# **CONFIGURATION OF CAN DATA IN** D-LAB





#### Content

1.	Hardware Setup	3
2.	Configure D-Lab	3
2.1	Configure Mobileye (if Mobileye sensor is available)	4
2.2	Configure CAN Messages (if dbc-file is available)	4



## 1. Hardware Setup

After Installing the CAN card (PEAK) and necessary drivers, D-Lab automatically recognizes and displays "CAN" as a recording device in the Recording Devices window within the Plan and Measure modes.



Figure 1: Recording Devices window with CAN card as a sensor

Please make sure that the D-Lab computer is connected to the Vehicle CAN prior to recording data. The adjustments described in the next steps can be made without an actual CAN connection. However, data will only be displayed when there is an existing connection.

## 2. Configure D-Lab

Step 1: Double click on the entry "Can".



A configuration dialogue appears. Here you can load the predefined CAN configuration for the Mobileye sensor (if available) or include specific CAN data from a CAN dbc file (file containing information to "decrypt" the CAN data).



Please note that Ergoneers cannot provide any data to decrypt CAN messages from any car manufacturer. This information can only be provided by the manufacturer of the car you are using. The following parameters are required:

- Format (Intel or Motorola)
- ID of the Message (Hex or Decimal)
- Length of the Message in Byte
- Position of the Value in the Message (Startbit)
- Length of the Value (Bit)
- Type (Signed / Unsigned)
- Factor
- Offset

### 2.1 Configure Mobileye (if Mobileye sensor is available)

In order to load the predefined Mobileye configuration, left-click on the 5th symbol from left (as shown in the image below). The necessary information will be loaded automatically.

		The size the trains							Deckyger	uslimations horal	
Edit Peak CAN Configuration					×	Ed	it Peak CAN Configuration				
Name			Boud	Rate		Na	ime			Boud Rate	
Can1			500	kBit/sec		C	Can1			500 kBit/se	c *
1 T 📥 🛛 🕼		Record	only d	ecoded mess	ages	Te	T 📥 😢 🗳		Reco	ord only decoded	messages
Name	T	Message Id	<b>T</b> [	Data Length	Ŧ	N	lame	T	Message Id	7 Data Lengt	th T
							Display and Warnings (0x700)	4	700	8	
					- 15		Car Signals (0x760)	-	760	3	
						í [])	Sign Position and Type 0 (0x720)	+	720	8	
						•	Sign Position and Type 1 (0x721)	4	721	8	
						•	Sign Position and Type 2 (0x722)	4	722	8	
				OK Can	icel					ОК	Cancel

# 2.2 Configure CAN Messages (if dbc-file is available)

Step1:

In order to manually configure the content of CAN-Messages, left-click on the 3<sup>rd</sup> symbol from left ("+"). In order to use this option you need the information described above.

In the dialogue that appears, enter the information to identify a certain CAN message

- Name (can be freely assigned, independent from the dbc file)
- Length of the message in bytes
- Format (Intel or Motorola; depends on the car manufacturer)
- ID of the message (Hex or Decimal)



warment of an experimental and a street			ne noro:		Dock
Edit Peak CAN Configuration	n//			×	Add New Can Symbol
Name		Во	ud Rate		Name
Can1			00 kBit/sec	*	New Symbol
1 T 💠 🛛 😭		Record only	decoded mess	sages	🖁 Data Length
Name	T	Message Id 🔻	Data Length	7	8
					Data Format
					Select a Data Format!
					Message Id Hexa O Decimal

Hit the "OK" button when all information is entered correctly.

#### <u>Step 2:</u>

Once a CAN message is defined, it appears in the main dialogue (e.g. ESP, see below). In the next step, it is necessary to localize certain variables / values (e.g. speed) wihtin the CAN message. Left-click on the small "+" symbol of the CAN message.

Edit Peak CAN Configuration	×	( )	Add New Variable			
Name	Boud Rate	1	Name		Unit	
Can1	500 kBit/sec *	3 [	New Variable			
1e T 🔮 😔 🕼	Record only decoded messages	,	Data Type	Bit Length	Factor	Offset
Name <b>Y</b>	Message Id 7 Data Length 7		Unsigned *	1 🗘	1 \$	0 ‡
Lor			Data Position Only Bit Start Po Bit Start	osition 🔿 Byte and	Bit Start Position	
						0 🗘
	OK Cancel					OK Cancel

In the dialogue that appears, enter the information to identify a certain CAN message

- Name (can be freely assigned, independent from the dbc file)
- Unit (can be freely assigned, independent from the dbc file)
- Type (Signed / Unsigned)
- Length of the Value (Bit)
- Factor
- Offset
- Format of the Data Position (depends on the data format)
  - Only Bit Start Position for Intel
  - Byte and Bit Start Position for Motorola
- Position of the Variable / Value within the Message (Startbit)

Hit the "OK" button when all information is entered correctly. The CAN is now configured and you can drag and drop variables / values (e.g. speed) to visualization windows in D-Lab (e.g. line chart, point chart, etc.) and record the data.

