



G-Dash

USER GUIDE



Made in Italy



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G-Dash Digital Display

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Thanks.

We would like to thank you for choosing G-Dash, our new display showing in real time data sampled by EVO4 logger.

With G-Dash, you can view values coming from the ECU, from accelerometers, as well as from the GPS built into the EVO4, in addition to receiving information from the on-board camera SmartyCam.

Thanks to its small size it is particularly suited for small cockpit installations like bikes and formula cars.

Its graphic display (G-Dash stands for Graphic Dash) allows a more precise and enjoyable visualization of data. Moreover G-Dash shows some innovative features, like multi-tasking LEDs.



G-Dash kit

G-Dash with CAN cable for EVO4 connection.



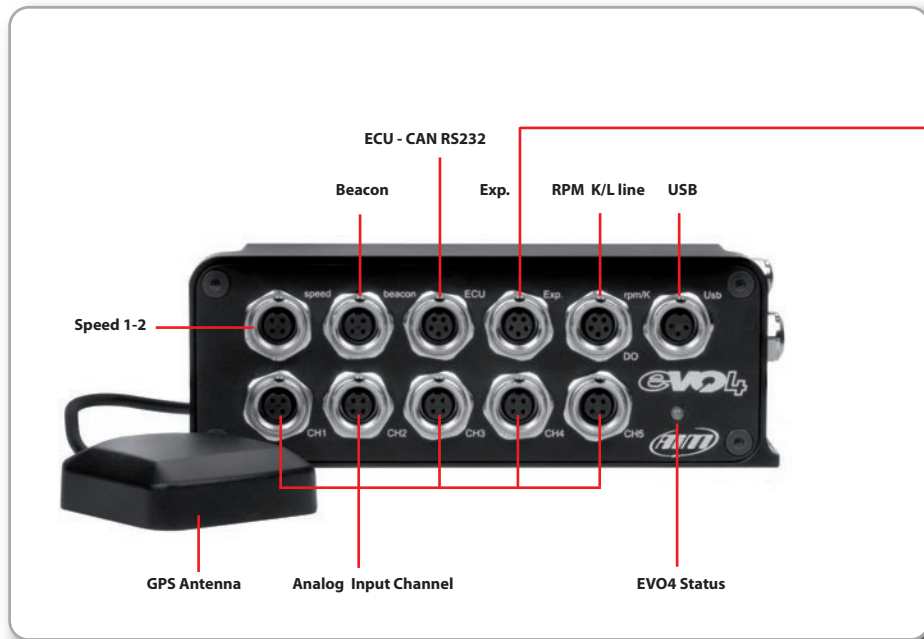
G-Dash



How To install and Connect G-Dash to EVO4.

1

G-Dash must be connected via CAN bus to your EVO4 (whose firmware version must be **43.05.01** or newer), by plugging the CAN cable into the logger "EXP" port.



2

Please check the firmware version of your EVO4: connect it to PC via USB, open the Race Studio 2 software and press 'Device Info' button (1).

**3**

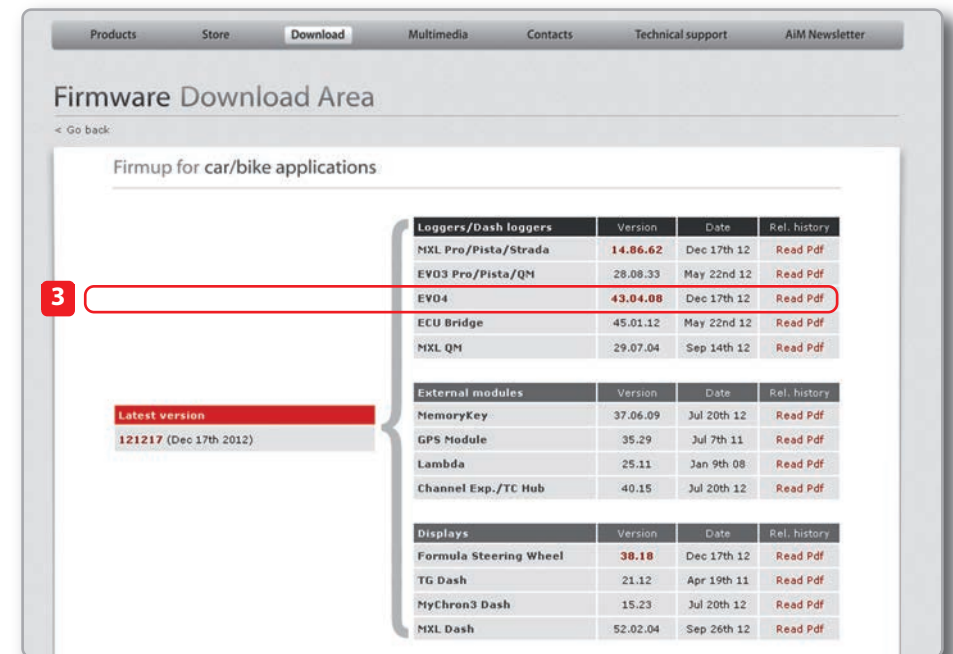
As an alternative you can just switch G-Dash on and select Menu>>System Management>>Device Info (2).

**4**

If the firmware is not adequate:

If the EVO4 firmware is older than **43.05.01**, open the aim-sportline.com "Download Firmware" website area, and download the current version onto your computer.

