, defining which data to be shown, their end of scale and measure unit.

Analog/digital inputs

MXL2/MXm feature digital Speed/RPM and analog inputs, recorded up to 1000 times per second each. You can connect and monitor temperature, pressure, suspension sensors, together with your custom sensors.

MXL2 features:

- ■ 4 Speed signals
- ■ Coil RPM input
- ■ Lap signal
- ■ 8 analog inputs

MXm features:

- ■ 2 Speed signals
- ■ Coil RPM input
- ■ 4 analog inputs

WiFi Connectivity

Makes it even more convenient to configure, calibrate, and download your data wirelessly, using a secure 802.11 WiFi connection: no need to move your PC close to the car anymore, you can do it from your van up to 50 meters away.

Expansions

A number of expansions can be added to MXL2 for incrementing the performance and the data acquired:
Channel Expansions, thermocouple Expansions, Lambda Controllers and the on-board camera SmartyCam HD are only some of the available modules. MXm can be connected to SmartyCam HD and Lambda Controller.

ECU connection

MXL2/MXm acquire data from the ECU of your vehicle: the list of available ECU drivers (CAN,RS232 or K-line), is constantly updated, this Includes 1,000+ different ECUs, either Stock and Racing.

Internal accelerometer and gyro

The internal three-axial accelerometer and the gyroscope provide all the information needed to quantify the dynamic characteristics of your vehicle.
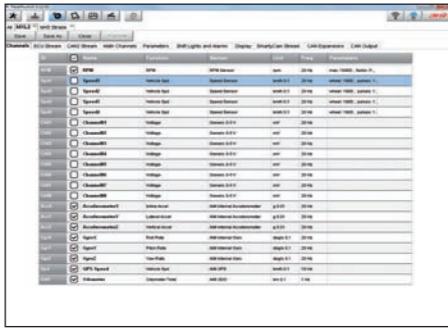
Race Studio 3, the almighty software

Race Studio 3 is the true 'engine' of your MXL2/MXm, as it will manage all your activities related to:

Configuration

With Race Studio 3 you can create, modify, delete, import and export configurations with all channels, ECU drivers, Math channels, display pages, digital outputs, alarms, Shift Lights and all the expansions you need.
You will also be able to manage the map of all your racing tracks and compare two laps watching the video recorded by SmartyCam cameras.
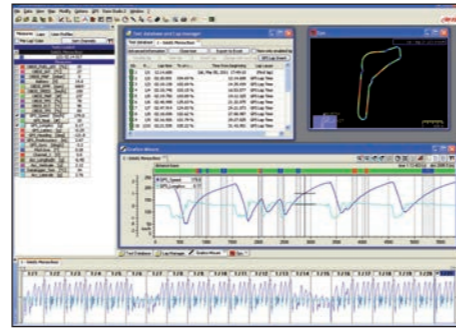
Analysis

With Race Studio 3 you can also analyze all data recorded by MXL2/MXm and downloaded to your PC: graphs, histograms and tables will help you study your performance, providing an objective support to avoid mistakes and improve performances.

Math channels

MXL2/MXm can be configured to display those values (i.e. brake bias, calculated gear) in real time.

Technical Specifications

	MXL2	MXm
- Display resolution	LCD display + graphical portion	268 x 128 pixels
- Backlight	White or red	7 configurable RGB colors
- Ambient Light sensor	Yes	Yes
- Shift Lights	10 configurable RGB LEDs	5 configurable RGB LEDs
- Alarm LEDs	6 configurable RGB LEDs	2 configurable RGB LEDs
- CAN connections	3	2
- ECU connections	CAN, RS232 or K-Line to 1,000+ industry leading ECUs	CAN, RS232 or K-Line to 1,000+ industry leading ECUs
- GPS	GPS08 Module included in the kit	Integrated
- External modules	GPS Module, Channel Expansion, Thermocouple Expansion, Lambda Controller, SmartyCam HD	Lambda Controller, SmartyCam HD
- Analog inputs	8 fully configurable, max 1,000 Hz each	4 fully configurable, max 1,000 Hz each
- Digital inputs	4 Speed inputs, lap signal, coil RPM input	2 Speed inputs, coil RPM input
- Digital outputs	2 low-side max 1 A	2 high-side max 10 A
- Inertial platform	Internal 3 axis ±5g accelerometer + 3 axis gyro	Internal 3 axis ±5g accelerometer + 3 axis gyro + 3 axis magnetometer
- Wifi connection	Yes	Yes
- Internal memory	4 GB	4 GB
- Body	Anodized Aluminum	Glass fiber reinforced Nylon
- Pushbuttons	Metallic	Metallic
- Connectors	2 Motorsport connectors	37 pins Motorsport connector + 4 pins power connector
- Dimensions	187,8x103x21mm	137x88,4x31,91mm
- Weight	530g	330g
- Waterproof	IP65	IP65

EVO4S
EVO5

- ■ Connection with industry leading 1,000+ ECUs
- ■ Lap signal
- ■ Coil RPM input
- ■ Internal 3 axis ±5g accelerometer + 3 axis gyro
- ■ CAN output
- ■ GPS included in the kit
- ■ External modules connection (Channel Expansion, TC Hub, Lambda controller, SmartyCam HD)
- ■ 4GB internal memory

EVO4S
- ■ 5 fully configurable analog inputs, max freq. 1,000 Hz each
- ■ 2 Speed inputs
- ■ 1 Digital Output (1 A max)

EVO5
- ■ 8 fully configurable analog inputs, max freq. 1,000 Hz each
- ■ 4 Speed inputs
- ■ 2 Digital Outputs (1 A max)
- ■ SD card slot
- ■ Second CAN
- ■ WiFi Connection

EVO4S
The powerful and flexible data logger

EVO4S is the evolution of the traditional data-logger that, all over the years, has become a standard de facto acquisition system in a huge amount of championships.

With its compact aluminum body, can be easily placed in any vehicle.

Its configuration with the new Race Studio 3 software is simple and immediate.

EVO5
The professional data logger

EVO5 is one step beyond. The SD card slot is the fastest way to grab data out of a vehicle when this is pitting.

WiFi offers an alternative access to the unit. Two Motorsport connectors, 8 analog inputs, 4 wheel speeds and a second CAN bus complete this professional package.

A wide range of sources

EVO4S and EVO5 sample all the information you need:
data coming from your vehicle ECU via CAN, RS232 or K-line, from the internal accelerometers and gyro, from the GPS08 Module included in the kit and from analog/digital inputs, external expansions as well as predefined math channels.

Sensors can be connected to the configurable analog channels, to the RPM input and to the wheel speed inputs.

ECU connection

EVO4S/EVO5 acquire data from the ECU of your vehicle.
The list of available ECU drivers, constantly updated and upgraded, includes 1,000+ different ECUs, either Stock and Racing.
They are sorted by manufacturer/vehicle model:
for each ECU you find the proprietary communication protocols, including the standard OBDII ones.
From a hardware point of view, AiM systems manage the following data lines: CAN, RS232, K-Line.

