

AiM InfoTech

AiM pressure sensor 0-10 bar
Race Studio 2 configuration

Release 1.01



1

Introduction

Once AiM pressure sensor 0-10 bar is physically connected to one of the device channels, it has to be loaded in the related configuration using AiM configuration software. In this datasheet it is loaded using **Race Studio 2** software.

You can proceed in two ways: importing the sensor configuration file, downloading it from the Products – Sensors (car/bike) section of our website www.aim-sportline.com, or creating a custom sensor.

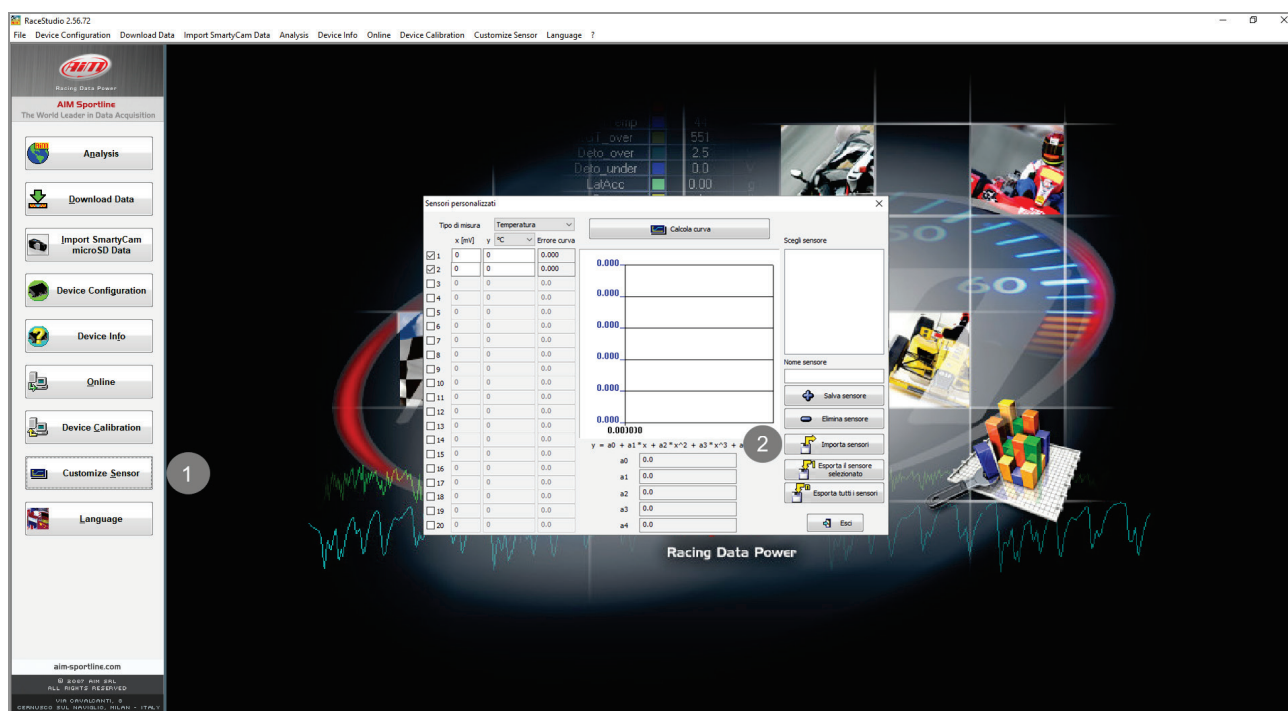
2 SCF* file import

To obtain the sensor configuration file, enter the Products – Sensors (auto/moto) section of the AiM website www.aim-sportline.com, and click the link referred to the sensor you own (following image). Once the download is finished, save the file in a PC folder.