Then run the firmware update program by following the included instructions.



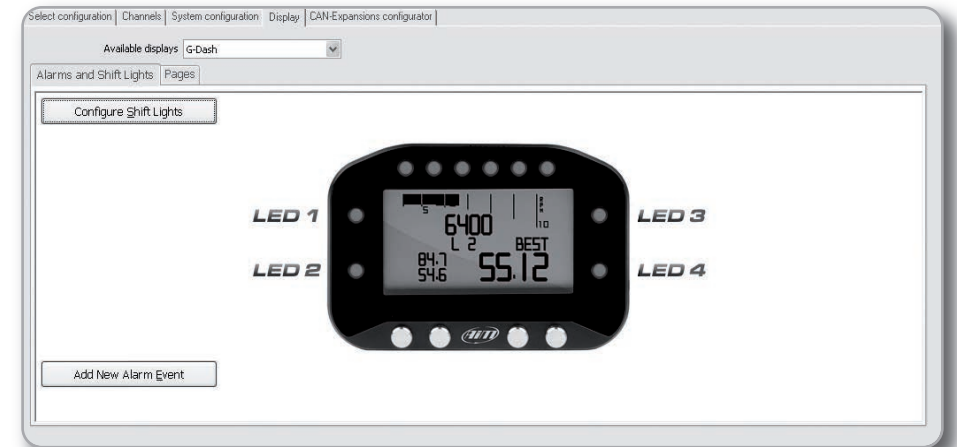
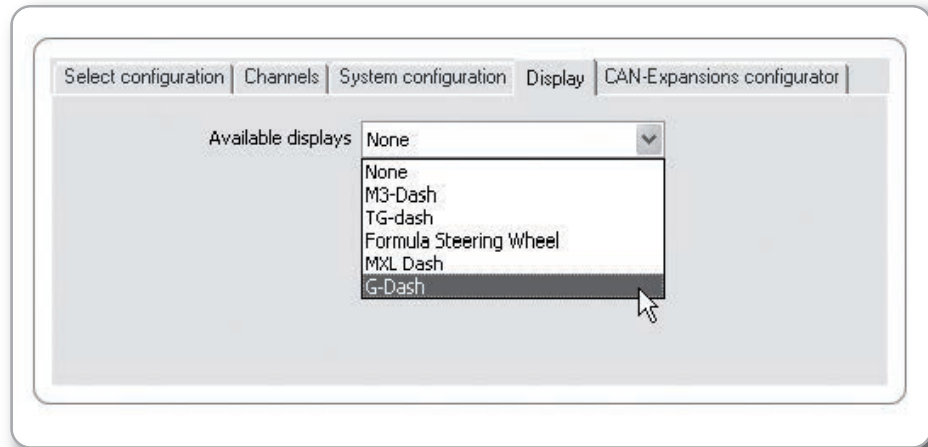
How to Configure G-Dash.

1

G-Dash receives its configuration parameters from EVO4, so you must configure EVO4 in order to make G-Dash display your data correctly.

Therefore, select in EVO4 configuration G-Dash as the display.

G-Dash pages, shift lights and alarms configuration is done using the Race Studio 2 software.

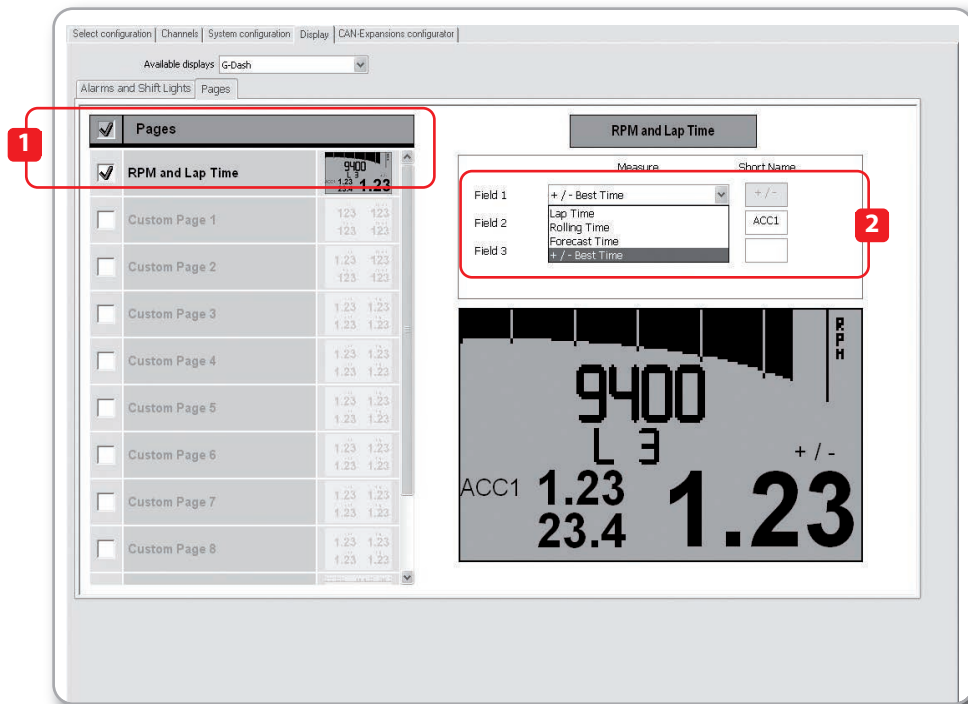


Pages Configuration.

