AiM Infotech

## Car speed sensor – Race Studio 2 configuration

## Release 1.00







## 1 Introduction

This datasheet explains how to configure the car speed sensor using AiM Race Studio 2 software.

## 2 Setup with con Race Studio 2

To load the sensor in the logger configuration:

- run the software, select the logger in use and the configuration to set the sensor on (in the example EVO4) and enter "Channels" layer
- if speed channels are enabled you can fill in the related panels highlighted here below.

Device Configuration Download [	Data Import SmartyCam	Data Analysis Devic	e Info Online Device Calibra	tion Customize S	Sensor Language ?				
	System manager								
(AIII)									
	Trans	mit 🗳	🗐 Receive	CAN-Net info	Smart Smart	Cam Functions setting	Set acquisition system	time	
AIM Sportline	Current configuration								
e World Leader in Data Acquisition	Installation name	Data logger type	Ecu Lap	Timer	Vehicle name	Available time	Time with GPS	Total frequenc	y
	DEFAULT	EVO4 - 5 channels	BMW - BMW_PT6 Opti	cal	DEFAULT	5.40.19 (h.m.	s) 4.04.37 (h.m.s)	409 (Hz)	
Analysis									
	Select configuration	Channels System configu	ration Display CAN-Expansions	configurator					
	Speed1	Spi	eed2						
Download Data	Wheel circumference	(mm) 1666 Wh	eel circumference (mm) 1666						
	Pulses per wheel rev	olution 1 Pul	ses per wheel revolution 1						
	Puises per wheel rev	olution 1 Put	ses per wheel revolution						
Import SmartyCam microSD Data	Channel identifier	Enabled/disabled	Channel name		Sampling free	uency Senso			Meas
	RPM	Disabled	Engine		10 Hz	· · ·	revolution speed		rpm
	SPD 1	Enabled	Speed1		10 Hz		revolution speed		l km/h
Device Configuration	SPD_1	Enabled	Speed2		10 Hz	Speed Speed			l km/h
	CH 1	Enabled	Channel 1		10 Hz		c linear 0-5 V		UV.1
	CH 2	Enabled	Channel 2		10 Hz		ased potentiometer		l mm
Device Info	СН 3	Enabled	Channel 3		10 Hz		100 bar (X05SNP31100R)		bar
Pevice Inio	CH 4	Enabled	Channel 4		10 Hz		10 bar (X05SNP31010R)		bar
	CH 5	Disabled	Channel 5		10 Hz		4 bar (X05SNP31004A)		bar
<u>O</u> nline	CALC GEAR	Disabled	Calculated Gear		10 Hz				#
	ACC 1	Enabled	Lateral acc		10 Hz	✓ Lateral	accelerometer	•	g .01
	ACC 2	Disabled	Longitudinal_acc		10 Hz	- Longit	udinal accelerometer		g .01
Device <u>Calibration</u>	ACC 3	Enabled	Vertical_acc		10 Hz	-	l internal accelerometer		۔ 01. و ل
	LOG TMP	Enabled	_ Datalogger_Temp		10 Hz	✓ Cold je	oint		°C
	BATT	M Enabled	Battery		1 Hz	- Batten	1		V .1
Customize <u>S</u> ensor	ECU_1	M Enabled	RPM		10 Hz	L Engine	speed sensor		rpm
	ECU_2	Enabled	PEDAL_POSITION		10 Hz	Percer	tage sensor		% .1
	ECU_3	Enabled	SPEED_BMW		10 Hz	✓ Speed	sensor		km/h
Language	ECU_4	Enabled	SPEED2_BMW		10 Hz	✓ Speed			km/h
	ECU_5	Enabled	WHEEL_SPD_FR_LF		10 Hz	✓ Speed	sensor		km/h
	ECU_6	Enabled	WHEEL_SPD_FR_RH		10 Hz	I Speed	sensor		km/h
		Enabled	WHEEL SPD RR LF		10 Hz	✓ Speed			km/h



• Select the speed channel where to set the sensor on and select "Speed" in "Sensor type" column as shown here below. Fill in the related panel.

