

1 – Configuring SmartyCam with SoloDL

Question:

How can I configure SmartyCam HD/GP HD (from here onwards SmartyCam) with SoloDL?

Answer:

For a good SmartyCam-SoloDL communication you have to:

- physically connect the devices
- configure SoloDL using Race Studio 2 software
- configure SmartyCam using Race Studio 3 software

1.1 – Physical connection

To physical connect the devices use the CAN cable you find in SmartyCam kit and connect camera "ext" connector to SoloDL CAN EXP connector (5 pins). Solo DL 7 pins connector is needed to connect SoloDL to the vehicle ECU (via CAN, K-Line or RS232).





1.2 – Configuring SoloDL with Race Studio 2

To configure SoloDL you should have installed Race Studio 2 software on your PC. Last releases are always downloadable from Download area -> Software section of AiM website www.aim-sportline.com.

Follow these steps:

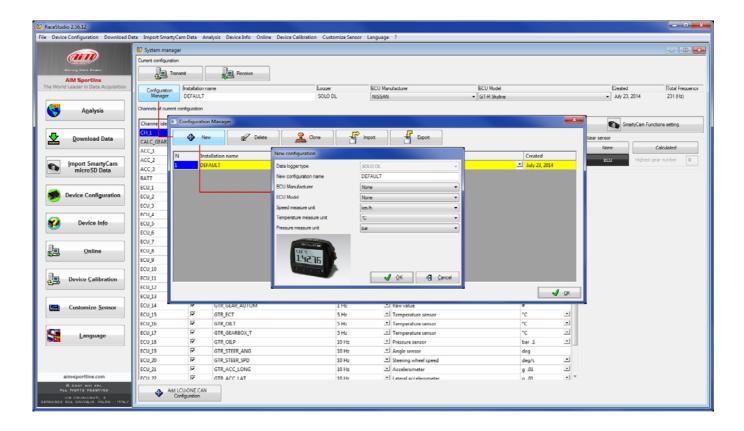
- run Race Studio 2
- click "Device Configuration"
- double click "Solo DL"





SoloDL configuration window shows up. To create a new configuration:

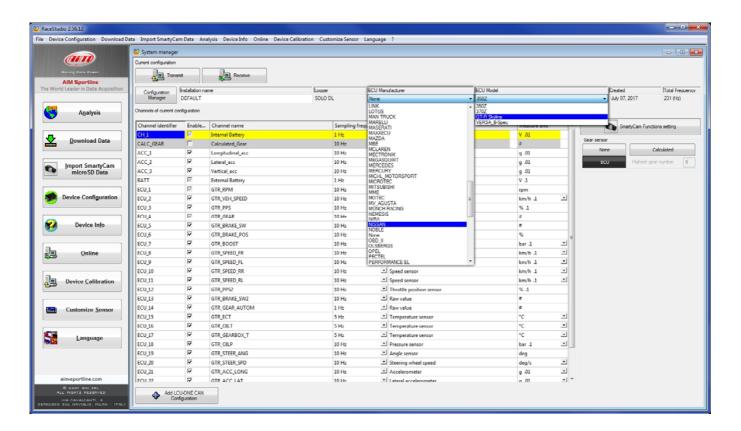
- press "Configuration Manager" and the related panel shows up
- press "New" and "New configuration" panel shows up
- select "ECU Manufacturer" and "ECU Model" corresponding to the vehicle you are going to install your SoloDL on; available ECUs are listed on Download area-> ECU Connections of AiM website www.aim-sportline.com.





In the top bar you can always see and modify the ECU you set. In the example below ECU set is "Nissan" "GT-R Skyline".

Once the ECU set all available channels are shown by the software. Some channels can be enabled/disabled using the checkbox in "Enable.." column, others, like sampling frequency and measure unit can be modified.





To set SmartyCam function press the related button.

