

Figure 1: MXL Pista

## Introduction

**MXL Pista** is a new powerful, professional and high-tech gauge, which allows the user to sample and display a large number of parameters. It represents the new generation of AIM gauges: the high performance one. Differently from **MXL Strada**, this one is mainly suggested for “track” use. **MXL Pista** has a beautiful wide display and a standard backlight.

**MXL Pista** has 1 AMP connector and 2 Binder connectors; it includes a tachometer, 1 RPM input, 8 analog inputs (temperatures, pressures, potentiometers, Lambda sond, “on board” and custom sensors), 1 speed input, gear position (that can be sampled from an “on board” gear sensor or calculated from RPM and speed values) and lap time.

Moreover, the logger may be interfaced with the engine’s ECU using a **RS232 serial cable** or a **CAN cable**, in order to sample the data outcoming from the ECU.

To have a complete list of compatibles ECUs, communication protocol and connection with AIM logger, please refer to “[documents](#)” page of our website [www.aim-sportline.com](http://www.aim-sportline.com), where You find a dedicated datasheet called ECU-AIM logger.

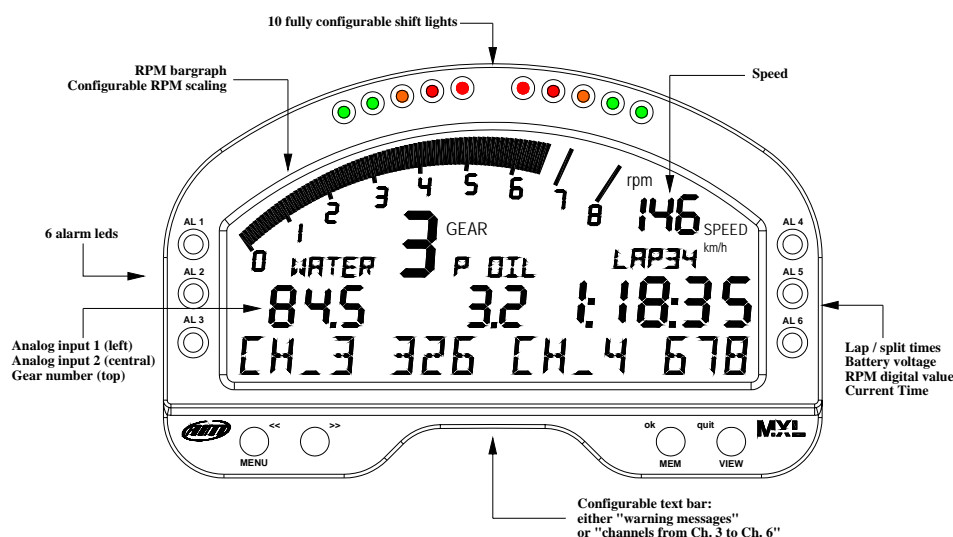
## MAIN FEATURES

MXL Pista is featured as follows:

- wide display with standard backlight;
- RPM numerical and graphical view (configurable RPM scaling);
- 1 RPM input;
- internal lateral G-sensor to map tracks;
- 8 analog inputs
- 1 speed input;
- gear number;
- optional built-in GPS System (GPS internal board and external GPS antenna) for 3D track mapping;
- 10 shift light leds: green, red and yellow;
- 6 freely configurable alarm leds for maximum/minimum alarm;
- fast USB data download (300 Kbytes/sec) to your PC and Race Studio 2 analysis software;
- 8 Mbytes internal non volatile memory
- lap and split times;
- configurable number of split times;
- built-in clock and calendar for test management;
- internal data acquisition system;
- total and partial (resettable) odometer;
- water resistant
- rugged and lightweight aluminium chassis

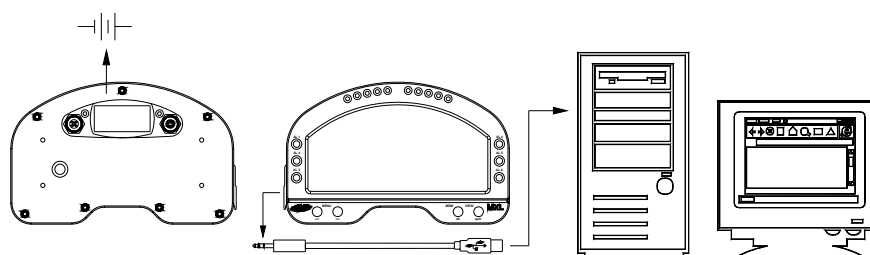
Data are stored in a great 8 Mb non volatile memory and may be downloaded to a PC through an USB cable.