EVO4S Sensors connection

Many sensors can be connected to EVO4S via:

■ 5 analog channels with configurable 12 bit 0-5 Volt, 0-500 mV, 0-50 mV inputs or thermocouple input, used to sample data coming from temperature, pressure, suspension and other kinds of sensors.
■ 2 speed inputs
■ 1 RPM input, which manages square wave signals transmitted by the ECU, or pulse signals picked from the coil command (low voltage).

View your parameters and alarms

Two different solutions allow to display vehicle parameters logged by EVO4S/EVO5. Shift lights and alarm LEDs complete the information supplied to the driver.

Formula Steering Wheel 3
Dedicated to Formula and Sports cars.
GS-Dash
The compact solution for tight cockpits.

CAN output

With the CAN Output you can send messages directly to an existing CAN network in order to improve the range of vehicle control possibilities.

Digital output

1 A at 12 Volts are output by EVO4S/EVO5: they can be configured in order to be turned On/Off depending on the strategy that has been set.

They permit to automatically run external systems, i.e. to switch on/off additional lights, to activate/de-activate a cooling fan or circulation pumps, etc. when a certain event happens. One output is available on EVO4S, two on EVO5.

Internal three-axial accelerometer and gyro

A built inertial platform: an integrated three-axial accelerometer and gyro sensor let you have the most powerful system to understand oversteering, understeering, banking, etc.

Expand your EVO4S/EVO5

Add expansion modules via our built in CAN-bus eg. Channel Expansions, Lambda controllers, displays (GS-Dash, FSW3).

These are only some of the items that can be added to our EVO4S/EVO5 range for incrementing the performance and the data acquired.

SmartyCam HD/GP HD

GS - Dash display

ECU

ECU MODULE

Memory Module

Lambda Controller

Channel Expansion

GPS08 Module
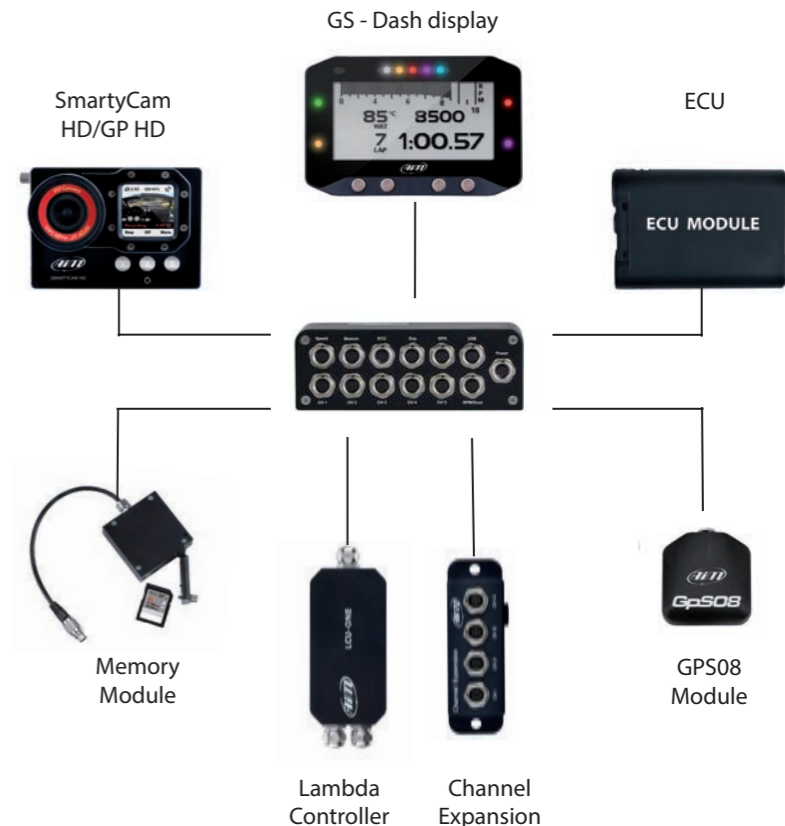
EVO5 Sensors connection

Many sensors can be connected to EVO5:

■ 8 analog channels with configurable 12 bit 0-5 Volt, 0-500 mV, 0-50 mV inputs or thermo-couple input, used to sample data coming from temperature, pressure, suspension and other kinds of sensors.
■ 4 speed inputs.
■ 1 RPM input, which manages square wave signals transmitted by the ECU, or pulse signals picked from the coil command (low voltage).

EVO5 Second CAN line

The CAN2 line manages data coming from your additional modules (i.e. ABS, traction control, infrared temperature sensors and more...).
This feature meets the requirements of a growing number of racers, as the use of additional modules is becoming quite common in a number of series.

EVO5 Store all your data in a SD card

The internal SD card permits to record all possible data you may ever need.
The card is protected by a waterproof door equipped with a sensor closing all files when you open it, to prevent any data loss possibility.
Of course a USB connection is available too.

EVO5 WiFi connectivity

Configure, calibrate and download your data wirelessly over a secure 802.11 WiFi connection.

38

Technical Specifications

	EVO4S	EVO5
- ECU connection	CAN, RS232 or K-Line to 1,000+ industry leading ECUs	CAN, RS232 or K-Line to 1,000+ industry leading ECUs
- External modules	GPS Module, Channel Expansion, TC Hub, Display, Lambda controller, SmartyCam HD	GPS Module, Channel Expansion, TC Hub, Display, Lambda controller, SmartyCam HD
- Analog inputs	5 fully configurable, max 1,000 Hz each	8 fully configurable, max 1,000 Hz each
- Digital inputs	2 speed inputs, lap signal, RPM input	4 speed inputs, lap signal, RPM input
- Inertial platform	Internal 3 axis ±5g accelerometer + 3 axis gyro	Internal 3 axis ±5g accelerometer + 3 axis gyro
- Digital outputs	1 (1A max)	2 (1A max)
- Second CAN	-	Yes
- WiFi connection	-	Yes
- Internal memory	4 GB	4 GB
- Removable SD card	-	Up to 128 GB
- Connectors	13 Binder connectors	2 Motorsport connectors 37-22 pin
- Body	Anodized aluminum	Anodized aluminum
- LEDs	1 system status	1 system status
- Dimensions	130x35x46,6mm	114,4x47,2x58,86mm
- Weight	330g	300g
- Waterproof	IP65	IP65

39

SOLO 2/ SOLO 2 DL

The GPS lap timers for motorsports

- ■ Graphical display
- ■ Automatic Lap time calculation based upon GPS technology
- ■ Wide internal Track Database with more than 3,000 tracks
- ■ Automatic track recognition at power on
- ■ Freely configurable display
- ■ 10 configurable RGB LEDs
- ■ Freely selectable race Mode: Speed, Performance, Point to Point, Autocross
- ■ Internal 4 GB memory
- ■ Rechargeable lithium battery
- ■ Solo 2 DL: connectable to every ECU for getting and recording all ECU data

SOLO 2
## The most precise and easy way to get lap times

The new Solo 2 receives the data from two satellites constellations, GPS and Glonass: this is a huge step forward since it is unbelievably faster and more precise than the previous version.

