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TFT100 AVL ID List

To search for compatible products, **Expand all content**

□

Contents

- 1 Permanent I/O elements
- 2 Eventual I/O elements
- 3 CAN communication I/O elements
  - 3.1 CAN BOSCH I/O elements
  - 3.2 CAN Askoll I/O elements
  - 3.3 Manual CAN I/O elements
  - 3.4 Default J1939 I/O elements
  - 3.5 FLEX I/O elements
- 4 RS485 communication I/O elements
  - 4.1 SuperSoco I/O elements
- 5 BLE Sensor I/O elements

Permanent I/O elements

Property ID in AVL packet	Property Name	Bytes	Type	Value range		Multiplier	Units	Description	HW Support	Parameter Group
				Min	Max					
239	Ignition	1	Unsigned	0	1	-	-	0 – Ignition Off 1 – Ignition On	TFT100 TST100	Permanent I/O elements
240	Movement	1	Unsigned	0	1	-	-	0 – Movement Off 1 – Movement On	[Expand] TMT250 GH5200 TST100 TFT100 TAT100 TAT140 TAT141 TAT240	Permanent I/O elements
80	Data Mode	1	Unsigned	0	5	-	-	0 – Home On Stop 1 – Home On Moving 2 – Roaming On Stop 3 – Roaming On Moving 4 – Unknown On Stop 5 – Unknown On Moving	[Expand] TMT250 GH5200 TST100 TFT100 TAT100 TAT140 TAT141 TAT240	Permanent I/O elements
21	GSM Signal	1	Unsigned	0	5	-	-	Value in scale 1-5	TMT250 GH5200 TFT100 TST100 TAT100 TAT140 TAT141 TAT240	Permanent I/O elements
200	Sleep Mode	1	Unsigned	0	4	-	-	0 - Sleep modes disabled 1 – GNSS sleep 2 – Deep sleep 3 – Online deep sleep 4 - Ultra deep sleep	TMT250 GH5200 TFT100 TST100	Permanent I/O elements

69	GNSS Status	1	Unsigned	0	3	-	-	0 - GNSS OFF 1 – GNSS ON with fix 2 - GNSS ON without fix 3 - GNSS sleep	TMT250 GH5200 TFT100 TST100 TAT100 TAT140 TAT141 TAT240	Permanent I/O elements
181	GNSS PDOP	2	Unsigned	0	500	0.1	-	Probability	TMT250 GH5200 TFT100 TST100 TAT100 TAT140 TAT141 TAT240	Permanent I/O elements
182	GNSS HDOP	2	Unsigned	0	500	0.1	-	Probability	TMT250 GH5200 TFT100 TST100 TAT100 TAT140 TAT141 TAT240	Permanent I/O elements
24	Speed	2	Unsigned	0	350	-	km/h	Value	TMT250 GH5200 TFT100 TST100 TAT100 TAT140 TAT141 TAT240	Permanent I/O elements
205	GSM Cell ID	2	Unsigned	0	65535	-	-	GSM base station ID	TMT250 GH5200 TFT100 TST100 TAT100 TAT140 TAT141 TAT240	Permanent I/O elements
206	GSM Area Code	2	Unsigned	0	65535	-	-	Location Area code (LAC), it depends on GSM operator. It provides unique number which assigned to a set of base GSM stations.	TMT250 GH5200 TFT100 TST100 TAT100 TAT140 TAT141 TAT240	Permanent I/O elements
67	Battery Voltage	2	Unsigned	0	65535	0.001	V	Voltage	TMT250 GH5200 TFT100 TST100 TAT100 TAT140 TAT141 TAT240	Permanent I/O elements
68	Battery Current	2	Unsigned	0	65535	0.001	A	Current	TMT250 GH5200 TFT100 TST100	Permanent I/O elements
113	Battery Level	1	Unsigned	0	100	-	%	Battery capacity level	TMT250 GH5200 TST100 TFT100	Permanent I/O elements
66	External Voltage	2	Unsigned	0	65535	0.001	V	IO element is used to measure External Voltage, when External Voltage is < 65V.	TFT100 TST100	Permanent I/O elements
800	Extended External Voltage	4	Unsigned	0	0xFFFF	-	V	IO element is used to measure External Voltage, when External Voltage is > 65 V.	TFT100	Permanent I/O elements
241	Active GSM Operator	4	Unsigned	0	4294967295	-	-	Currently used GSM Operator code	TMT250 GH5200 TFT100 TST100 TAT100 TAT140 TAT141 TAT240	Permanent I/O elements
199	Trip Odometer	4	Unsigned	0	2147483647	-	m	Trip Odometer value	TMT250 GH5200 TFT100 TST100	Permanent I/O elements
16	Total Odometer	4	Unsigned	0	2147483647	-	m	Total Odometer value	TMT250 GH5200 TFT100 TST100	Permanent I/O elements