2

G-Dash is able to fully configure up to 9 pages, allowing you to view your data in user definable and very flexible ways.

Select the “Pages” tab to enter the Pages Configuration panel: custom pages are all disabled by default.

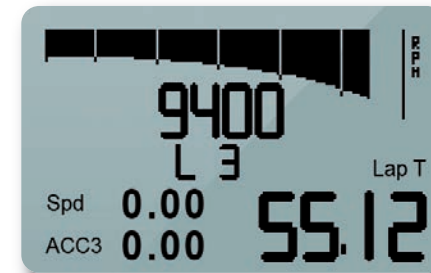


The first available page is:

RPM and lap time. (1) Here you can configure two channels and choose one of the different Lap time visualizations: (2)

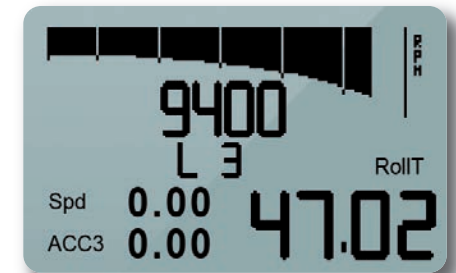
■ Lap Time:

The lap time of the previous lap will be shown;



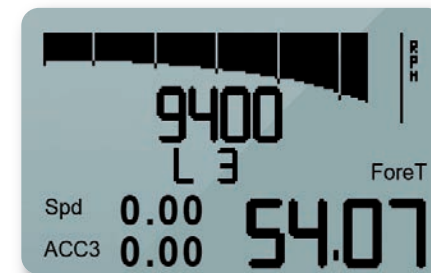
■ Rolling Time:

The lap time is shown for ten seconds, then the rolling time will be shown;



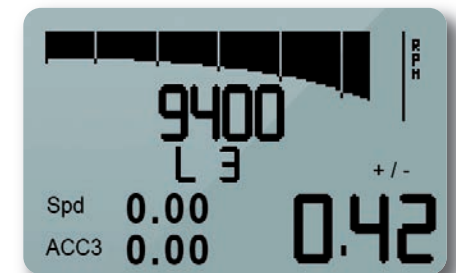
■ Predictive Time:

Shows a forecast of the current lap time;



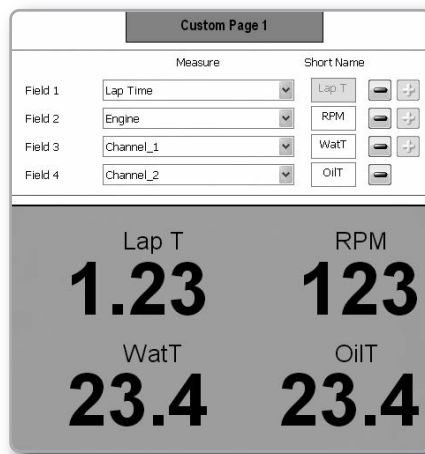
■ +/- Best Time

Shows a prediction of the current lap time in comparison with the best lap of the session.



8 Freely Configurable Pages.

You can add up to four fields per page, defining also the short name that will describe that field.



Field	Measure	Short Name
Field 1	Lap Time	Lap T
Field 2	Engine	RPM
Field 3	Channel_1	WatT
Field 4	Channel_2	OilT

Lap T	RPM
1.23	123
WatT	OilT
23.4	23.4

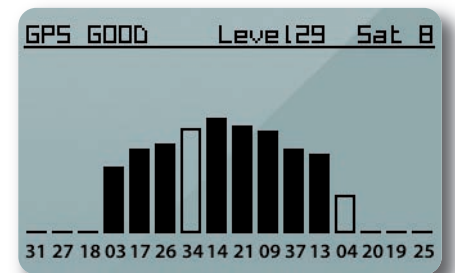
Of course, you can enable or disable each of these pages, simply clicking on the square:



At the bottom of the list, you find other two pages: Satellites and SmartyCam.

■ Satellites

Satellites shows the level of GPS signal. For good precision, it is best to acquire data from at least 8 satellites



■ SmartyCam

SmartyCam status shows the status of the camera, when connected to the system.

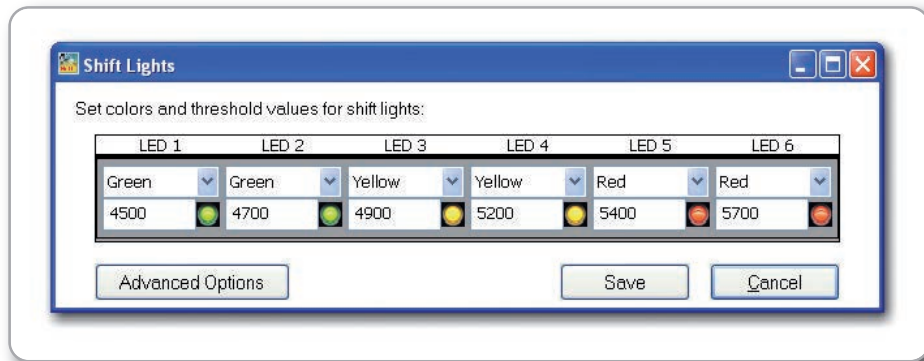


Shift Lights Configuration.