(III)	System manag	er									
	Current configuration	1					-				
Racing Data Power	ter	namit	Receive	Set Functions To Channels		• • ×					
AIM Sportline	150		* .	FUNCTION	CHANNEL						
World Leader in Data Acquisition	Configuration	Installation	lame	ENGINE RPM	NISSAN_RPM		-		Crea		Total Freque
	Manager	DEFAULT		REFERENCE SPEED	GPS Speed				• July	07, 2017	152 (Hz)
Analysis	Channels of current configuration		GEAR	Calculated_Gear							
				WATER TEMP	NOT SET	-	Adversaria and				
	Channel identifie		d Channel name	HEAD TEMP	NOT SET		measure anne	_	0	SmartyCam Functions	setting
Download Data	CH_1		Internal Battery	EXHAUST TEMP	NOT SET		V .01		Gear sensor		
	CALC_GEAR	되	Calculated_Gear	OIL TEMP	NOT SET		1		None	Cale	lated
	ACC_1		Longitudinal_acc	OIL PRESS	none available		g .01			_	
Import SmartyCam	ACC_2	4	Lateral_acc	BRAKE PRESS	none available		g .01		ECU	Highest gear n	umber 6
microSD Data	ACC_3	2	Vertical_acc	THROTTLE POSITION	NOT SET		g .01				
	BATT	R	External Battery	BRAKE POS	NOT SET	•	V .1				
Dealer Configurat	ECU_1	R	NISSAN_RPM	CLUTCH POS	NOT SET	•	rpm				
Device Configuration	ECU_2	2	NISSAN_SPEED	STEER POS	none available		km/h 1	-			
	ECU_3	9	NISSAN_PEDAL_POSITION	LAMBDA	none available		% 1				
	FCU_4	9	NISSAN_RRAKE_SWITCH	LATERAL ACCEL	NOT SET	•					
Device Info	ECU_S	•	NISSAN_ENGINE_COOLANT_TEMP	LONG ACCEL	NOT SET		°C	-			
	ECU_6	2	NISSAN_STEERING_ANGLE	FUEL LEVEL	NOT SET		deg 1	-			
	ECU_7	2	NISSAN_OIL_PRESS_SWITCH	BATTERY	none available						
Online	ECU_11		NISSAN_WH_FL				km/h .1	-			
	ECU_12	2	NISSAN_WH_FR	Enable Channel for all Functions			km/h 1	-			
	ECU_13	×	NESSAN_WH_RL				km/h 1	-			
Device Calibration	ECU_14	2	NISSAN_WH_RR		✓ ♀	Cancel	km/h .1	-			

FAQ



The software shows a panel – bottom left – that allows to associate available functions (left column) to SmartyCam channels (right column). Channels list is filtered according to the functions set. To set functions different from default ones enable "Enable Channel for all Functions" checkbox (image below on the right). Once all channels set press "OK.

Set Functions To Channels		
FUNCTION	CHANNEL	
ENGINE RPM	GTR_RPM	
REFERENCE SPEED	GPS Speed	
GEAR	GTR_GEAR	
WATER TEMP	NOT SET	•
HEAD TEMP	NOT SET	•
EXHAUST TEMP	NOT SET	•
OIL TEMP	NOT SET	•
OIL PRESS	NOT SET	•
BRAKE PRESS	NOT SET	•
THROTTLE POSITION	NOT SET	•
BRAKE POS	NOT SET	•
CLUTCH POS	NOT SET	•
STEER POS	none available	
LAMBDA	none available	
LATERAL ACCEL	NOT SET	•
LONG ACCEL	NOT SET	•
FUEL LEVEL	NOT SET	•
BATTERY	none available	
Enable Channel for all Functions		
	✓ ok	Cancel

Set Functions To Channels		
FUNCTION	CHANNEL	
ENGINE RPM	GTR_RPM	
REFERENCE SPEED	GPS Speed	
GEAR	GTR_GEAR	
WATER TEMP	NOT SET	-
HEAD TEMP	NOT SET	•
EXHAUST TEMP	NOT SET	•
OIL TEMP	GTR_OILT	•
OIL PRESS	GTR_OILP	•
BRAKE PRESS	NOT SET	•
THROTTLE POSITION	NOT SET	•
BRAKE POS	GTR_BRAKE_POS	•
CLUTCH POS	NOT SET	•
STEER POS	GTR_STEER_ANG	•
LAMBDA	NOT SET	-
LATERAL ACCEL	GTR_ACC_LAT	•
LONG ACCEL	GTR_ACC_LONG	•
FUEL LEVEL	NOT SET	-
BATTERY	Internal Battery	•
Enable Channel for all Functions		
	✓ ok	Cancel