1	Digital Input 1	1	Unsigned	0	1	-	-	Logic: 0/1	TFT100	Permanent I/O elements
2	Digital Input 2	1	Unsigned	0	1	-	-	Logic: 0/1	TFT100	Permanent I/O elements
3	Digital Input 3	1	Unsigned	0	1	-	-	Logic: 0/1	TFT100	Permanent I/O elements
262	Digital Input 4	1	Unsigned	0	1	-	-	Logic: 0/1	TFT100	Permanent I/O elements
179	Digital Output 1	1	Unsigned	0	1	-	-	Logic: 0/1	TFT100	Permanent I/O elements
180	Digital Output 2	1	Unsigned	0	1	-	-	Logic 0/1	TFT100	Permanent I/O elements
841	DOUT 1 Overcurrent	1	Unsigned	0	1	-	-	DOUT 1 Overcurrent IO element is used to indicate overcurrent on Digital Output 1. When Digital Output 1 overcurrent happens, it means that current level is > 300 mA, value is set to 1. Value 1 holds until 5 min timeout runs out. After timeout value is set to 0 if current level is < 300 mA. If current level is still > 300 mA value remains 1.	TFT100	Permanent I/O elements
842	DOUT2 Overcurrent	1	Unsigned	0	1	-	-	DOUT 2 Overcurrent IO element is used to indicate overcurrent on Digital Output 2. When Digital Output 2 overcurrent happens, it means that current level is > 300 mA, value is set to 1. Value 1 holds until 5 min timeout runs out. After timeout value is set to 0 if current level is < 300 mA. If current level is still > 300 mA value remains 1.	TFT100	Permanent I/O elements
9	Analog Input 1	2	Unsigned	0	65535	0.001	V	Voltage	TFT100	Permanent I/O elements
6	Analog Input 2	2	Unsigned	0	65535	0.001	V	Voltage	TFT100	Permanent I/O elements
839	Extended Analog Input 1	4	Unsigned	0	0xFFFF	-	V	Extended Analog Input 1 IO element is used to measure Analog Input 1 voltage, when Analog Input 1 voltage is > 65 V.	TFT100	Permanent I/O elements
840	Extended Analog Input 2	4	Unsigned	0	0xFFFF	-	V	Extended Analog Input 2 IO element is used to measure Analog Input 2 voltage, when Analog Input 1 voltage is > 65 V.	TFT100	Permanent I/O elements
303	Instant Movement	1	Unsigned	0	1	-	-	Logic: 0/1 returns movement value	TMT250 GH5200 TST100 TFT100 TAT100 TAT140 TAT141 TAT240	Permanent I/O elements
17	Axis X	2	Signed	-8000	8000	0.001	G	X axis value	TMT250 GH5200 TFT100 TST100	Permanent I/O elements
18	Axis Y	2	Signed	-8000	8000	0.001	G	Y axis value	TMT250 GH5200 TFT100 TST100	Permanent I/O elements
19	Axis Z	2	Signed	-8000	8000	0.001	G	Z axis value	TMT250 GH5200 TFT100 TST100	Permanent I/O elements
11	ICCID1	8	Unsigned	0	0xffffffffffffffff	-	-	Value of SIM ICCID, MSB	TMT250 GH5200 TFT100 TST100 TAT100 TAT140 TAT141 TAT240	Permanent I/O elements
14	ICCID2	8	Unsigned	0	0xffffffffffffffff	-	-	Value of SIM ICCID, MSB	TMT250 GH5200 TFT100 TST100 TAT100 TAT140 TAT141 TAT240	Permanent I/O elements
72	Dallas Temperature 1	4	Signed	-550	1150	0.1	°C	Degrees (°C), -55 - +115, if 850 – Sensor not ready if 2000 – Value read error if 3000 – Not connected if 4000 – ID failed if 5000 – same as 850	TFT100	Permanent I/O elements