The Power ON requires only a few seconds and the lap times are calculated with a max 2/100 of tolerance.
Solo 2 can rely on a database of more than 3,000 tracks all over the world: as soon as it switches on, Solo 2 identifies its position, recognizes the starting line coordinates of the track and starts sampling lap times.

In case the track is not in the database, no problem: Solo 2 realizes it and enters into the autolearning mode, automatically understands the characteristics of the track and gives the lap time anyway.

Even the predictive lap time is much more reliable, and the configurable RGB LEDs will give you a clear and fast indication of the comparison with your best lap.
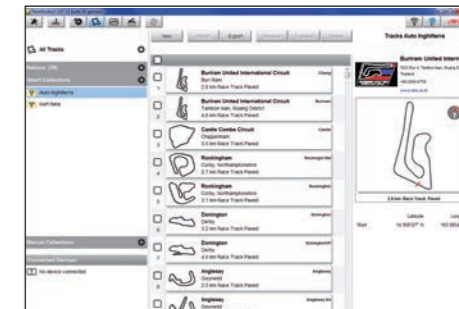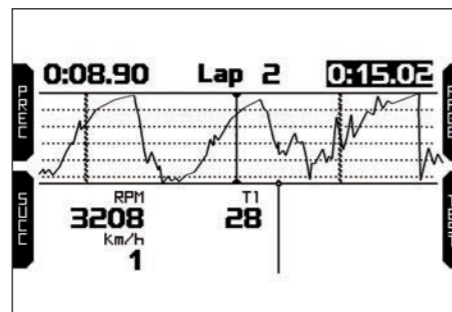
SOLO 2

Race Mode Selection

Solo 2 can manage different types of races:

- Speed races in a closed circuit
- Point to-point races
- Regularity
- Performance tests (0-100 km/h etc.)

In each of these configurations, Solo 2 gives the proper information during the test and powerful data review immediately after each session.

Data recall on screen

At the end of your test, you can quickly review all the key information on your display.

WiFi communication with the PC

Wifi connection: easy, fast, without connectors nor cables: the best way to configure your Solo 2, to manage the Track database, to download the data to your PC.

iPhone Connection

Use your iPhone for a quick and comfortable data analysis, for managing the track database and even for an On-Line view of the most important parameters of your Engine (in case you have chosen the Solo 2 DL).

SOLO 2 DL

SOLO 2 DL
Solo 2 plus ECU connection

More than 1,000 protocols for 1,000+ ECU in the database, for easily connect your Solo 2 DL to your Engine Control Unit and get a lot of information with just one cable.
In case your ECU protocol is not in the database, no problem: an ECU Driver Builder is always available in the Race Studio 3 configuration software, and you will be able to create your protocol by yourself.

Coil RPM Input

Solo 2 DL now features a digital input allowing to log RPM either from square wave signals (8-50 V each signals) or pulse signals (150-450 V ignition coil trigger – primary circuit).

SmartyCam connection

The perfect connection: get all the data from your ECU, merge them with the GPS information and transmit everything to the SmartyCam, that will show them in graphical overlay in the video.

Technical Specifications

- Display	Graphical
- Display resolution	128x64 pixels
- Display pages	Up to 8 freely configurable
- Backlight	7 configurable RGB colors
- Shift lights/alarm LEDs	10 configurable RGB LEDs
- Integrated track database	Yes
- Inertial platform	Internal 3 axis ±5g accelerometer + 3 axis gyro + 3 axis magnetometer
- WiFi connection	Yes
- GPS	10 Hz
- External power	12V
- Memory	4 GB
- Battery type	Rechargeable lithium
- Pushbuttons	Metallic
- Dimensions	98.0x73.7x30.2 mm
- Weight	240 g, battery included
- Waterproof	IP65

Solo 2 DL

- ECU connection	CAN, RS232 or K-Line to 1,000 + industry leading ECUs

SMARTYCAM HD 2.1

The videocamera for motorsports

- H.264, 1,280x720 pixel @ 30 fps Video format
- Telecentric lens with six elements
- 67° or 84° Angle of view
- Internal, rechargeable lithium battery - 1.950 mAh
- Battery duration: 120 '- 150' of recording with data
- 9-15 Volt External Power
- Support for up to 128 GP SD Cards
- 3 axis ± 5g accelerometer
- -10°C/+60°C Usage temperatures
- Auto Power ON/OFF
- Auto Start/Stop recording

The Videocamera Designed for Motorsports

SmartyCam HD Rev.2.1 has been designed for motorsports with a single purpose: providing great videos that include all the technical information that will help you improve your performance. All this in the most robust and reliable system ever.

In its new version, the electronics/mechanics have been further improved, and SmartyCam HD is now even easier to manage.

Real Time Data Overlayed on Videos

SmartyCam HD Rev.2,1 overlays all the data you need from different sources.
- From GPS: track map and vehicle position, as well as speed, lap and split times.
- From AiM loggers connected to your ECU: RPM, throttle, engaged gear, acceleration, temperatures, pressures and - in presence of additional sensors - also their values.
All these info will be overlayed on videos in each single point of the track.

48

49

No "Wave Effect" with Global Shutter CMOS Sensor

Engine rumble causes vibrations, which are not a good thing for video recording.

Never again will you experience that seasick "wave effect" you get when watching videos recorded by a generic camera, when the car rolls at 7,000 RPM.

SmartyCam HD has been designed for that environment and for those vibrations.

"Wave effect" is just a memory.

Acceleration   Temp.   Trottle   Lap Time Best Lap   Gear   RPM   Speed

Automatic Start & Stop

You are on the starting grid, ready to sprint, your adrenaline reaching the climax: the last thing you can worry about is... switching on the camera.

You have other things to worry about. SmartyCam HD is aware of that. That is why it switches on/off automatically and starts/stops recording the same way.
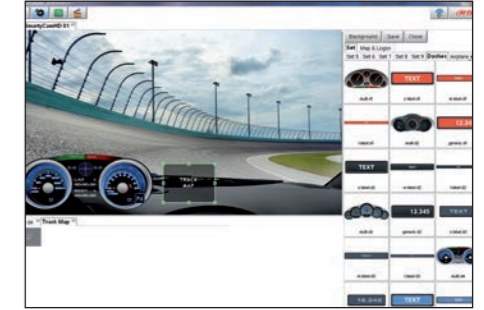
RS3, your software for video configuration and analysis

SmartyCam HD uses Race Studio 3, the powerful software which allows to configure all details of your videos and to get plenty of fun and information out of them.

