

AiM Infotech

## Sensore velocità auto/moto – configurazione con Race Studio 3

Versione 1.00

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# 1

## Introduzione

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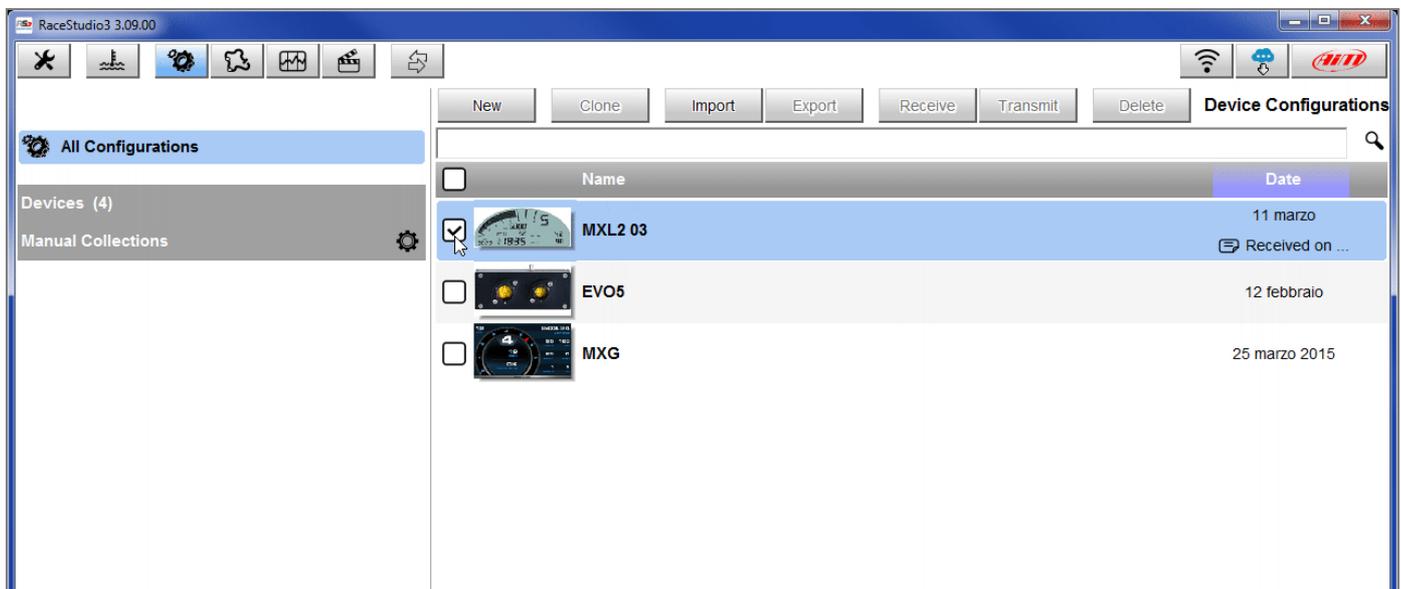
Una volta fisicamente collegato ad uno dei canali dello strumento AiM è necessario caricare il sensore velocità nella relativa configurazione utilizzando il software di configurazione AiM. In questo datasheet esso sarà caricato utilizzando il software **Race Studio 3**.

# 2

## Configurazione con Race Studio 3

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Per caricare il sensore velocità auto nella configurazione dello strumento AiM lanciare il software e selezionare la configurazione sul quale esso sarà caricato (nell'esempio MXL2 03).



Si entrerà nel layer "Canali" (Channels).