73	Dallas Temperature 2	4	Signed	-550	1150	0.1	°C	Degrees (°C), -55 - +115, if 850 – Sensor not ready if 2000 – Value read error if 3000 – Not connected if 4000 – ID failed if 5000 – same as 850	TFT100	Permanent I/O elements
74	Dallas Temperature 3	4	Signed	-550	1150	0.1	°C	Degrees (°C), -55 - +115, if 850 – Sensor not ready if 2000 – Value read error if 3000 – Not connected if 4000 – ID failed if 5000 – same as 850	TFT100	Permanent I/O elements
75	Dallas Temperature 4	4	Signed	-550	1150	0.1	°C	Degrees (°C), -55 - +115, if 850 – Sensor not ready if 2000 – Value read error if 3000 – Not connected if 4000 – ID failed if 5000 – same as 850	TFT100	Permanent I/O elements
76	Dallas Temperature ID 1	8	Unsigned	0	0xffffffffffffffff	-	-	Dallas sensor ID	TFT100	Permanent I/O elements
77	Dallas Temperature ID 2	8	Unsigned	0	0xffffffffffffffff	-	-	Dallas sensor ID	TFT100	Permanent I/O elements
79	Dallas Temperature ID 3	8	Unsigned	0	0xffffffffffffffff	-	-	Dallas sensor ID	TFT100	Permanent I/O elements
71	Dallas Temperature ID 4	8	Unsigned	0	0xffffffffffffffff	-	-	Dallas sensor ID	TFT100	Permanent I/O elements
78	iButton	8	Unsigned	0	0xffffffffffffffff	-	-	iButton ID	TFT100	Permanent I/O elements
15	Eco Score	2	Unsigned	0	65535	0.01	-	Average amount of events on some distance	TFT100	Permanent I/O elements
116	Charger Connected	1	Unsigned	0	1	-	-	0 - charger is not connected 1 - charger is connected	TMT250 GH5200	Permanent I/O elements
854	User ID	4	Unsigned	0	0xFFFFFFFF	-	-	This parameter allows to send custom number as AVL ID parameter. Configurable in `Features` section.	TMT250 GH5200	Permanent I/O elements
387	ISO6709 Coordinates	34	HEX	0	0x7fffffffffffffff	-	-	ISO6709 Coordinates Latitude, Longitude (in Degrees, Minutes and Seconds) and Altitude: IO value format: ±DDMMSS.SSSS±DDDMMSS.SSSS±AAA.AAA/	[Expand] TMT250 GH5200 TST100 TFT100 TAT100 TAT140 TAT141 TAT240	Permanent I/O elements
636	LTE Cell ID	4	Unsigned	0	4294967295	-	-	LTE Cell ID	TAT140 TAT141 TAT240	Permanent I/O elements
288	GSM Cell ID 1	2	Unsigned	0	65535	-	-	Unique ID of the Cell 1	TAT100	Permanent I/O elements
291	GSM Cell ID 2	2	Unsigned	0	65535	-	-	Unique ID of the Cell 2	TAT100	Permanent I/O elements
294	GSM Cell ID 3	2	Unsigned	0	65535	-	-	Unique ID of the Cell 3	TAT100	Permanent I/O elements
297	GSM Cell ID 4	2	Unsigned	0	65535	-	-	Unique ID of the Cell 4	TAT100	Permanent I/O elements
287	GSM Cell LAC 1	2	Unsigned	0	65534	-	-	Location Area Code of the Cell 1	TAT100	Permanent I/O elements
290	GSM Cell LAC 2	2	Unsigned	0	65534	-	-	Location Area Code of the Cell 2	TAT100	Permanent I/O elements
293	GSM Cell LAC 3	2	Unsigned	0	65534	-	-	Location Area Code of the Cell 3	TAT100	Permanent I/O elements
296	GSM Cell LAC 4	2	Unsigned	0	65534	-	-	Location Area Code of the Cell 4	TAT100	Permanent I/O elements
1200	GSM Cell MNC 1	1	Unsigned	-	-	-	-	Mobile Network Code of the Cell 1	TAT100	Permanent I/O elements
1201	GSM Cell MNC 2	1	Unsigned	-	-	-	-	Mobile Network Code of the Cell 2	TAT100	Permanent I/O elements
1202	GSM Cell MNC 3	1	Unsigned	-	-	-	-	Mobile Network Code of the Cell 3	TAT100	Permanent I/O elements
1203	GSM Cell MNC 4	1	Unsigned	-	-	-	-	Mobile Network Code of the Cell 4	TAT100	Permanent I/O elements
286	GSM Signal RX 0	1	Unsigned	0	63	-	-	GSM Signal of the Cell 0	TAT100	Permanent I/O elements
289	GSM Signal RX 1	1	Unsigned	0	63	-	-	GSM Signal of the Cell 1	TAT100	Permanent I/O elements