PRESSURE SENSORS						
Turbo pressure sensor from -1 to 3 Bar	X05SNP31004A		Datasheet	RS3 conf	RS2 conf	SCF*
Pressure sensor 0-10 bar/0-145 PSI	X05SNP31010R		Datasheet	RS3 conf	RS2 conf	SCF*
Pressure sensor 0-100 bar/0-1450 PSI	X05SNP31100R		Datasheet	RS3 conf	RS2 conf	SCF*
Pressure sensor 0-160 bar/0-2320 PSI	X05SNP31160R		Datasheet	RS3 conf	RS2 conf	SCF*
VDO pressure sensor 0-5 Bar	X05SNBO05		Datasheet	RS3 conf	RS2 conf	
VDO pressure sensor 0-10 Bar	X05SNBO00		Datasheet	RS3 conf	RS2 conf	

*Download the sensor configuration file ready to import in RS2

To import the file in Race Studio 2, making it available in the pressure sensors list, from the Customize Sensors window (1), click Import Sensors (2) and select the saved file.



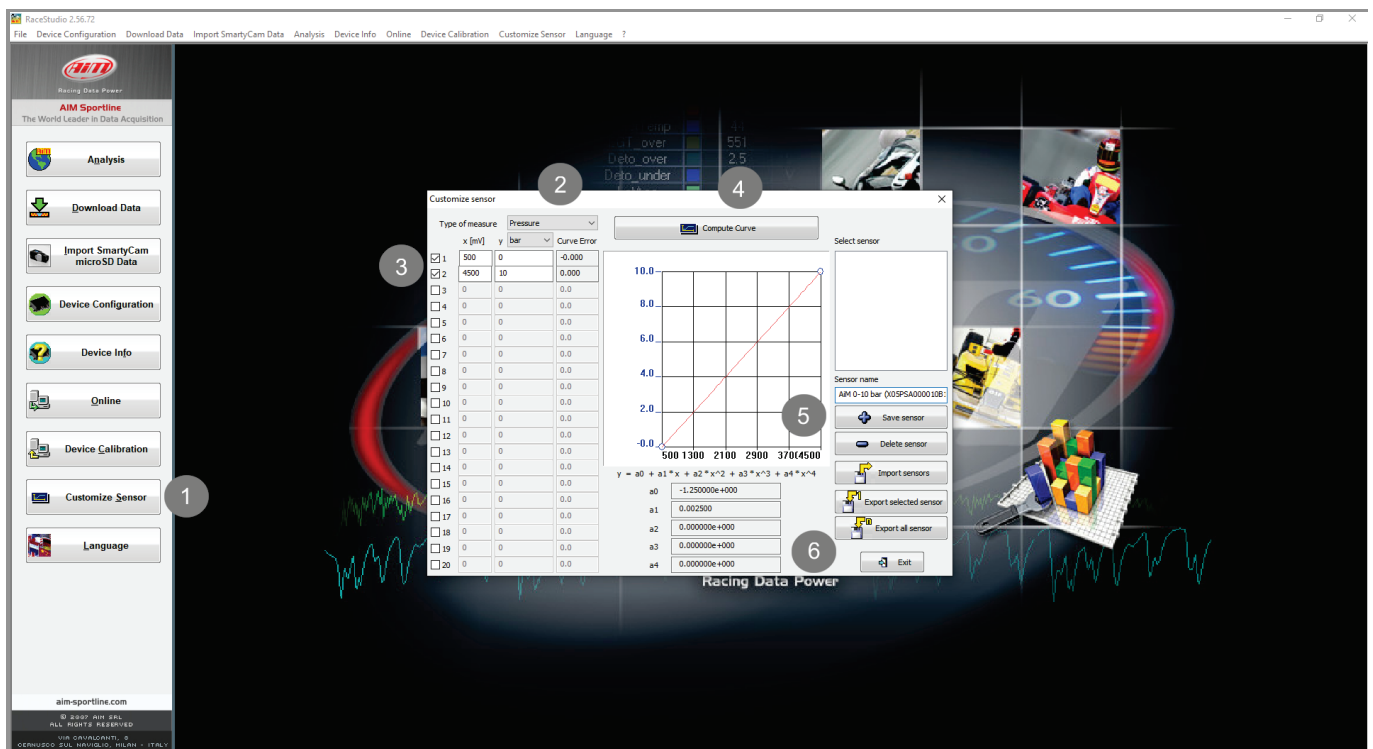
3

Custom sensor creation

- create a custom sensor pressing "Customize sensor" **(1)**
- select the type of measure (Pressure) and the measure unit (bar) **(2)**
- complete the first two rows of the table on the left as follows **(3)**:

X [mV]	Y [bar]
500	0
4500	10

- press "Compute curve" **(4)**, fill in sensor name - in the example "AiM 0-10 bar (X05PSA00010B10K)" – and press "Save sensor" **(5)**; press "Exit" **(6)**