You can configure your overlays in a virtually infinite variety of modes: add your logo and the track map, and choose your graphic objects from a list of pre-determined sets with same layout or even single objects from different sets.
Your videos will be truly "yours" in all details, from the data to their graphic layouts.

Designed to withstand extreme on-track working conditions

Frail things have a bad time on track.

An on-board camera designed for motorsports must guarantee great resistance against the extreme working conditions typical of racing and against the most adverse weather, such as: strong and prolonged vibrations, storms, continuous rain, and extremely high and low temperatures.

That is why SmartyCam HD is made in machinery molded aluminum, just like many competition car parts.

High quality with small size video files

Generic HD cameras are focused on the highest pixel number.
The result is that their video files are far too large, taking too much memory.

SmartyCam HD videos have the same quality as other HD cameras but their files are smaller because the H.264 compression system parameters have been optimized to a perfect balance between video quality and file size.

You can choose among three video file quality levels: one-hour recording takes 4GB (high quality), 2GB (normal) or 1,5GB (low).

Files are stored on SD cards: with current SD cards reaching 128 GB capacity, you can record more than 30 hours of high-quality videos without changing the card.

- Video format	H.264 -1280 x 720 pixel @ 30fps
- Display resolution	128x128 pixels
- Lens	Telecentric with 6 elements
- Field of view	67° - 84°
- Internal battery	Rechargeable Lithium battery 1.950 mAh
- Battery charge	700 mAh 12V
- Internal battery duration	120 - 150 min. of recording
- External power	9 -15 Volt
- Supported SD card	Up to 128 GB
- Memory required	1.5 GB (1 hour low quality recording)
	2 GB (1 hour medium quality recording)
	4 GB (1 hour high quality recording)
- Accelerometer	Three-axial ± 5g
- Usage temperature	-10°C/+60°C
- Auto Power On/Off	Yes, if connected to an AiM logger
- Auto Power Off	Yes
- Auto Start/Stop Recording	Yes
- Body	Anodized Aluminum
- Dimensions	87x63x49mm
- Weight	280g battery included
- Waterproof	IP67

SMARTYCAM GP HD 2.1

The Bullet-cam designed for motorsports

- H.264, 1280x720 pixel @ 30 fps Video format
- 2.4" 240x320 Display
- Telecentric lens with six elements
- 67° or 84° Angle of view
- Internal, rechargeable lithium battery - 1.040 mAh
- Battery duration: 60 '- 70' of recording with data
- 9-15 Volt External Power
- Up to 128 GB memory
- 3 axis ± 5g accelerometer
- -10°C/+60°C Usage temperatures
- Auto Power ON/OFF
- Auto Start/Stop recording

If you have a Formula car, or a bike, or in every situation in which SmartyCam is not so comfortable to install, here is the version with remoted bullet-cam, SmartyCam GP HD Rev. 2.1.

Same video quality, same connections to Master Loggers, same features but a completely different look.
It is in black anodized aluminum, billet machined with a light, robust, and really small Bullet-Camera.

SmartyCam GP HD Rev. 2.1 is very flexible: you can add optional modules to fit it perfectly to your needs, like the ECU Bridge to connect it directly to the Engine Control Unit, the GPS, or the external microphone/jack.

Technical Specifications

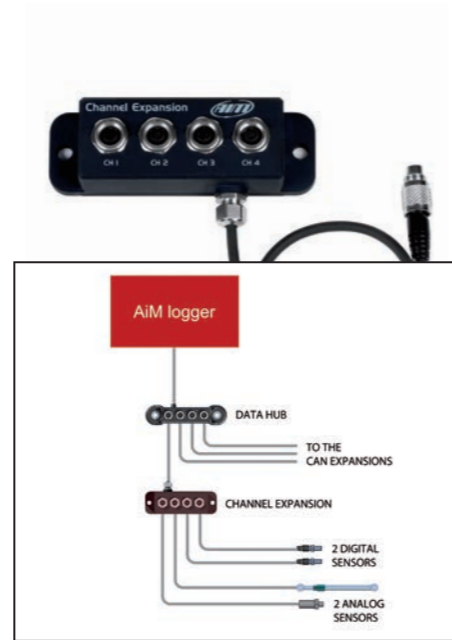|	
- Video format	H.264 -1280 x 720 pixel @ 30fps
- Display resolution	2,4″ 240x320 pixel
- Lens	Telecentric with 6 elements
- Field of view	67° - 84°
- Internal battery	Rechargeable Lithium battery 1.040 mAh
- Battery charge	700 mAh 12V
- Internal battery duration	60 - 70 min. of recording
- External power	9 -15 Volt
- Supported SD card	Up to 128 GB
- Memory capability	1.5 GB (1 hour low quality recording)
	2 GB (1 hour medium quality recording)
	4 GB (1 hour high quality recording)
- Accelerometer	Three-axial ± 5g
- Usage temperature	-10°C/+60°C
- Auto Power On/Off	Yes, if connected to an AiM logger
- Auto Power Off	Yes
- Auto Start/Stop Recording	Yes
- Body	Anodized Aluminum
- Dimensions	Main box 102.5x65,2x26,5mm
	Bullet camera diam 24mm x 73,5mm
- Bullet cable	0,5 - 1,0 - 1,5 - 2,0 mt
- Weight	Main unit 260g - Bullet camera 55g
- Waterproof	IP67

CHANNEL EXPANSION

CAN Device

■ 4 freely configurable analog
(or two digital and two analog) channels
■ CAN connection to AiM loggers and
dashloggers

Enhancing your logger performance

This compact CAN device provides virtually endless data acquisition system expansion options.
Channel Expansion hub adds up to four freely configurable analog (or two digital and two analog) channels without occupying or modifying any of the existing system channels.

By using advanced CAN technology, wiring is simplified from four cables into just a single connection, thereby reducing possible and unnecessary points of failure. It is also possible - via Data Hub - to connect to the Master as many Channel Expansion as needed.

Dimensions: 105x33x28,4mm
Weight: 170 g
Waterproof: IP65

TC HUB
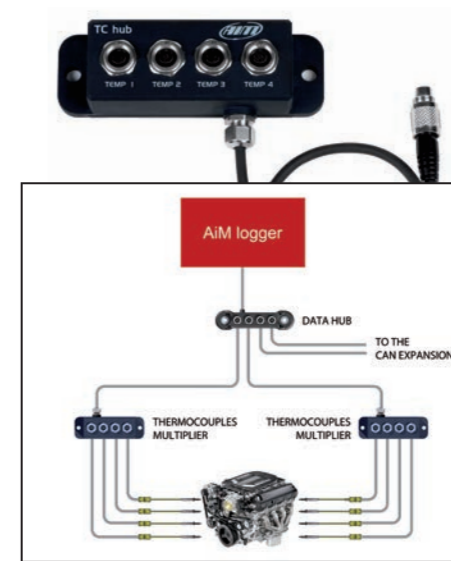
Thermocouples Multiplier

Keep all temperatures of your engine under control

With TC Hub four additional thermocouples can be connected via CAN to all AiM loggers. Using more TC Hubs you can easily keep under control all your temperature sensors data, monitoring each single cylinder exhaust gas temperature, together with water, oil and head temperatures.