292	GSM Signal RX 2	1	Unsigned	0	63	-	-	GSM Signal of the Cell 2	TAT100	Permanent I/O elements
295	GSM Signal RX 3	1	Unsigned	0	63	-	-	GSM Signal of the Cell 3	TAT100	Permanent I/O elements
298	GSM Signal RX 4	1	Unsigned	0	63	-	-	GSM Signal of the Cell 4	TAT100	Permanent I/O elements
25021	LTE Cell ID 1	4	Unsigned	0	4294967295	-	-	Unique ID of the LTE Cell 1	TAT140 TAT141	Permanent I/O elements
25024	LTE Cell ID 2	4	Unsigned	0	4294967295	-	-	Unique ID of the LTE Cell 2	TAT140 TAT141	Permanent I/O elements
25027	LTE Cell ID 3	4	Unsigned	0	4294967295	-	-	Unique ID of the LTE Cell 3	TAT140 TAT141	Permanent I/O elements
25030	LTE Cell ID 4	4	Unsigned	0	4294967295	-	-	Unique ID of the LTE Cell 4	TAT140 TAT141	Permanent I/O elements
25020	LTE Cell LAC 1	2	Unsigned	0	65534	-	-	Location Area Code of the LTE Cell 1	TAT140 TAT141	Permanent I/O elements
25023	LTE Cell LAC 2	2	Unsigned	0	65534	-	-	Location Area Code of the LTE Cell 2	TAT140 TAT141	Permanent I/O elements
25026	LTE Cell LAC 3	2	Unsigned	0	65534	-	-	Location Area Code of the LTE Cell 3	TAT140 TAT141	Permanent I/O elements
25029	LTE Cell LAC 4	2	Unsigned	0	65534	-	-	Location Area Code of the LTE Cell 4	TAT140 TAT141	Permanent I/O elements
25032	LTE Cell MNC 1	1	Unsigned	-	-	-	-	LTE Mobile Network Code of the Cell 1	TAT140 TAT141	Permanent I/O elements
25033	LTE Cell MNC 2	1	Unsigned	-	-	-	-	LTE Mobile Network Code of the Cell 2	TAT140 TAT141	Permanent I/O elements
25034	LTE Cell MNC 3	1	Unsigned	-	-	-	-	LTE Mobile Network Code of the Cell 3	TAT140 TAT141	Permanent I/O elements
25035	LTE Cell MNC 4	1	Unsigned	-	-	-	-	LTE Mobile Network Code of the Cell 4	TAT140 TAT141	Permanent I/O elements
25019	LTE Signal RX 0	1	Unsigned	0	7	-	-	LTE Signal of the Cell 0	TAT140 TAT141	Permanent I/O elements
25022	LTE Signal RX 1	1	Unsigned	0	7	-	-	LTE Signal of the Cell 1	TAT140 TAT141	Permanent I/O elements
25025	LTE Signal RX 2	1	Unsigned	0	7	-	-	LTE Signal of the Cell 2	TAT140 TAT141	Permanent I/O elements
25028	LTE Signal RX 3	1	Unsigned	0	7	-	-	LTE Signal of the Cell 3	TAT140 TAT141	Permanent I/O elements
25031	LTE Signal RX 4	1	Unsigned	0	7	-	-	LTE Signal of the Cell 4	TAT140 TAT141	Permanent I/O elements
399	Time To First Fix	1	Unsigned	0	4294967295	-	s	Amount of time it took to get first GNSS fix	TAT100 TAT140 TAT141 TAT240	Permanent I/O elements
20015	Modem Uptime	1	Unsigned	0	4294967295	-	s	Modem Uptime since the last wake up	TAT100 TAT140 TAT141 TAT240	Permanent I/O elements
25015	Modem Uptime	8	Unsigned	0	4294967295	-	s	Modem Uptime since the last wake up (from FW X.4.10.Rev.00)	TAT100 TAT140 TAT141 TAT240	Permanent I/O elements
20016	LTE RSRP	2	Signed	-140	-44	-	dBm	Reference Signals Received Power	TAT140	Permanent I/O elements
20017	LTE RSRQ	1	Signed	-3	-20	-	dB	Reference Signals Received Quality	TAT140	Permanent I/O elements
25016	LTE RSRP	2	Signed	-140	-44	-	dBm	Reference Signals Received Power (from FW X.4.10.Rev.00)	TAT140 TAT141 TAT240	Permanent I/O elements
25017	LTE RSRQ	1	Signed	-20	-3	-	dB	Reference Signals Received Quality (from FW X.4.10.Rev.00)	TAT140 TAT141 TAT240	Permanent I/O elements
449	Ignition On Counter value		Unsigned	0	2147483647	-	s	Current value of the counter	TFT100	Permanent I/O elements
10800	EYE Temperature 1	2	Signed	-32768	32767	0.01	°C	Temperature measured by EYE Sensor 1	TFT100 TMT250 GH5200	Permanent I/O elements
10801	EYE Temperature 2	2	Signed	-32768	32767	0.01	°C	Temperature measured by EYE Sensor 2	TFT100 TMT250 GH5200	Permanent I/O elements
10802	EYE Temperature 3	2	Signed	-32768	32767	0.01	°C	Temperature measured by EYE Sensor 3	TFT100 TMT250 GH5200	Permanent I/O elements
10803	EYE Temperature 4	2	Signed	-32768	32767	0.01	°C	Temperature measured by EYE Sensor 4	TFT100 TMT250 GH5200	Permanent I/O elements
10804	EYE Humidity 1	1	Unsigned	0	100	-	%	Humidity measured by EYE Sensor 1	TFT100 TMT250 GH5200	Permanent I/O elements