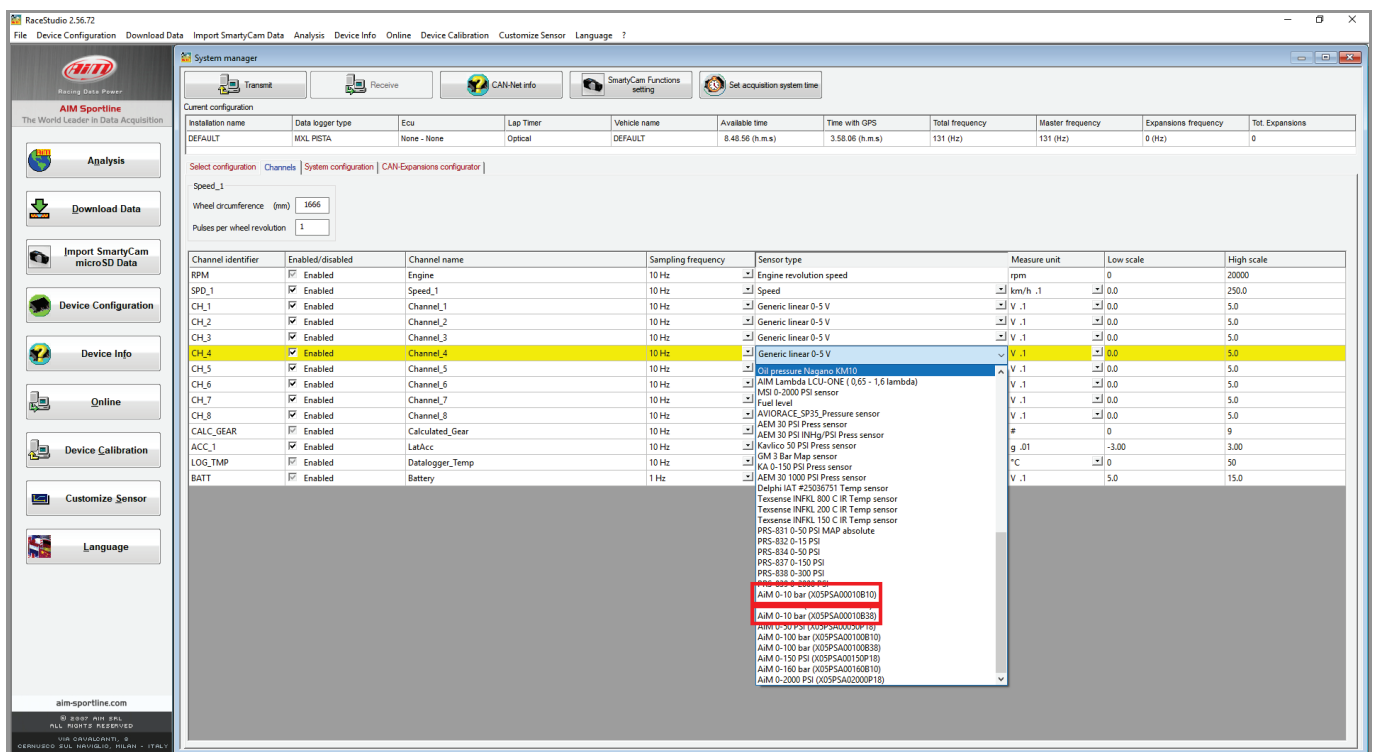


The screenshot shows the 'Customize sensor' dialog box in the RaceStudio 2.56.72 software. The dialog box is open, and the 'Type of measure' is set to 'Pressure' and the 'Unit' is set to 'bar'. The 'Compute Curve' button is highlighted. The 'Sensor name' field contains 'AiM 0-10 bar (X05PSA00010B10K)'. The 'Save sensor' button is highlighted. The 'Exit' button is highlighted. The background shows a racing data acquisition interface with various charts and data points.

4 Analog channel configuration

To set the sensor in the device configuration:

- enter "Channels" tab
- set the sensor on a channel selecting "AiM 0-10 bar (X05PSA00010B10K)" or "AiM 0-10 bar (X05PSA00010B38K)" in sensor type column of the desired channel and transmit the configuration to the device.



The screenshot shows the RaceStudio 2.56.72 software interface. The 'Device Configuration' tab is active, and the 'Channels' sub-tab is selected. The table below lists the configured channels and their sensor types. Channel 4 is highlighted, and the sensor type dropdown is open, showing 'AiM 0-10 bar (X05PSA00010B10K)' selected.

Channel identifier	Enabled/disabled	Channel name	Sampling frequency	Sensor type	Measure unit	Low scale	High scale
