

How to inject PSI5 Sensor Data via CAN -Seskion GmbH-

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Test setup: CAN – Simulyzer Sensor-Mode – Simulyzer ECU-Mode



PSI5-Simulyzer "ECU Mode"



CAN – Simulyzer Sensor-Mode – Simulyzer ECU-Mode

First of all you have to connect the two simulyzers and start the GUI software twice. With both windows open, you must click on the menu group *File* and select the sub-items *New* and *New Project*. Here you can set the compatibility. In our example we have created this with the PSI5-P10P-500_4H compatibility.

🛗 ps	PSI5-Simulyzer - C:\Users\philipp\Documents\P10P-500-4H_Sensor.ppf									
File	View Tools Help									
	New	New Project 🔸	PSI5-S10P-500_4H							
	Open		PSI5-S10P-500_3L							
	Save		PSI5-P20CRC-500_3H							
	Save as		PSI5-P20CRC-500_2L							
	Save Template		PSI5-P16CRC-500_3H							
	Import		PSI5-P16CRC-500_2L							
	Export +		PSI5-P10P-500_4H							
	1 C:\Users\philipp\\P10P-500-4H_Sensor.ppf		PSI5-P10P-500_3L							
	2 C:\Users\philipp\Documents\MMA52xxKW.ppf		PSI5-P10P-500_2L							
	Exit		PSI5-P10P-250_1L							
			PSI5-P10CRC-500_2L							
			PSI5-A8P-250_1L							
			PSI5-A16CRC-500_1L							
			PSI5-A10P-250_1L							
			PSI5-A10CRC-250_1L							

When you have opened the new projects in both open software applications, you have to set the connected Sensor simulyzer as *Sensor* and the other simulyzer as *ECU*.



PSI	5-Sin	nulyze	r - C:\	User
File \	/iew	Tools	Help	
E 🕨 .	T	ECU	I	-
_		Pas	sive	
		ECU	l	
		Sen	sor	N
		Sim	ulation	

Next you have to select *Tools* in the sensor software and go to *Expert Mode* and then to *CAN Configuration*.



Now you have to transfer the values in your CAN Test-Software GUI into the CAN Configuration so that they match. The *kBaud/kHz* and the *CAN ID/BiDir ID* must be the same in both configurations. In Expert mode you have to check the *PSI5-Interface 1* checkbox and enter "*8*" in the DLC field of the CAN Test-Software GUI. We support only 4 slots with a maximum bit length of 16 bit, coded in Little Endien. The slots are 16 bit aligned.





For the CAN communication to work, the mode must be changed from Internal to **CAN** in the left settings under Sensor Simulation.

~	Sensor Simulation	
	BitJitterMode	Off
	JitterFrequency	0
	LowLatency	False
	Mode	CAN
	NegEdgeDelay	Intern
	NegJitter	ExternProgram
>	Parameter	ExternAnalog
	PosEdgeDelay	CAN
	PosJitter	SDCARD VS
	SensorCapacity	Off
	SensorldleCurrent	4
	SensorSendCurrent	26
	SupplyVoltageTriggerLevel	5000

Now you can click on the *green arrow* in the sensor software and in the ECU software also on the *green arrow* and additionally on *Power*.

|--|

PS15-Simi	ulyzer	· - C:/I	Jsei	rs\philij	pb/l	Documents\
File View	Tools	Help				
: 📐 🚛	Sens	or	•	Power	4	Stream Start

ECU-Mode Software

🔛 PS	15-Sin	ulyzer	- C:\l	Jser	s\philip	p/D	ocume	nts\P
File	View	Tools	Help					
1	J.	ECU		•	Power	4	Stream	Start
1 - 140								
PS	15-Sin	ulyzer	- C:\l	Jser	s\philip	p\D	ocume	nts\P
File	15-Sin View	nulyzer Tools	- C:\l Help	Jser	s\philip	p\D	ocume	nts\P

Now when you click on *Send Message* in CAN Test-Software GUI, you will see this message in both software windows.

CAN Contro	bl															
CAN ID: 8						Extended ID										
DLC: 8						Remote Request										
Message:								C	0	ne-Sl	hot					
Offset	0	1	2	3	4	5	6	7	8	9	А	В	С	D	Е	F
0x0000	12	01	56	00	9A	00	DE	00								
Send Mess	rge															

Sensor-Software Data:

Sensor Data						
Time [µsec]	Ch	Data	Slot	Error	Parity/C	dataRegA
162703515	0	Sync				
162703453	0	0xde	0x3	0x0	0	0xde
162703453	0			Sig4	0xde	
162703336	0	0x9a	0x2	0x0	0	0x9a
162703336	0			Sig3	0x9a	
162703229	0	0x56	0x1	0x0	0	0x56
162703229	0			Sig2	0x56	
162703138	0	0x112	0x0	0x0	1	0x112
162703138	0			Sig1	0x112	

ECU-Software Data:

Sensor Data						Р 🗆
Time [µsec]	Ch	Data	Slot	Error	Parity/C	dataRegA
8155637	1	Sync				
8155635	0	Sync				
8155574	0	0xde	0x3	0x0	0	0xde
8155574	0			Sig4	0xde	
8155457	0	0x9a	0x2	0x0	0	0x9a
8155457	0			Sig3	0x9a	
8155350	0	0x56	0x1	0x0	0	0x56
8155350	0			Sig2	0x56	
8155259	0	0x112	0x0	0x0	1	0x112
8155259	0			Sig1	0x112	



Test setup: CAN – Simulyzer ECU-Mode – Simulyzer Sensor-Mode



"Sensor Mode"



CAN – Simulyzer ECU-Mode – Simulyzer Sensor-Mode

First of all you have to connect the two simulyzers and start the GUI software twice. With both windows open, you must click on the menu group *File* and select the sub-items *New* and *New Project*. Here you can set the compatibility. In our example we have created this with the PSI5-P10P-500_4H compatibility.