3

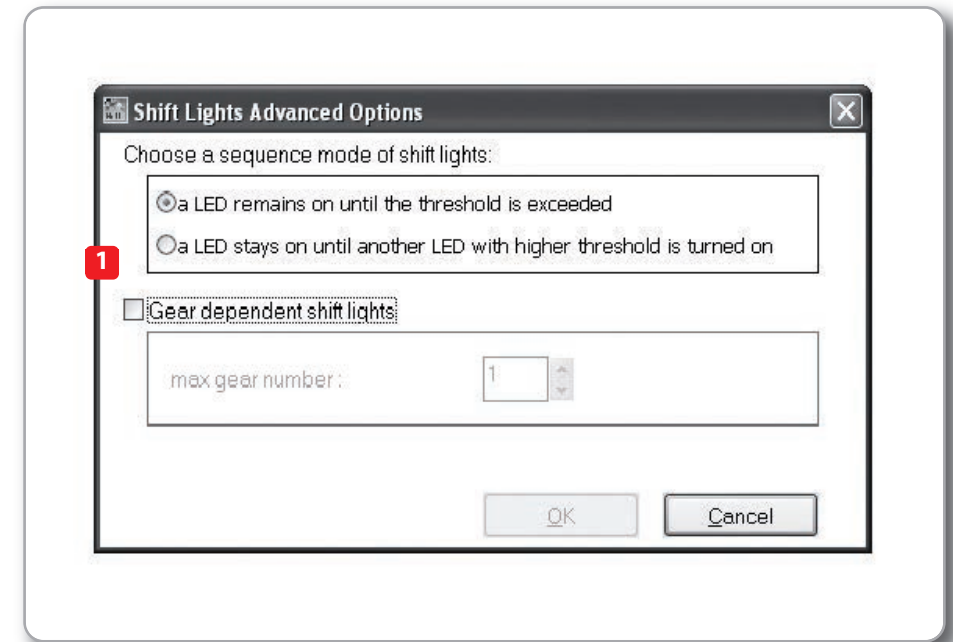
Click "Configure Shift Lights" to manage the Shift Light LED's.

The panel shown below appears and you can manage all 6 LEDs color and the RPM threshold value which will turn it on.



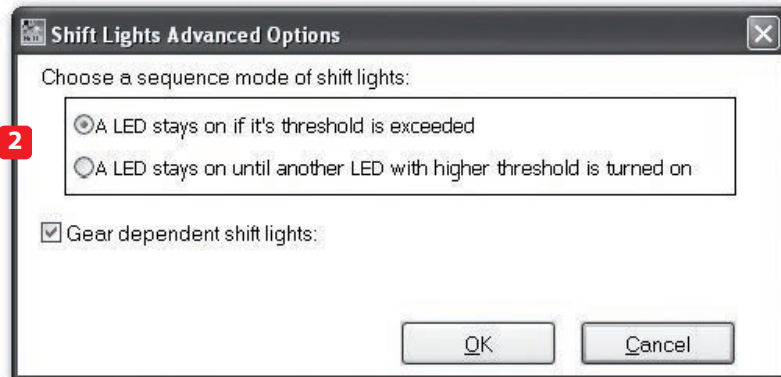
By selecting the "Advanced options" function, you can more deeply configure your Shift Light LED's. The available options are:

■ **The sequence mode of the shift lights:** you can choose to leave an individual shift light LED ON or turn it OFF when the following LED has been turned ON. (1)



■ **The shift lights dependence upon the gear position:**

you can configure G-Dash to have different Shift Light LED thresholds for each gear position (2).



When you select this option you can set the maximum number of gears (up to 9): the view below appears.



Alarms Configuration

4

Click on the “Add new alarm event” button to add new Alarms or click on the icon to the right to manage existing alarms.

When you click on the “Add new alarm event” button, the window below appears. Here you can select the event the system will check and the effect of that event.

1 – Fill in the DESCRIPTION field, in order to easily identify the event in the future (1).

2 – Describe the Alarm: it can be a simple event, for example “water temperature is greater than 100 C°” (2)...