To transmit the configuration to SoloDL press "Trasmit".

eStudio 2.56.12											
Device Configuration Download D	ata Import SmartyC	am Data Ana	ilysis DeviceInfo Online Devic	e Calibration Customize Sensor	Language	?					
	🔤 System manage	r									
(III)	Current configuration										
Racing Data Power	De		Do a c								
AIM Sportline	Tran	smit N	Receive								
World Leader in Data Acquisition	Configuration	Installation na	me	Logger	ECU Manuf	acturer	ECU Model			Created	Total Freque
	Manager	DEFAULT		SOLO DL	NISSAN		GT-R Skyline			 July 07, 2017 	231 (Hz)
him Anabusia	Channels of current of	onfountion									
A <u>n</u> alysis		or ingo to to t									
	Channel identifier	Enable	Channel name	Sampling fr	equency	Sensor type	Measu	re unit	^	SmartyCam Fun	tions setting
Download Data	CH_1		Internal Battery	1 Hz	ا ك	/oltage sensor	V .01			ar sensor	
	CALC_GEAR	Г	Calculated_Gear	10 Hz	- (Calculated Gear			Gea	1	Calculated
	ACC_1	1	Longitudinal_acc	10 Hz	-	ongitudinal accelerometer	g .01			None	Calculated
Import SmartyCam	ACC_2	2	Lateral_acc	10 Hz	- 1	ateral accelerometer	g .01			ECU Highest g	sar number 6
microSD Data	ACC_3	v	Vertical_acc	10 Hz	× 1	/ertical internal accelerometer	g .01				
	BATT	M	External Battery	1 Hz	· 1	/oltage sensor	V 1				
	ECU_1	M	GTR_RPM	10 Hz	-	ingine speed sensor	rpm				
Device Configuration	ECU_2	v	GTR_VEH_SPEED	10 Hz		ipeed sensor	km/h	1	-		
_	ECU_3	v	GTR_PPS	10 Hz	× 1	Throttle position sensor	% 1				
				10 Hz		Sear sensor					
	ECU_4	M	GTR_GEAR	10 Hz							
Device Info	ECU_4 ECU_5	▼	GTR_GEAR GTR_BRAKE_SW	10 Hz	- I I	Raw value	8				
Device Info		ধ				Raw value Percentage sensor	a %				
Device Info	ECU_5	▼	GTR_BRAKE_SW	10 Hz	- 1		-				



1.3 – Configuring SmartyCam with Race Studio 3

To configure SmartyCam you should have installed Race Studio 3¹ software on your PC. Last releases are always downloadable from Download area -> Software section of AiM website www.aim-sportline.com.

Follow these steps:

- run Race Studio 3
- connect SmartyCam to the PC using the mini USB cable included in the kit
- press "Configurations" icon
- press "New"
- select "SmartyCam" and press "OK"
- fill in configuration name and press "OK"

RaceStudio3 3.16.00		
★ ▲ ◆ 20 53 EE ≦ ≨ All SmartyCam HD 01 ×		<u> </u>
	New Clone Import Export Receive Transmit	Delete Device Configurations
2 All Configurations		Q ()
	Name	Date
Devices (3)		
Manual Collections 🔅		🜁 New Configuration 📃 🔀
	Choose a device	SmartyCam HD
	SmartyCam HD	
	MXG	Configuration Name
	MXL2	SmartyCam HD 01
	EV05	Comment
	MXS	
	MXS Strada	
	OK Cancel	OK Cancel
Connected Devices		
🛄 smarty hd 001		
AIM-WIFI: Network forbidden. Please retry the connection.		
•		
Trash		

¹ Please note: Race Studio 2 does not support AiM cameras



SmartyCam configuration page shows up.

- on the right you see a number of overlay sets you can select and drag and drop in left part of the window
- bottom of the window you see each overlay layers, the settings of which you can modify.