TC Hub provides highly reliable, being its sampling frequency configurable up to 50Hz per channel.
Its aluminum chassis makes it resistant and Waterproof.

Dimensions: 105x33x28,4mm
Weight: 170 g
Waterproof: IP65

LCU-ONE

Lambda Controller

■ Sampling A/F ratio and punctual Lambda values from 0.65 to 1.6
■ Wide band Bosch LSU 4.9 probe included in the kit
■ Available in three versions providing CAN, Analog and CAN+Analog outputs

Full control of your engine

LCU-ONE Lambda controllers allow you to perfectly tune the carburetion of your engine, significantly improving your car performances.

All LCU-ONE lambda controllers use a wide band Bosch LSU 4.9 probe for its capacity of saving the original calibration for all its life and for its duration: Bosch LSU 4.9 probe, in fact, has been designed to last for more than 100.000 km on a stock car.

High precision sampling

LCU-ONE can detect punctual Lambda value from 0.65 to 1.6, offering you an extremely precise measurement, very useful for engine tuning.

Through the analysis of the remaining oxygen, LCU-ONE points out possible oxygen excess/lack in the carburetion, providing an essential information for gasoline, diesel or alternative fuel powered engines.

Three variants to cover all needs

LCU-ONE range is available in three different versions:

■ LCU-ONE CAN: uses a CAN bus and is extremely easy to install.
■ LCU-ONE Analog: uses a serial line for programming and an analog output proportional to lambda value.
To be even more user-friendly, these two versions of LCU-ONE switch on/off together with the logger.

■ LCU-ONE CAN + Analog, equipped with both CAN bus and analog output.

MEMORY MODULE

Massive data storage
for AiM loggers

■ Power consumption 50 mA
■ Cable length 40 cm
■ SD Card 4 GB
  it supports up to 128 GB
■ Dimensions 55,5x78,3x18 mm
■ Weight 103 g
■ Waterproof: IP65

Manages SD Card up to 128 GB

Memory Module is a small SD Card holder that can be connected via CAN bus to these AiM loggers:

MXL2, MXG, MXP, MXS, EVO4S, EVO5

...in order to record the data during your tests. Its management is really very simple: just connect the Module to your logger and the data will be saved simultaneously both in the logger and on the SD Card. No configuration is needed.

The SD card can be removed and replaced even during pit stops, while the car engine is still ON, making it extremely fast to get the data during endurance races or long tests, when the time at the paddock is really limited.
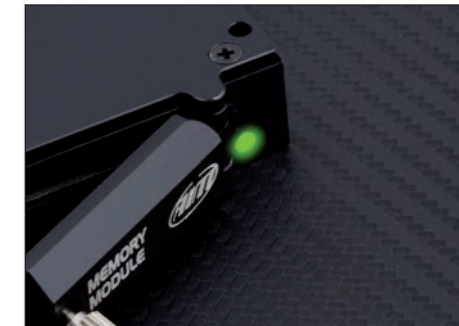
When the session is over, all you need to do is moving the SD card from the Module to your PC and download the data using Race Studio 3. The Module features a front LED showing its recording/fw updating status:

SHIFT LIGHT MODULE

■ 10 configurable RGB LEDs
■ CAN connection to AiM loggers
  and dashloggers

Position your shift lights where you wish

Ten completely configurable RGB LEDs to keep your engine under control.

You can easily set the LED color and the RPM threshold value that turns it ON, also in dependance upon the gear number.
Shift Light Module is CAN compatible with the following AiM systems:

Shift Light Module is CAN compatible with the following AiM systems:

■ MXL2
■ MXG
■ MXP
■ MXS
■ EVO5

Dimensions: 116x27x17mm
Weight: 70 g
Waterproof: IP65

GPS08/GPS08 ROOF

An extremely powerful GPS

- ■ 2 satellite systems, with an average of 20 satellites connection
- ■ Less than 1 meter tolerance
- ■ Very fast signal locking
- ■ No risk of missing the signal
- ■ Samples lap times, position, speed and lateral/in-line acceleration
- ■ Ten times/second sampling

Top reliability and precision with two satellite systems

GPS08 is more precise than most of the existing GPS systems, as it has been designed to add to the GPS satellite's signal the Global Navigation Satellite (Glonass) system's signal. With an average of almost twenty satellites working in conjunction, GPS08 guarantees a precision and a reliability simply not comparable to the old generation GPS systems. The benefits are huge:

■ An average of less than one meter tolerance, which means absolute precision in determining vehicle position.

■ Satellite signal is locked very rapidly, few seconds after switch-on.

■ No risk of missing the signal anymore in case of 'noise' or interferences on one system, as the other system will guarantee the signal continuity.
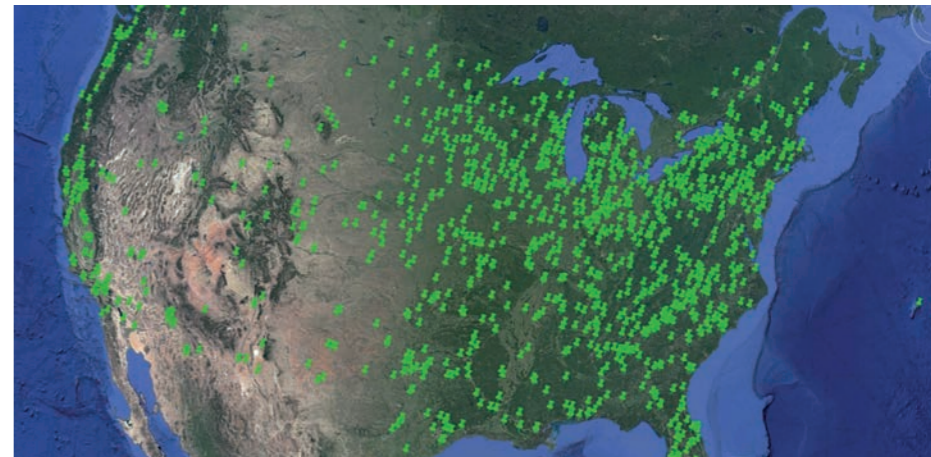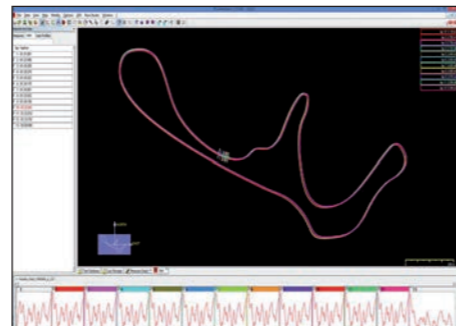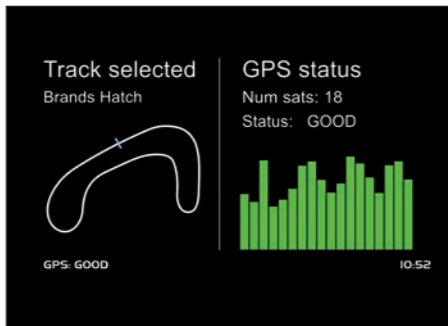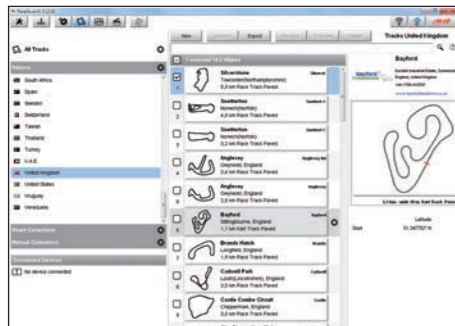
With your track included in the AiM database, GPS08 does it all by itself