- Selezionare il canale velocità sul quale si vuole impostare il sensore – nell'esempio il canale Speed2 (1) e compilare il pannello che compare
- Selezionare la funzione "Speed" e scegliere:
  - Vehicle Speed, compilare i restanti campi e premere "Save" oppure
  - Wheel Speed(2)

The screenshot shows the RaceStudio3 3.09.00 interface. The 'Channels' tab is active, displaying a table of channels. The 'Speed2' channel is selected, and the 'Channel Settings' dialog box is open for it. The dialog box shows the following configuration:

- Name: Speed2
- Function: Vehicle Spd
- Sensor: Speed Sensor
- Sampling Frequency: 20 Hz
- Unit of Measure: km/h
- Display Precision: 1 decimal place
- Speed Parameters:
  - Wheel circumference [mm]: 1600
  - Pulse per wheel revolution: 1

The 'Wheel Spd' option is highlighted in the 'Sensor' dropdown menu, and a red circle '2' is placed next to it. A red circle '1' is placed next to the 'Speed2' channel in the table.

ID	Name	Function	Sensor	Unit	Freq	Parameters
RPM	RPM	RPM	RPM Sensor	rpm	20 Hz	max: 16000 ; factor: /1 ;
Spd1	Speed1					wheel: 1600 ; pulses: 1 ;
Spd2	Speed2					wheel: 1600 ; pulses: 1 ;
Spd3	Speed3					wheel: 1600 ; pulses: 1 ;
Spd4	Speed4					wheel: 1600 ; pulses: 1 ;
Ch01	Channel01					
Ch02	Channel02					
Ch03	Channel03					
Ch04	Channel04					
Ch05	Channel05					
Ch06	Channel06					
Ch07	Channel07					
Ch08	Channel08					
AccX	AccelerometerX					
AccY	AccelerometerY					
AccZ	AccelerometerZ					
GyrX	GyroX	Ang Velocity	AIM Internal Gyro	deg/s	20 Hz	
GyrY	GyroY	Ang Velocity	AIM Internal Gyro	deg/s	20 Hz	
GyrZ	GyroZ	Ang Velocity	AIM Internal Gyro	deg/s	20 Hz	
Spd	GPS Speed	Vehicle Spd	AIM GPS	km/h 0.1	10 Hz	
OdD	Odometer	Odometer Total	AIM ODO	km 0.1	1 Hz	

In questo secondo caso l'opzione "Position" apparirà nel pannello:

- cliccate e apparirà il pannello mostrato sotto:
  - scegliere la ruota cui il sensore è collegato
  - premere "Save"
- premere "Save" di nuovo

The screenshot shows the RaceStudio3 3.09.00 interface. A dialog box titled "Choose position of measure" is open, displaying a top-down view of a car with four wheels. The wheels are labeled "Front", "Rear", "Left", and "Right". A red dot is positioned on the left front wheel, indicating the selected sensor location. The dialog box has "Save" and "Cancel" buttons at the bottom.

ID	Name	Function	Sensor	Unit	Freq	Parameters
RPM	RPM	RPM	RPM Sensor	rpm	20 Hz	max: 16000 ; factor: /1 ;
Spd1	Speed1					wheel: 1600 ; pulses: 1 ;
Spd2	Speed2					wheel: 1600 ; pulses: 1 ;
Spd3	Speed3					wheel: 1600 ; pulses: 1 ;
Spd4	Speed4					wheel: 1600 ; pulses: 1 ;
Ch01	Channel01					
Ch02	Channel02					
Ch03	Channel03					
Ch04	Channel04					
Ch05	Channel05					
Ch06	Channel06					
Ch07	Channel07					
Ch08	Channel08					
AccX	AccelerometerX					
AccY	AccelerometerY					
AccZ	AccelerometerZ					
GyrX	GyroX	Ang Velocity	AIM Internal Gyro	deg/s	20 Hz	
GyrY	GyroY	Ang Velocity	AIM Internal Gyro	deg/s	20 Hz	
GyrZ	GyroZ	Ang Velocity	AIM Internal Gyro	deg/s	20 Hz	
Spd	GPS Speed	Vehicle Spd	AIM GPS	km/h 0.1	10 Hz	
OdD	Odometer	Odometer Total	AIM ODO	km 0.1	1 Hz	

Il software mostrerà il sensore installato. Nell'esempio il sensore è stato installato sul canale "Speed2" e collegato alla ruota anteriore sinistra.