10805	EYE Humidity 2	1	Unsigned	0	100	-	%	Humidity measured by EYE Sensor 2	TFT100 TMT250 GH5200	Permanent I/O elements
10806	EYE Humidity 3	1	Unsigned	0	100	-	%	Humidity measured by EYE Sensor 3	TFT100 TMT250 GH5200	Permanent I/O elements
10807	EYE Humidity 4	1	Unsigned	0	100	-	%	Humidity measured by EYE Sensor 4	TFT100 TMT250 GH5200	Permanent I/O elements
10808	EYE Magnet 1	1	Unsigned	0	1	-	-	Magnet measured by EYE Sensor by EYE Sensor 1	TFT100 TMT250 GH5200	Permanent I/O elements
10809	EYE Magnet 2	1	Unsigned	0	1	-	-	Magnet measured by EYE Sensor by EYE Sensor 2	TFT100 TMT250 GH5200	Permanent I/O elements
10810	EYE Magnet 3	1	Unsigned	0	1	-	-	Magnet measured by EYE Sensor by EYE Sensor 3	TFT100 TMT250 GH5200	Permanent I/O elements
10811	EYE Magnet 4	1	Unsigned	0	1	-	-	Magnet measured by EYE Sensor by EYE Sensor 4	TFT100 TMT250 GH5200	Permanent I/O elements
10812	EYE Movement 1	2	Unsigned	0	1	-	-	Movement state measure by EYE Sensor 1	TFT100 TMT250 GH5200	Permanent I/O elements
10813	EYE Movement 2	2	Unsigned	0	1	-	-	Movement state measure by EYE Sensor 2	TFT100 TMT250 GH5200	Permanent I/O elements
10814	EYE Movement 3	2	Unsigned	0	1	-	-	Movement state measure by EYE Sensor 3	TFT100 TMT250 GH5200	Permanent I/O elements
10815	EYE Movement 4	2	Unsigned	0	1	-	-	Movement state measure by EYE Sensor 4	TFT100 TMT250 GH5200	Permanent I/O elements
10816	EYE Pitch 1	1	Signed	-90	90	-	-	Pitch angle measured by EYE Sensor 1	TFT100 TMT250 GH5200	Permanent I/O elements
10817	EYE Pitch 2	1	Signed	-90	90	-	-	Pitch angle measured by EYE Sensor 2	TFT100 TMT250 GH5200	Permanent I/O elements
10818	EYE Pitch 3	1	Signed	-90	90	-	-	Pitch angle measured by EYE Sensor 3	TFT100 TMT250 GH5200	Permanent I/O elements
10819	EYE Pitch 4	1	Signed	-90	90	-	-	Pitch angle measured by EYE Sensor 4	TFT100 TMT250 GH5200	Permanent I/O elements
10820	EYE Low Battery 1	1	Unsigned	0	1	-	-	Low Battery indication for EYE Sensor 1	TFT100 TMT250 GH5200	Permanent I/O elements
10821	EYE Low Battery 2	1	Unsigned	0	1	-	-	Low Battery indication for EYE Sensor 2	TFT100 TMT250 GH5200	Permanent I/O elements
10822	EYE Low Battery 3	1	Unsigned	0	1	-	-	Low Battery indication for EYE Sensor 3	TFT100 TMT250 GH5200	Permanent I/O elements
10823	EYE Low Battery 4	1	Unsigned	0	1	-	-	Low Battery indication for EYE Sensor 4	TFT100 TMT250 GH5200	Permanent I/O elements
10824	EYE Battery Voltage 1	1	Unsigned	0	65535	-	-	Battery Voltage of EYE Sensor 1	TFT100 TMT250 GH5200	Permanent I/O elements
10825	EYE Battery Voltage 2	1	Unsigned	0	65535	-	-	Battery Voltage of EYE Sensor 2	TFT100 TMT250 GH5200	Permanent I/O elements
10826	EYE Battery Voltage 3	1	Unsigned	0	65535	-	-	Battery Voltage of EYE Sensor 3	TFT100 TMT250 GH5200	Permanent I/O elements
10827	EYE Battery Voltage 4	1	Unsigned	0	65535	-	-	Battery Voltage of EYE Sensor 4	TFT100 TMT250 GH5200	Permanent I/O elements
10832	EYE Roll 1	2	Signed	-180	180	-	-	Roll angle measured by EYE Sensor 1	TFT100 TMT250 GH5200	Permanent I/O elements
10833	EYE Roll 2	2	Signed	-180	180	-	-	Roll angle measured by EYE Sensor 2	TFT100 TMT250 GH5200	Permanent I/O elements
10834	EYE Roll 3	2	Signed	-180	180	-	-	Roll angle measured by EYE Sensor 3	TFT100 TMT250 GH5200	Permanent I/O elements
10835	EYE Roll 4	2	Signed	-180	180	-	-	Roll angle measured by EYE Sensor 4	TFT100 TMT250 GH5200	Permanent I/O elements