As soon as GPS08 switches-on, it identifies its position and - if your track is included in the list of tracks stored on Race Studio 3 database - will start sampling lap times.

In fact, Race Studio 3 stores the finish line coordinates (plus map, contact info and logo) of almost three thousands tracks, sorted by Nation, circuit and surface type: you will be able to create your own collections, adding/removing tracks as you wish.

Create your own selection, download it to the AiM system and GPS08 will be ready to operate.

Should your home track be missing, you can easily add it to your own tracklist when downloading your session files to Race Studio 3, and send it to AiM for inclusion in the official database.

Much more than just Lap times

GPS08 samples ten times per second position, speed and lateral/in-line acceleration at any point of the track: all the data needed for a precise evaluation of vehicle and driver behavior, which is the necessary step to improve performance.
Thanks to GPS08, even the predictive lap time will be much more reliable: in any moment of your race, you will know your time gap vs. your best lap with absolute precision.

GPS08 ROOF

GPS08 is also available in the "Roof" version, specifically designed for easy installation on covered cars.

GS-DASH

The display for EVO4S and EVO5

- Display resolution: 268x128 pixel
- Backlight: 7 configurable RGB colors
- Ambient light sensor
- 5 RGB LED configurable shift lights
- 4 configurable alarm LEDs
- Fully configurable display pages
- Aluminum Body
- Metallic pushbuttons
- Dimensions: 128 x 82 x 22 mm
- Weight: 380 g
- Waterproof IP67

GS-Dash has been designed to show data sampled by the new generation of AiM loggers, EVO4S and EVO5.

With this compact but with wide graphical display you can visualize all data coming from your vehicle's ECU, from the accelerometers and from the GPS, as well as from your custom sensors.

Easy and immediate readability

To maximise readability of data, you need plenty of room. That is why GS-Dash features a wide 268x128 pixel graphical display.

EVO4S

EVO5

Fully configurable shift lights and alarm LEDs

GS-Dash features five individually configurable RGB LED shift lights: you will choose color and value thresholds for their activation.

In addition, they can also be configured to show your best lap/split time or monitor RPM level. Alarm LEDs are configurable as well, in order to turn them on/off depending on the values you selected and their thresholds.
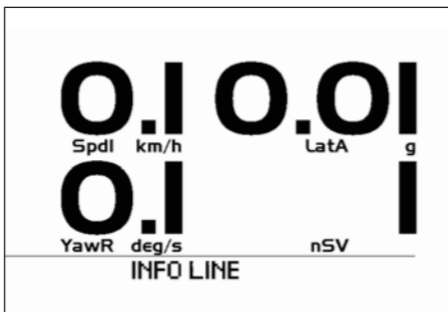
All the data you wish, with your preferred layout

GS-Dash swaps among pages showing lap times and data in a 100% customizable way: just choose your data and create your pages displaying up to 4 fields each.

The "RPM and Lap Time" page layout is also available to display RPM Graph, Lap Time and two channels of your choice.
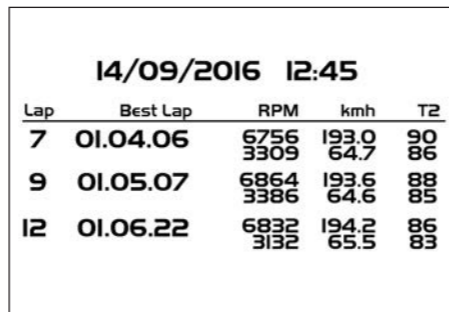
Recall your session highlights

A key-data summary is available at the end of each session: you can also see a list of all the laps of the session, with their times, min/max speed and min/max RPMs.

Backlight available in seven colors

The screen can be backlighted in one of the seven available colors.
The incorporated light sensor makes brightness and contrast ideal in all light conditions.

- Display resolution	268x128 pixels
- Backlight	7 configurable RGB colors
- Ambient Light sensor	Yes
- Shift Lights	5 RGB configurable
- Alarm LEDs	4 configurable
- Display pages	Fully configurable
- Body	Anodized Aluminum
- Pushbuttons	Metallic
- Dimensions	127.8x82x22.2mm
- Weight	380g
- Waterproof	IP65

FORMULA
STEERING WHEEL 3

- Display resolution: 268x128 pixel
- Backlight: seven configurable RGB colors
- Ambient light sensor
- Five RGB LED configurable shift lights
- Four configurable alarm LEDs

- Fully configurable display pages
- Dimensions: 270x183x67mm
- Waterproof IP67

### Specifically designed for Formula and Sports Cars

The Formula Steering Wheel 3 has been specifically designed for Formula and Sports cars. It offers the opportunity to visualize in real time all the information acquired by EVO5 or EVO4S logger - or by a "bridge" connected to your ECU - in a typical "racing" look.

Easy and immediate readability

The new wheel features a wide 268x128 pixel graphical display.
The screen can be backlighted in seven different colors. The incorporated light sensor makes brightness and contrast ideal in all light conditions.

All the data you wish, with your preferred layout

The display pages show lap times and data in a 100% customizable way: just choose your data and create your pages displaying up to 4 fields each.
The "RPM and Lap Time" page layout is also available to display RPM Graph, Lap Time and two channels of your choice.
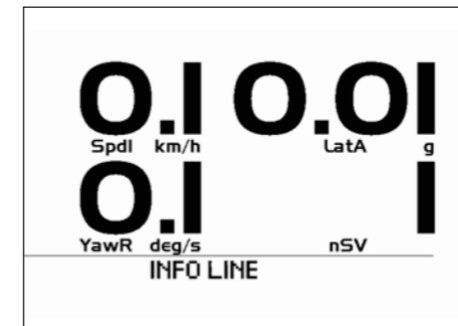
Recall
your session highlights

A key-data summary is available at the end of each session: you can also see a list of all the laps of the session, with their times, min/max speed and min/max RPMs.