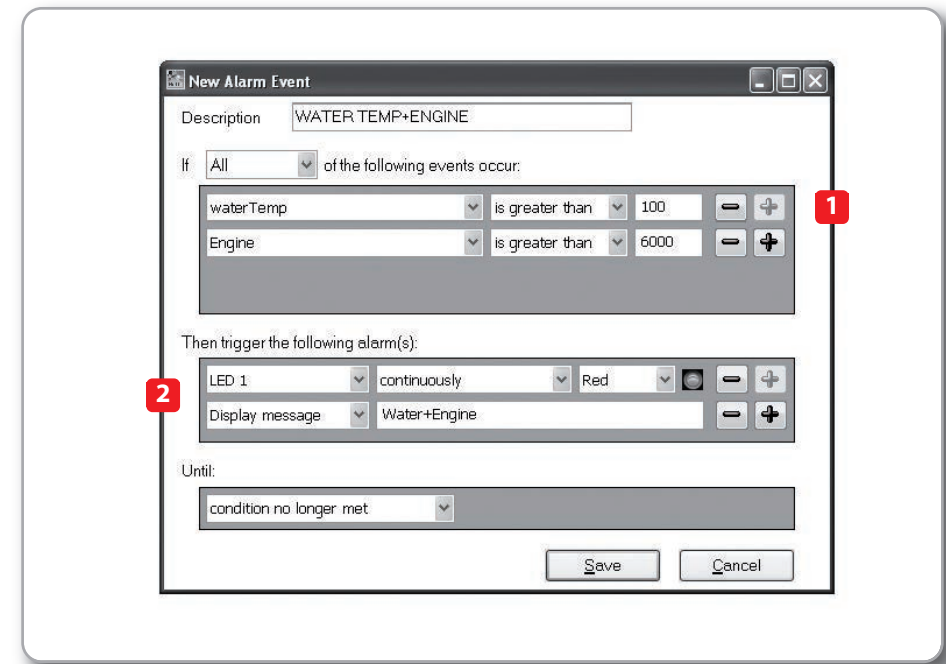
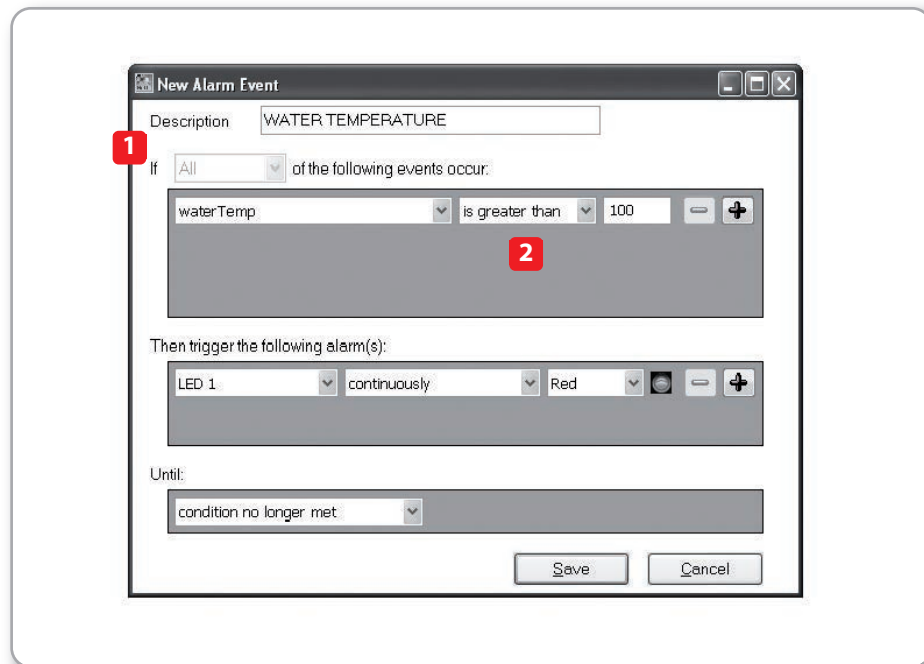
3 – ...or a combination of events, for example: “water temperature is greater than 100 C° AND “Engine RPM is greater than 6000” (1)

4 – Then assign what to do with a LED when

the event (or events) occurs:

You can have G-Dash turn on the LED and you can also select the LED colour and the LED behaviour (solid or fast/slow blinking).

You can also define a text message (2)