10836	EYE Movement count 1	2	Unsigned	0	65535	-	-	Movement count measure by EYE Sensor 1	TFT100 TMT250 GH5200	Permanent I/O elements
10837	EYE Movement count 2	2	Unsigned	0	65535	-	-	Movement count measure by EYE Sensor 2	TFT100 TMT250 GH5200	Permanent I/O elements
10838	EYE Movement count 3	2	Unsigned	0	65535	-	-	Movement count measure by EYE Sensor 3	TFT100 TMT250 GH5200	Permanent I/O elements
10839	EYE Movement count 4	2	Unsigned	0	65535	-	-	Movement count measure by EYE Sensor 4	TFT100 TMT250 GH5200	Permanent I/O elements
10840	EYE Magnet count 1	2	Unsigned	0	65535	-	-	Magnet trigger count measure by EYE Sensor 1	TFT100 TMT250 GH5200	Permanent I/O elements
10841	EYE Magnet count 2	2	Unsigned	0	65535	-	-	Magnet trigger count measure by EYE Sensor 2	TFT100 TMT250 GH5200	Permanent I/O elements
10842	EYE Magnet count 3	2	Unsigned	0	65535	-	-	Magnet trigger count measure by EYE Sensor 3	TFT100 TMT250 GH5200	Permanent I/O elements
10843	EYE Magnet count 4	2	Unsigned	0	65535	-	-	Magnet trigger count measure by EYE Sensor 4	TFT100 TMT250 GH5200	Permanent I/O elements
11317	EYE Sensor List	variable length	HEX	0 bytes	1024 bytes	-	-	EYE Sensor List	TFT100 TMT250 GH5200	Permanent I/O elements