Fully configurable shift
lights and alarm LEDs

The individually configurable RGB LED shift lights allow to choose color and value thresholds for their activation.
In addition, they can also be configured to show your best lap/split time or monitor RPM level.
Alarm LEDs are configurable as well, in order to turn them on/off depending on the values you selected and their thresholds.

Switch buttons for external
functions

The Formula Steering Wheel 3 also features switch buttons to remote the desired functions among the options available in your car, like speed limiter, traction control, neutral, etc.
Being electrically isolated from the others, each button operates autonomously.

The optional paddle shifts

Formula Steering Wheel 3 features optional paddle shifts to provide a better driving experience, facilitating manual gear changes.

- Display	Graphical
- Alarms LEDs	4 RGB freely configurable
- Shift Lights	5 RGB freely configurable
- Display pages	Up to 8 freely configurable
- BackLight	White
- Display Pushbuttons	4
- User Pushbuttons	4
- Chassis	Anodized Aluminum
- Finishing	Hand-sewn shammy leather
- Paddleshift SX-DX	Optional
- Dimensions	270x184x48 mm
- Weight	1.400g
- Waterproof	IP65

76

77

MYCHRON5

- Integrated GPS
- Wide display with configurable multicolor backlight
- Graphical display resolution
- Completely configurable pages
- Calculated Gear Number
- 2 freely configurable RGB Alarm LEDs
- 5 freely configurable RGB ShiftLight LEDs
- Glass fiber reinforced nylon
- Metallic pushbuttons
- Rechargeable Lithium Iones Battery
- WiFi connection
- Compatible with MyChron4 add-ons
- Waterproof IP65


The most precise and reliable GPS ever

MyChron5 integrated GPS samples lap times as well as speed, position on track and acceleration... with a reliability simply not comparable to traditional tools and even with previous GPS systems.

The system adds to the GPS satellite's signal the Global Navigation Satellite (Glonass) system signal: an average of almost twenty satellites working in conjunction, MyChron5 GPS guarantees absolute precision. MyChron5 GPS can recognize the finish line coordinates of hundreds of kart tracks all over the world. Opening Race Studio 3 software you will see the huge list of tracks included in the AiM database: you will be able to create your own collection, adding/removing tracks.

So, immediately after switch-on, MyChron5 GPS will determine its position, identify the track and start loading start/finish line coordinates and start sampling lap, predictive and split times.
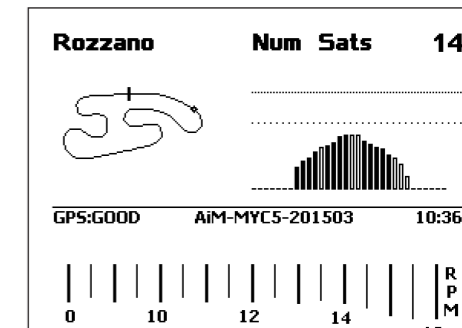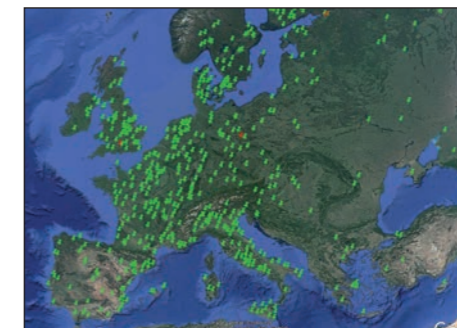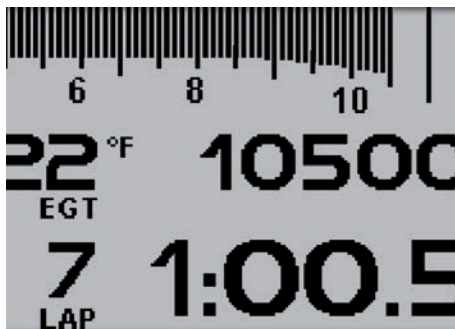
Completely configurable pages

Define as many pages as you wish, showing graphic bars or just digits, via software or directly on your system.
In case your kart is a shifter kart, you can decide to show the gear number, automatically calculated in a few hundredths of meters while you are driving.

ShiftLight and Alarm LEDs

Five RGB shift lights can be configured for each gear, choosing LED color and RPM threshold values which will turn them on/off. They also allow RPM monitoring in a glance. Even alarms are managed in a very flexible way: you choose the situation that generates the alarm, the LED behavior (blinking frequency and color) when the alarm appears and the conditions for its switch-off.

Ambient Light Sensor

MyChron5 provides optimum viewing in several lighting conditions:
the display brightness is automatically adjusted according to the environment light.

WiFi connection

Download your data to your PC, look at the OnLine measures, upgrade your firmware, transmit parameters using WiFi connection.

A robust housing with wider display

The new Nylon chassis with metallic pushbuttons guarantees even more resistance to shocks and water.

The anti-scratch non-reflecting polycarbonate screen and the wider display ensure great readability.

Rechargeable Lithium Battery

No problems with traditional batteries anymore: MyChron5 is powered by a dedicated rechargeable - and removable - lithium battery. It is long-lasting (about 10 hours duration) and easy to recharge, placed on its magnetic basement connected to the power adapter. The usual external power connection is also available.

MyChron5 2T

Like its predecessor, MyChron5 2T gives the chance to control two engine temperatures instead of one, coming from thermocouples or thermoresistors.

Compatible with MyChron4 add-ons

Adding new modules you will get all the additional information you need:

LCU-One
Perfectly tuning your engine carburetion.

Mychron Expansion
The channel multiplier that permits to check when you brake and accelerate, as well as Power Valve behaviour.

Smartycam HD
For professional videos with real-time data overlayed.