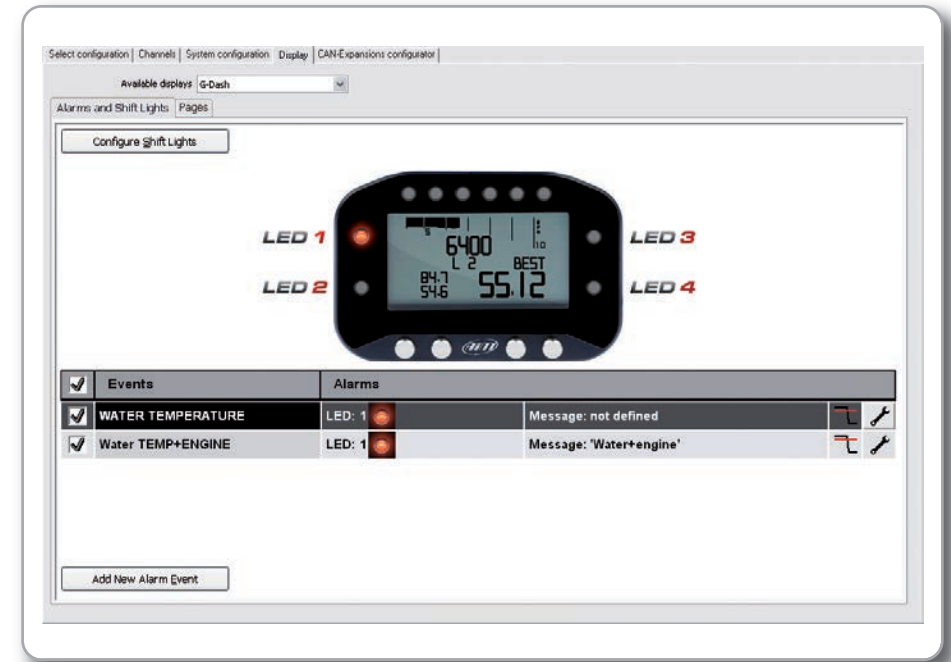
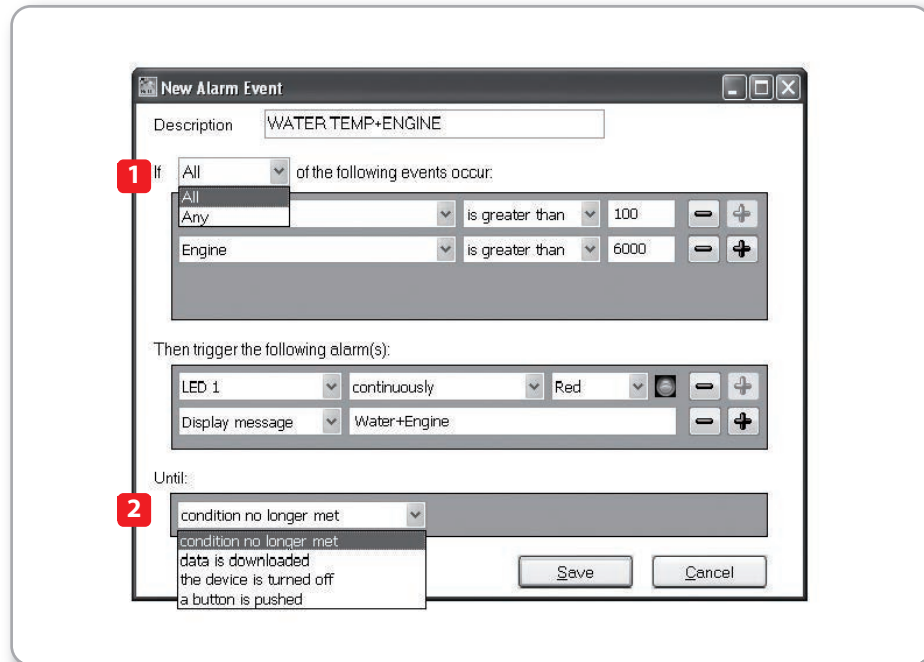


You can add different events and define the alarm as a combination of ALL the events or ANY of them (1).

Finally, you will configure the duration of the alarm. (2). Here are the options:

- Until the condition is no longer met
- Until the data is downloaded
- Until the device is turned off
- Until a button is pushed

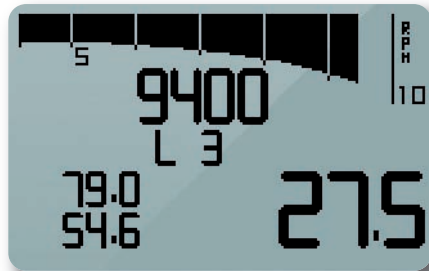
Once the configurations are built, a summary will appear: any time you need to edit the settings, just click the button and proceed.



Keyboard Configuration.

1

Once G-Dash is turned on, the **RPM and Lap Time page** appears: it shows RPM and lap time (the lap time selected among the four modes explained above), together with current lap number and the additional configurable channels.



2

Pressing Menu>>Display Setup>>PageSetup>>Page you can enable up to eight **Custom Pages**.

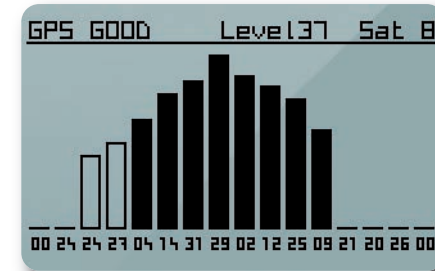
You decide where to show the desired variables (up to 4 on each page) from those sampled by the ECU, the accelerometers and the GPS values from EVO4.

To choose the variable, select it when you choose the 'Sel' menu item:



3

GPS page: this shows the number of visible satellites and their signal strength.



4

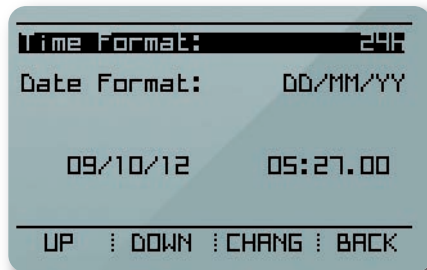
SmartyCam page: this shows the on-board camera information, when connected (see related chapter).



Selecting “Menu” you can also:

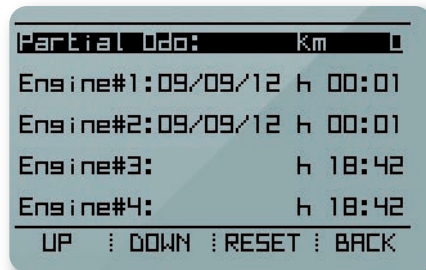
1

- Set the Time/Date format.



2

- Set the partial odometer and also track the engine running time (of up to 4 engine).



3

- Choose the displayed language and view the device info (serial number and installed firmware version) of both G-Dash and EVO4, by selecting the “System Management”.



4

- Enable/disable the backlight.

Adjust display brightness as well as LED intensity. Set how long the lap time will be shown on the display after crossing start/finish line. Choose if the keyboard will always be visible ('locked' mode) or not ('auto hidden' mode).