🛗 ps	315-Simulyzer - C:\Users\philipp\Documents\	P10P-500-4H_Sense	or.ppf
File	View Tools Help		
	New	New Project	PSI5-S10P-500_4H
	Open		PSI5-S10P-500_3L
	Save		PSI5-P20CRC-500_3H
	Save as		PSI5-P20CRC-500_2L
	Save Template		PSI5-P16CRC-500_3H
	Import		PSI5-P16CRC-500_2L
	Export +		PSI5-P10P-500_4H
	1 C:\Users\philipp\\P10P-500-4H_Sensor.ppf		PSI5-P10P-500_3L
	2 C:\Users\philipp\Documents\MMA52xxKW.ppf		PSI5-P10P-500_2L
	Exit		PSI5-P10P-250_1L
			PSI5-P10CRC-500_2L
			PSI5-A8P-250_1L
			PSI5-A16CRC-500_1L
			PSI5-A10P-250_1L
			PSI5-A10CRC-250_1L

When you have opened the new projects in both open software applications, you have to set the connected Sensor simulyzer as *Sensor* and the other simulyzer as *ECU*.



PS	15-Sir	nulyzei	- C:/	User
File	View	Tools	Help	
: 🕨	T ډ	ECU		-
-		Pase	sive	
		ECU		
		Sen	sor	N
		Simu	Ilation	

Next you have to select *Tools* in the sensor software and go to *Expert Mode* and then to *CAN Configuration*.



Here you can assign up to four Slot IDs by clicking on *Add Slot ID*. The kBaud number must also match the kHz number in the CAN Test-Software GUI and the check mark for *PSI Interface 1* must also be set. As *Error ID* you can enter a desired number.

ExpertMode	x
Load Program Update Bootloader	
Console File Handler Standalone Configuration CAN Configuration SPI-Bridge Configuration	
Receive while Transmit	
250 v kBaud	
PSI5 Interface PSI5 Interface 2 Add Set ID Add Frame ID Add Slot ID Add Frame ID	
ID: CAN-ID: ID: CAN-ID:	
sIID 0 0x700 sIID 1 0x701	
sID 2 0x702 Delete Delete	
Crifa ID: 0x0 Crifa ID: 0x0	



Now you can click on the *green arrow* in the sensor software and in the ECU software also on the *green arrow* and additionally on *Power*.

Sensor-Mode Software:

🚆 PS	15-Sin	ulyzer	- C:/	Usei	rs\phili	pp/I	Documents\
File	View	Tools	Help				
	. T	Sensor		•	Power	*	Stream Start

ECU-Mode Software:

🚆 PS	15-Sin	nulyzer	- C:\	User	s\phili	pp\I	ocume	ents\P
File	View	Tools	Help					
1	T .	ECU		•	Power	*	Stream	Start
_								
🔛 PS	315-Sin	nulyzer	- C:\	User	s\phili	pp\D)ocume	ents\P
File	SIS-Sin View	nulyzer Tools	- C:\\ Help	User	s\phili	pp\D)ocume	ents\P

In the CAN Test-Software GUI you will now see the following responses:

m:s.ms.us	ID	RTR	DLC		Data	^
137:46.058.650	0x702	0	4	46 04 00 00		
137:46.058.994	0x703	0	4	47 00 00 00		
137:46.059.330	0x700	0	4	48 00 00 00		
137:46.059.674	0x701	0	4	49 04 00 00		
137:46.060.010	0x702	0	4	4A 04 00 00		
137:46.060.350	0x703	0	4	4B 00 00 00		
137:46.060.694	0x700	0	4	4C 04 00 00		
137:46.061.038	0x701	0	4	4D 00 00 00		
137:46.061.378	0x702	0	4	4E 00 00 00		
137:46.061.726	0x703	0	4	4F 04 00 00		
137:46.062.066	0x700	0	4	50 00 00 00		
137:46.062.410	0x701	0	4	51 04 00 00		
 137:46.062.746	0x702	0	4	52 04 00 00		
137:46.063.090	0x703	0	4	53 00 00 00		
137:46.063.426	0x700	0	4	54 04 00 00		
137:46.063.770	0x701	0	4	55 00 00 00		
137:46.064.109	0x702	0	4	56 00 00 00		
137:46.064.453	0x703	0	4	57 04 00 00		
137:46.064.789	0x700	0	4	58 04 00 00		
137:46.065.137	0x701	0	4	59 00 00 00		¥