SmartyCam
HD/GP HD

MyChron
Expansion

Lambda
Controller
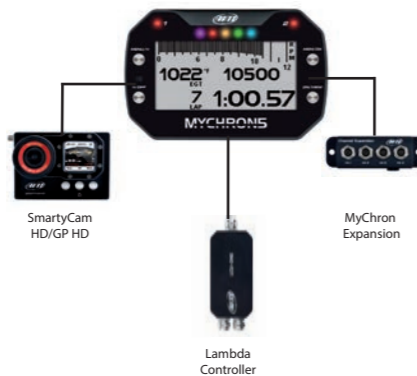
Technical Specifications

- GPS integrated	10 Hz GPS
- RPM	Up to 25.000 RPM
- Temperature	Thermocouple/ Thermoresistence
- Lap time	GPS based (included)
	Optical or Magnetic receiver (optional)
- Inertial Platform	For steering wheel position (included)
- WiFi connection to PC	Yes
- Memory	4 GB - more than 3.000 hours of continuous logging
- Display resolution	268x128 pixel
- Backlight	Multicolor, freely configurable
- Alarm	2 freely configurable RGB LEDs
- ShiftLights	5 freely configurable RGB LEDs
- Battery	Rechargeable 3 A Lithium Ion
- Battery duration	Up to 10 hours
- Battery charger	Included
- Body	Glass fiber reinforced nylon
- Dimensions	137x88,4x29mm
- Weight	390g battery included
- Analysis software	Freely downloadable Race Studio 3

MYCHRON EXPANSION

- Sampling frequency 10Hz
- Dimensions 127x24x33 mm
- Weight 194g

MyChron Expansion

MyChron Expansion channel multiplier improves MyChron5 and MyChron5 2T (and also MyChron4 and MyChron4 2T) performance, thanks to four additional channels and a further CAN bus connector. Through this last connector the systems can be connected to LCU-One Lambda controller and SmartyCam HD (and to GPS and Data key for MyChron4 systems). Thanks to its specific wirings, My-Chron Expansion powers the systems and their peripherals with an external battery, avoiding internal battery consumption.
MyChron Expansion features four inputs to connect the systems to an equal number of additional channels.

All channels are easily configurable as analog through the system menu to sample data coming from:

- Exhaust gas valve position sensor (very important to understand at which RPM value the exhaust port opens)
- Wheel speed sensor: the first input on the left can be configured also as digital input
- No contact brake pedal position sensor
- No contact throttle pedal position sensor (to know if and when to accelerate)
- Brake pressure sensor

- Water temperature or cylinder head temperature (PT100 thermo-resistor only)
- Steering angle potentiometer (to highlight over/under steering situations)
- Brake pedal potentiometer
- Throttle pedal potentiometer

MyChron Expansion is a complete, value-for-money instrument for professional kart analysis.

Warning: MyChron Expansion DOES NOT support gear calculation.

TYRE TEMPERATURE SENSOR KIT

■ Connection to MyChron5 via
   IR Temperature Controller
■ Output signal 0-5V
■ Field of View 35°
■ Temperature range -20°/120°C
■ IR temperature controller dimensions:
   127.6 x 32 x 39 mm
■ Sensor dimensions: 26.6 x 17.2 mm
■ Sensor cable lenght: 250 mm
■ IR temperature controller cable lenght:
   400 mm

Tyre temperature sensor

The Tyre Temperature sensor has been specifically designed to measure the
surface temperature of tyres, providing important info for chassis tuning, tyre exploitation, and driver behaviour.
It can be connected to MX series or EVO series analog inputs directly or via Channel Expansion.

The sensor, with a 35° Field of View, measures temperatures between -20°C and 120°C and provides a 0-5V output signal.

Kit for karts

To be used on karts, the sensor needs a dedicated Infrared Temperature Controller device.

MYCHRON5
STEERING WHEEL

■ Diameter 340mm
■ Weight 600g
■ Colors: red/black and black
■ 3 and 6 holes version
■ Colors: red/black and black
■ Anodized aluminum chassis
■ Finishing Koram Nabuk +
  shammy leather

MyChron5 Steering Wheel is the ideal comple-
ment for your newest MyChron5. Light-wei-
ghted and ergonomical, it allows you to put
your MyChron5 in the best position: right in
front of you.

You will be able to fully discover the power of
MyChron5, watching all your data in a glance
while keeping the best driving precision.

Designed with flat bottom and curved top,
MyChron5 Steering Wheel is made of an ano-
dized aluminum frame covered by chamoised
leather: the Nabuk covering on sides has been
added to maximise grip, bringing the total
control of the kart in your hands.

Available in two colors (red/black or black)
with 3/6 holes, the MyChron5 Steering Wheel
has been designed to fit all types of kart.

MyChron5 installation is easy and immediate
with the bracket included in the kit.

OVAL
STEERING WHEEL

■ Diameter 360mm
■ Weight 700g
■ color black and black
■ Anodized aluminum
  + polyurethane

MyChron5 Oval Steering Wheel has been spe-
cifically designed for oval karts: its shape al-
lows a perfect view of the track and MyChron5
is placed in the best position to keep data
available at a glance.

With its perfect grip - due to finger grooves -
rugged and ergonomic, MyChron5 Oval Stee-
ring Wheel is a balanced mix of nice design,
powerful feeling and top technology.

Safety is a primary goal

The outer rim has been designed without
edges, to avoid any problem in case of acci-
dent.

Maximum comfort

Differently from traditional aluminum/steel
steering wheels, its
polyurethane softness minimizes the
effect of vibrations on the hands.

■ Easy to install
■ Resistant to all weather conditions
■ Jet-washable without any problem

OEM Products

We have been involved in the development and production of a specifically dedicated Dash Controller and in the electronic inside the Steering Wheel of the new, Dallara Stradale, the first Street legal car produced by the famous brand.

In this application, the dash MXsl is a multifunction electronic device, that absorbs the different features of Dash, Datalogger and Power Device Unit.
Beside the normal functions related to the Analog/Digital Inputs and the High Power Digital Outputs, it manages also the Suspension Controller Tractive and transmits commends to the ECU for changing its behavior.
Some dedicated pages have been specifically designed, in accordance with Dallara requirements.

The Steering Wheel features 10 enlighted pushbuttons and two paddleshifts.

The brightness of the pushbuttons depends upon the light level measured by a dedicated sensor and, in dependence of the defined configuration, may give a feedback of the command.
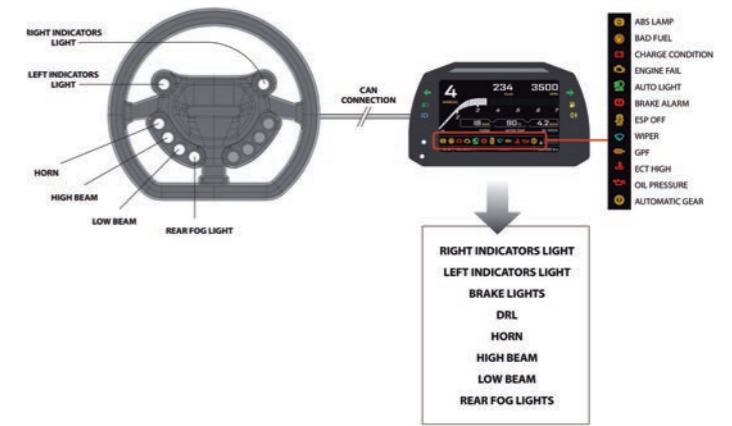
Not Sure What System You Need ?

Send us your requirements and we will send you options and prices by email

Get Quote >

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