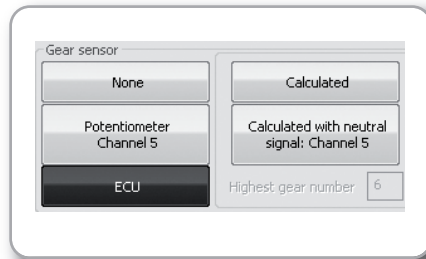


By pressing the “Create New GPS Track” item, the system stores that GPS location and will automatically calculate lap times each time you cross that location.

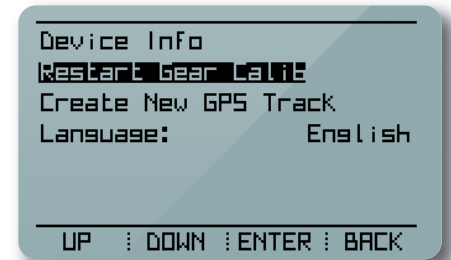
Engaged Gear.

Engaged gear information is provided by EVO4 and automatically displayed if you choose – in the System Configuration panel – to set the gear:

- using a potentiometer
- via ECU connection

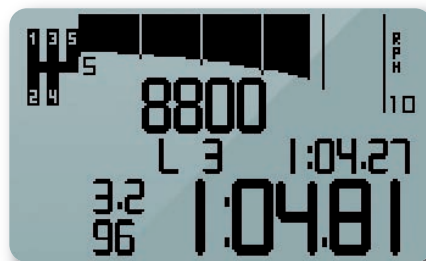


Gear calibration may be restarted using the keyboard: the path is Menu>>System Management>> Restart Gear Calibration.



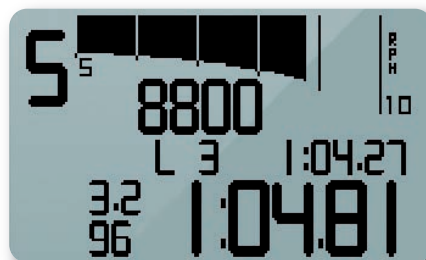
1

If you choose the “Calculated” mode, during the calculation G-Dash will show this icon in the RPM and Lap Time page.



2

Once calculation is finished, the gear number will appear.



Powering On/Off.

G-Dash is powered by EVO4 and turns on and off with the EVO4 with no additional user input.

As soon as EVO4 senses an RPM value, G-Dash menu will change.

The configuration functions will then show; "LIGHT" to quickly and conveniently backlight the display and "TRCK" to easily create and store the GPS location so the system will automatically calculate lap times each time you cross that location.



Data Recall.

Pressing the "MEM" pushbutton (1) you will recall the data from the latest test sessions stored in memory (max. 6).



The first page of the data recall screen shows a session summary: the best 4 laps, total distance run, total time run, Max RPM and Max Speed.

Best 4 Laps		Tot Dist
3	1:00.46	18.6km
2	1:00.99	Tot Time 05:25.01
4	1:01.18	
5	1:02.25	
Max RPM: 11159		
Max SPEED: 158 km/h		
--- : --- : NEXT : EXIT		

The second page shows all of the session laps with lap times and speeds (min and max).

Lap	Time	Min/Max Speed
1	1:01.38	13/134 Km/h
2	1:00.99	57/148 Km/h
3	1:00.46	56/158 Km/h
4	1:01.18	51/140 Km/h
5	1:02.25	53/135 Km/h
6	0:18.75	8/112 Km/h
--- : --- : NEXT : EXIT		

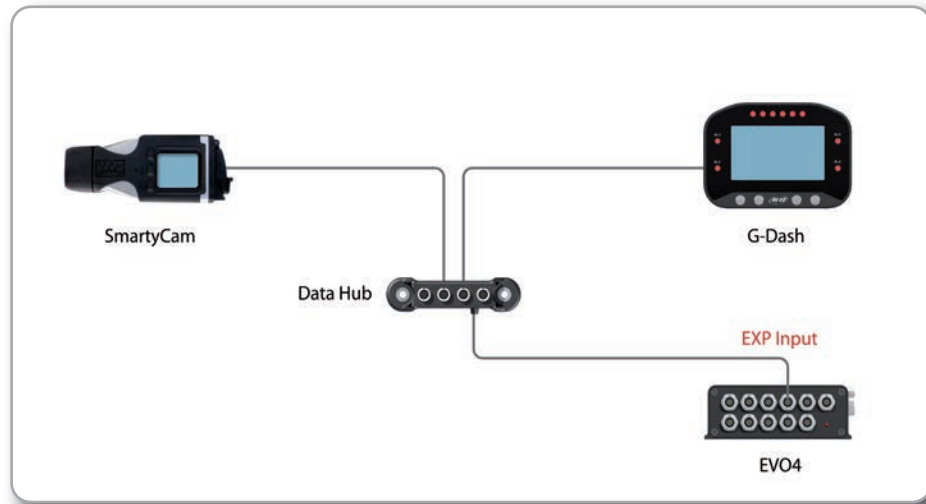
Interaction with SmartyCam.

G-Dash communicates with SmartyCam via the CAN-bus through EVO4 datalogger.

To connect both G-Dash and the SmartyCam to EVO4 'EXP' port you will need a Data Hub.