	🚟 System manager									
Racing Data Power	Transn	nit Eş	Receive CAN-Net	info Sma	tyCam Functions setting	Set acquisition system ti	me			
AIM Sportline	Current configuration									
e World Leader in Data Acquisition	Installation name	Data logger type	Ecu Lap Timer	Vehicle name	Available time	Time with GPS	Total frequenc	y		
	DEFAULT	EVO4 - 5 channels	BMW - BMW_PT6 Optical	DEFAULT	5.40.19 (h.m.s	) 4.04.37 (h.m.s)	409 (Hz)			
Analysis										
	Select configuration (	Channels System configu	ration Display CAN-Expansions configurator							
	Speed1	Sp	eed2							
Download Data	Wheel circumference	(mm) 1666 Wh	eel circumference (mm) 1666							
	Pulses per wheel revolution 1 Pulses per wheel revolution 1									
	ruises per wheerreve		ses per vincer evolution							
Import SmartyCam	Channel identifier	Enabled/disabled	Channel name	Sampling fre	quency Sensor	type		Mea		
microSD Data	RPM	Disabled	Engine	10 Hz	<u> </u>	revolution speed		rpm		
	SPD_1	Enabled	Speed1	10 Hz	- Speed	·····		km/ł		
Device Configuration	SPD_2	Enabled	Speed2	10 Hz	Speed			km/l		
<b>-</b>	CH_1	Enabled	Channel_1	10 Hz	<ul> <li>Detonat</li> </ul>			V .1		
	CH_2	Enabled	Channel_2	10 Hz	ABS spe	ion speed ed sensor		mm		
Device Info	CH_3	Enabled	Channel_3	10 Hz	⊥ AiM 0-1	00 bar (X05SNP31100R)	•	bar		
-	CH_4	Enabled	Channel_4	10 Hz	AiM 0-1	0 bar (X05SNP31010R)	•	bar		
	CH_5	Disabled	Channel_5	10 Hz	-1 AiM 0-4	bar (X05SNP31004A)	-	bar		
	CALC_GEAR	Disabled	Calculated_Gear	10 Hz	🖃 Calcula	ted Gear		#		
	ACC_1	Enabled	Lateral_acc	10 Hz	🔳 Lateral	accelerometer	•	<b>.0 و ا</b>		
	ACC_2	Disabled	Longitudinal_acc	10 Hz	土 Longitu	dinal accelerometer	-	g .0:		
Device <u>C</u> alibration	ACC_3	Enabled	Vertical_acc	10 Hz	🗾 Vertical	internal accelerometer	-	Jg.0		
	LOG_TMP	🗹 Enabled	Datalogger_Temp	10 Hz	I Cold jo	nt		°C		
	BATT	Enabled	Battery	1 Hz	■ Battery			V .1		
Customize Sensor	ECU_1	🗹 Enabled	RPM	10 Hz	🔳 Engine	speed sensor		rpm		
	ECU_2	Enabled	PEDAL_POSITION	10 Hz	I Percent	-		% .1		
	ECU_3	Enabled	SPEED_BMW	10 Hz	⊥ Speed s			km/l		
Language	ECU_4	Enabled	SPEED2_BMW	10 Hz	✓ Speed s			km/ł		
	ECU_5	Enabled	WHEEL_SPD_FR_LF	10 Hz	⊥ Speed s			km/l		
	ECU_6	Enabled	WHEEL_SPD_FR_RH	10 Hz	✓ Speed s			km/l		
	ECU_7	Enabled	WHEEL_SPD_RR_LF	10 Hz	⊥ Speed s			km/		
	ECU_8	Enabled	WHEEL_SPD_RR_RH	10 Hz	⊥ Speed s			km/l		
	ECU_9	Enabled	STEER_ANGLE	10 Hz	Angle s			deg		
	ECU_10	Enabled	CLUTCH_SWITCH	10 Hz	Raw val			#		
	ECU_11	Enabled	BRAKE_SWITCH	10 Hz	Raw val			#		
	ECU_12	Enabled	BRAKE_PRESS	10 Hz	Pressur			bar .		
aim-sportline.com	ECU_13	Enabled	BRAKE_PR_FR_LF	10 Hz	Pressure	e sensor		bar .		

Transmit the configuration to the logger pressing "Transmit".

🚰 RaceStudio 2.55.56								
File Device Configuration Download Da	ata Import SmartyCam	Data Analysis Device I	nfo Online Device C	alibration Customize S	Gensor Language ?			
	🥁 System manager							
Racing Data Power	Transm	it L	Receive	CAN-Net info		Cam Functions setting	Set acquisition system t	ime
AIM Sportline	Current configuration	5						
The World Leader in Data Acquisition	Installation name	Data logger type	Ecu	Lap Timer	Vehicle name	Available time	Time with GPS	Total frequency
	DEFAULT	EVO4 - 5 channels	BMW - BMW_PT6	Optical	DEFAULT	5.40.19 (h.m.s)	4.04.37 (h.m.s)	409 (Hz)
A <u>n</u> alysis	Select configuration	Channels System configurat	ion   Display   CAN-Expan	sions configurator				
	Speed1	Speed	12					
Download Data	Wheel circumference	(mm) 1666 Whee	l circumference (mm)	1666				
	Pulses per wheel revo	lution 1 Pulses	per wheel revolution 1					