RPM	☒ Enabled	Engine	10 Hz	Engine revolution speed	rpm	0	20000
SPD_1	☒ Enabled	Speed_1	10 Hz	Speed	km/h	0.0	250.0
CH_1	☒ Enabled	Channel_1	10 Hz	Generic linear 0-5 V	V	0.0	5.0
CH_2	☒ Enabled	Channel_2	10 Hz	Generic linear 0-5 V	V	0.0	5.0
CH_3	☒ Enabled	Channel_3	10 Hz	Generic linear 0-5 V	V	0.0	5.0
CH_4	☒ Enabled	Channel_4	10 Hz	Generic linear 0-5 V	V	0.0	5.0
CH_5	☒ Enabled	Channel_5	10 Hz	Oil pressure Napam KM10	V	0.0	5.0
CH_6	☒ Enabled	Channel_6	10 Hz	AIM Lambda LCU-ONE (0.65 - 1.6 lambda)	V	0.0	5.0
CH_7	☒ Enabled	Channel_7	10 Hz	MSI 0-2000 PSI sensor	V	0.0	5.0
CH_8	☒ Enabled	Channel_8	10 Hz	Fuel level	V	0.0	5.0
CALC_GEAR	☒ Enabled	Calculated_Gear	10 Hz	AVTORACE_SF35 Pressure sensor	#	0	9
ACC_1	☒ Enabled	LatAcc	10 Hz	AEM 30 PSI Press sensor	g	-3.00	3.00
LOG_TEMP	☒ Enabled	Datalogger_Temp	10 Hz	Kavlico 50 PSI Press sensor	°C	0	50
BATT	☒ Enabled	Battery	1 Hz	GM 3 Bar Map sensor	V	0	15.0

The sensor type dropdown for Channel 4 is open, showing the following options:

- AiM 0-10 bar (X05PSA00010B10K)
- AiM 0-10 bar (X05PSA00010B38K)
- AiM 0-30 PSI (X05PSA00030P18)
- AiM 0-100 bar (X05PSA00100B10)
- AiM 0-100 bar (X05PSA00100B30)
- AiM 0-150 PSI (X05PSA00150P18)
- AiM 0-160 bar (X05PSA00160B10)
- AiM 0-2000 PSI (X05PSA02000P18)