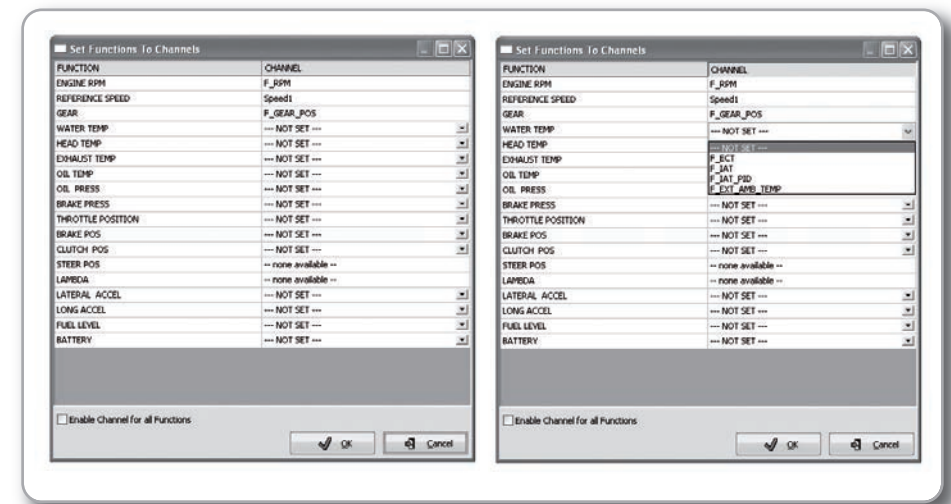
SmartyCam



To visualize up to 16 channels of data sampled by the EVO4 (including ECU based data) on SmartyCam generated videos, you must configure your EVO4 with the Race Studio 2 software and send the configuration to the SmartyCam. In the Race Studio 2 software, follow this path: "Device Configuration">>"EVO4">>>"SmartyCam functions setting".

The panel below appears. It shows functions that can be displayed on SmartyCam video (left) and channels (ECU and others) that can be assigned to that function (right).

The drop down menus show channels (ECU and others) coming from EVO4 grouped by type (i.e. on Water Temperature you will find all of the temperature channels).



If you find the channel you are looking for, select it and associate it with SmartyCam function. If you do not find it in the list, select the "Enable Channel for all Functions" checkbox to verify that the channel is being supplied by the EVO4 (ECU and others) as all available channels will be shown.

When you have all of the channels set that you are interested in, click on the "OK" button and then the "Transmit" button at the top of the page. The "Functions to Channels" information will then be automatically sent to the SmartyCam.

In G-Dash Menu, the SmartyCam page follows the GPS page:

The path is Menu>>Display Setup>>Page Setup>>Smarty.

This page displays if the SmartyCam is currently recording (REC: ON). Also displayed is the amount of memory is left on the MicroSD memory card inserted in the SmartyCam.



SmartyCam HD



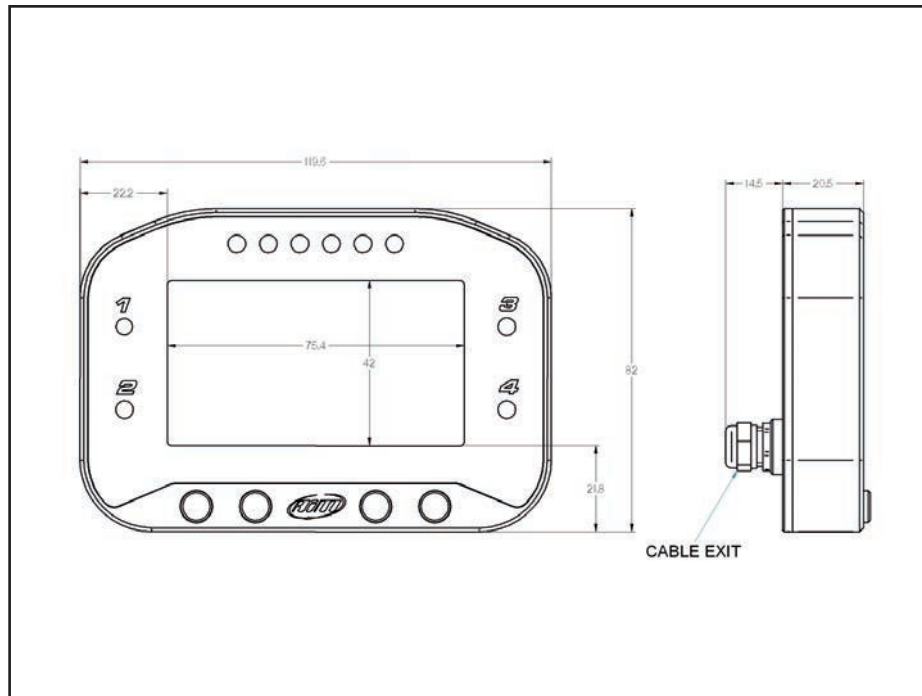
SmartyCam



SmartyCam GP



G-Dash



- Graphical Display
- Aluminum body
- Grey backlight
- 4 RGB Alarm LEDs
- 6 RGB Shift Lights
- Dimensions: 119x82x20 mm
- Weight: 350g
- Waterproof IP67



Our web site aim-sportline.com is constantly updated.

We try to share with you our experiences about our products and how to use them in the tracks all over the world.

Please, constantly check it and download the last versions of the firmware of your products.