Eventual I/O elements

Property ID in AVL packet	Property Name	Bytes	Type	Value range		Multiplier	Units	Description	HW Support	Parameter Group
				Min	Max					
155	Geofence zone 01	1	Unsigned	0	3	-	-	0 – target left zone 1 – target entered zone 2 – over speeding end 3 – over speeding start	TMT250 GH5200 TFT100 TST100	Eventual I/O elements
156	Geofence zone 02	1	Unsigned	0	3	-	-	0 – target left zone 1 – target entered zone 2 – over speeding end 3 – over speeding start	TMT250 GH5200 TFT100 TST100	Eventual I/O elements
157	Geofence zone 03	1	Unsigned	0	3	-	-	0 – target left zone 1 – target entered zone 2 – over speeding end 3 – over speeding start	TMT250 GH5200 TFT100 TST100	Eventual I/O elements
158	Geofence zone 04	1	Unsigned	0	3	-	-	0 – target left zone 1 – target entered zone 2 – over speeding end 3 – over speeding start	TMT250 GH5200 TFT100 TST100	Eventual I/O elements
159	Geofence zone 05	1	Unsigned	0	3	-	-	0 – target left zone 1 – target entered zone 2 – over speeding end 3 – over speeding start	TMT250 GH5200 TFT100 TST100	Eventual I/O elements
61	Geofence zone 06	1	Unsigned	0	3	-	-	0 – target left zone 1 – target entered zone 2 – over speeding end 3 – over speeding start	TMT250 GH5200 TFT100 TST100	Eventual I/O elements
62	Geofence zone 07	1	Unsigned	0	3	-	-	0 – target left zone 1 – target entered zone 2 – over speeding end 3 – over speeding start	TMT250 GH5200 TFT100 TST100	Eventual I/O elements
63	Geofence zone 08	1	Unsigned	0	3	-	-	0 – target left zone 1 – target entered zone 2 – over speeding end 3 – over speeding start	TMT250 GH5200 TFT100 TST100	Eventual I/O elements
64	Geofence zone 09	1	Unsigned	0	3	-	-	0 – target left zone 1 – target entered zone 2 – over speeding end 3 – over speeding start	TMT250 GH5200 TFT100 TST100	Eventual I/O elements
65	Geofence zone 10	1	Unsigned	0	3	-	-	0 – target left zone 1 – target entered zone 2 – over speeding end 3 – over speeding start	TMT250 GH5200 TFT100 TST100	Eventual I/O elements
70	Geofence zone 11	1	Unsigned	0	3	-	-	0 – target left zone 1 – target entered zone 2 – over speeding end 3 – over speeding start	TMT250 GH5200 TFT100 TST100	Eventual I/O elements
88	Geofence zone 12	1	Unsigned	0	3	-	-	0 – target left zone 1 – target entered zone 2 – over speeding end 3 – over speeding start	TMT250 GH5200 TFT100 TST100	Eventual I/O elements
91	Geofence zone 13	1	Unsigned	0	3	-	-	0 – target left zone 1 – target entered zone 2 – over speeding end 3 – over speeding start	TMT250 GH5200 TFT100 TST100	Eventual I/O elements
92	Geofence zone 14	1	Unsigned	0	3	-	-	0 – target left zone 1 – target entered zone 2 – over speeding end 3 – over speeding start	TMT250 GH5200 TFT100 TST100	Eventual I/O elements
93	Geofence zone 15	1	Unsigned	0	3	-	-	0 – target left zone 1 – target entered zone 2 – over speeding end 3 – over speeding start	TMT250 GH5200 TFT100 TST100	Eventual I/O elements
94	Geofence zone 16	1	Unsigned	0	3	-	-	0 – target left zone 1 – target entered zone 2 – over speeding end 3 – over speeding start	TMT250 GH5200 TFT100 TST100	Eventual I/O elements
95	Geofence zone 17	1	Unsigned	0	3	-	-	0 – target left zone 1 – target entered zone 2 – over speeding end 3 – over speeding start	TMT250 GH5200 TFT100 TST100	Eventual I/O elements
96	Geofence zone 18	1	Unsigned	0	3	-	-	0 – target left zone 1 – target entered zone 2 – over speeding end 3 – over speeding start	TMT250 GH5200 TFT100 TST100	Eventual I/O elements