For further information concerning the gauge's display, please refer to the following drawing.

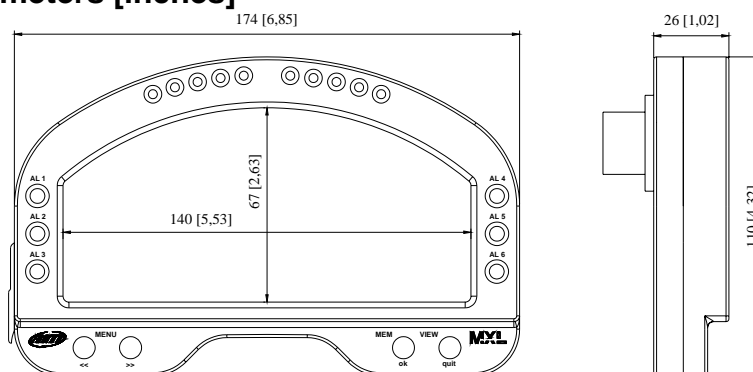


## How to connect Your MXL Pista to the PC

To connect your **MXL Pista** to the PC, please use the USB data download cable and plug it both in the gauge's USB port and in the PC's USB port, as shown in Figure 3. Moreover, please **use a 9-15 Volts external power source** in order to be able to switch on the gauge.



## Dimensions in millimeters [inches]



### Connector details (Beacon)

Pin	Function	Pin	Function
1	Magnetic Lap	3	+ VB
2	GND	4	Optic lap

6A	5A	4A	3A	2A	1A	8B	7B	6B	5B	4B	3B	2B	1B
12A	11A	10A	9A	8A	7A	16B	15B	14B	13B	12B	11B	10B	9B

28 pins AMP Connector pinout (external view)  
12 pins connector is labelled "A"  
16 pins connector is labelled "B"

### Connector details (CAN for external "Expansion modules")

Pin	Function	Pin	Function
1	Can 0 +	4	Can 0 -
2	GND	5	9-15 V Battery
3	+VB		



Female binder connectors pinout (external view): 4 pins (left) and 5 pins (right)

### Connectors Details (AMP – 12 Pin)

Pin	Function	Pin	Function
1A	GND	7A	USB D-
2A	9-15V Battery input	8A	RPM 150-400 V (coil) and RPM sq. wave (>8 V)
3A	Can 1 - (ECU interface)	9A	+ VB
4A	Can 1 + (ECU interface)	10A	GND
5A	RS 232 TX (ECU interface)	11A	+ VB
6A	RS232 RX (ECU interface)	12A	Speed

### Connectors Details (AMP – 16 Pin)

Pin	Function	Pin	Function
1B	Analog Input 4	9B	Analog Input 8
2B	V Reference	10B	USB D+
3B	Analog GND	11B	Analog GND
4B	Analog Input 3	12B	Analog Input 7
5B	Analog Input 2	13B	Analog Input 6
6B	V Reference	14B	V Reference
7B	Analog GND	15B	Analog GND
8B	Analog Input 1	16B	Analog Input 5

### Technical characteristics

General characteristics	Value
Analog Input	8
Speed channels	1
Input channels from ECU	Max. 64
Max sampling frequency per channel	Up to 500 Hz
Total sampl. Freq.	2000 Hz
Internal g-sensor	Monoaxial, ±10g
External power	From 9 to 15 VDC
Voltage output (V reference)	4.5 V (for potentiometers)
Internal memory	8 Mbytes
ECU interface	Serial / CAN protocol
PC interface	300 kbyte/sec USB port

Other characteristics	Value
<b>MXL Pista</b> dimensions	174x110x26 mm
Display dimensions	140x67 mm
Chassis	Aluminium