The screenshot shows the RaceStudio3 3.09.00 interface. The 'Channels' tab is active, displaying a table of sensor configurations. The 'Speed2' channel is highlighted with a red box, indicating it is the selected channel for the front left wheel.

ID	<input checked="" type="checkbox"/>	Name	Function	Sensor	Unit	Freq	Parameters
RPM	<input checked="" type="checkbox"/>	RPM	RPM	RPM Sensor	rpm	20 Hz	max: 16000 ; factor: /1 ;
Spd1	<input checked="" type="checkbox"/>	Speed1	Vehicle Spd	Speed Sensor	km/h 0.1	20 Hz	wheel: 1600 ; pulses: 1 ;
Spd2	<input checked="" type="checkbox"/>	Speed2	Vehicle Spd - Front Left	Speed Sensor	km/h 0.1	20 Hz	wheel: 1600 ; pulses: 1 ;
Spd3	<input checked="" type="checkbox"/>	Speed3	Vehicle Spd	Speed Sensor	km/h 0.1	20 Hz	wheel: 1600 ; pulses: 1 ;
Spd4	<input checked="" type="checkbox"/>	Speed4	Vehicle Spd	Speed Sensor	km/h 0.1	20 Hz	wheel: 1600 ; pulses: 1 ;
Ch01	<input checked="" type="checkbox"/>	Channel01	Voltage	Generic 0-5 V	mV	20 Hz	
Ch02	<input checked="" type="checkbox"/>	Channel02	Voltage	Generic 0-5 V	mV	20 Hz	
Ch03	<input checked="" type="checkbox"/>	Channel03	Voltage	Generic 0-5 V	mV	20 Hz	
Ch04	<input checked="" type="checkbox"/>	Channel04	Voltage	Generic 0-5 V	mV	20 Hz	
Ch05	<input checked="" type="checkbox"/>	Channel05	Percent	Percentage Pot. Calib	% 0.01	20 Hz	
Ch06	<input checked="" type="checkbox"/>	Channel06	Position	Position Pot. AutoCal	mm	20 Hz	max travel: 50 ;
Ch07	<input checked="" type="checkbox"/>	Channel07	Voltage	Generic 0-5 V	mV	20 Hz	
Ch08	<input checked="" type="checkbox"/>	Channel08	Voltage	Generic 0-5 V	mV	20 Hz	
AccX	<input checked="" type="checkbox"/>	AccelerometerX	Inline Accel	AIM Internal Accelerometer	g 0.01	20 Hz	
AccY	<input checked="" type="checkbox"/>	AccelerometerY	Lateral Accel	AIM Internal Accelerometer	g 0.01	20 Hz	
AccZ	<input checked="" type="checkbox"/>	AccelerometerZ	Vertical Accel	AIM Internal Accelerometer	g 0.01	20 Hz	
GyrX	<input checked="" type="checkbox"/>	GyroX	Ang Velocity	AIM Internal Gyro	deg/s	20 Hz	
GyrY	<input checked="" type="checkbox"/>	GyroY	Ang Velocity	AIM Internal Gyro	deg/s	20 Hz	
GyrZ	<input checked="" type="checkbox"/>	GyroZ	Ang Velocity	AIM Internal Gyro	deg/s	20 Hz	
Spd	<input checked="" type="checkbox"/>	GPS Speed	Vehicle Spd	AIM GPS	km/h 0.1	10 Hz	
OdD	<input checked="" type="checkbox"/>	Odometer	Odometer Total	AIM ODO	km 0.1	1 Hz	

Trasmettere la configurazione allo strumento premendo "Transmit".

The screenshot shows the RaceStudio3 3.09.00 interface. The 'Transmit' button is highlighted in red, indicating it is the button to be pressed to send the configuration to the instrument.