97	Geofence zone 19	1	Unsigned	0	3	-	-	0 – target left zone 1 – target entered zone 2 – over speeding end 3 – over speeding start	TMT250 GH5200 TFT100 TST100	Eventual I/O elements
98	Geofence zone 20	1	Unsigned	0	3	-	-	0 – target left zone 1 – target entered zone 2 – over speeding end 3 – over speeding start	TMT250 GH5200 TFT100 TST100	Eventual I/O elements
99	Geofence zone 21	1	Unsigned	0	3	-	-	0 – target left zone 1 – target entered zone 2 – over speeding end 3 – over speeding start	TMT250 GH5200 TFT100 TST100	Eventual I/O elements
153	Geofence zone 22	1	Unsigned	0	3	-	-	0 – target left zone 1 – target entered zone 2 – over speeding end 3 – over speeding start	TMT250 GH5200 TFT100 TST100	Eventual I/O elements
154	Geofence zone 23	1	Unsigned	0	3	-	-	0 – target left zone 1 – target entered zone 2 – over speeding end 3 – over speeding start	TMT250 GH5200 TFT100 TST100	Eventual I/O elements
190	Geofence zone 24	1	Unsigned	0	3	-	-	0 – target left zone 1 – target entered zone 2 – over speeding end 3 – over speeding start	TMT250 GH5200 TFT100 TST100	Eventual I/O elements
191	Geofence zone 25	1	Unsigned	0	3	-	-	0 – target left zone 1 – target entered zone 2 – over speeding end 3 – over speeding start	TMT250 GH5200 TFT100 TST100	Eventual I/O elements
192	Geofence zone 26	1	Unsigned	0	3	-	-	0 – target left zone 1 – target entered zone 2 – over speeding end 3 – over speeding start	TMT250 GH5200 TFT100 TST100	Eventual I/O elements
193	Geofence zone 27	1	Unsigned	0	3	-	-	0 – target left zone 1 – target entered zone 2 – over speeding end 3 – over speeding start	TMT250 GH5200 TFT100 TST100	Eventual I/O elements
194	Geofence zone 28	1	Unsigned	0	3	-	-	0 – target left zone 1 – target entered zone 2 – over speeding end 3 – over speeding start	TMT250 GH5200 TFT100 TST100	Eventual I/O elements
195	Geofence zone 29	1	Unsigned	0	3	-	-	0 – target left zone 1 – target entered zone 2 – over speeding end 3 – over speeding start	TMT250 GH5200 TFT100 TST100	Eventual I/O elements
196	Geofence zone 30	1	Unsigned	0	3	-	-	0 – target left zone 1 – target entered zone 2 – over speeding end 3 – over speeding start	TMT250 GH5200 TFT100 TST100	Eventual I/O elements
197	Geofence zone 31	1	Unsigned	0	3	-	-	0 – target left zone 1 – target entered zone 2 – over speeding end 3 – over speeding start	TMT250 GH5200 TFT100 TST100	Eventual I/O elements
198	Geofence zone 32	1	Unsigned	0	3	-	-	0 – target left zone 1 – target entered zone 2 – over speeding end 3 – over speeding start	TMT250 GH5200 TFT100 TST100	Eventual I/O elements
208	Geofence zone 33	1	Unsigned	0	3	-	-	0 – target left zone 1 – target entered zone 2 – over speeding end 3 – over speeding start	TMT250 GH5200 TFT100 TST100	Eventual I/O elements
209	Geofence zone 34	1	Unsigned	0	3	-	-	0 – target left zone 1 – target entered zone 2 – over speeding end 3 – over speeding start	TMT250 GH5200 TFT100 TST100	Eventual I/O elements
216	Geofence zone 35	1	Unsigned	0	3	-	-	0 – target left zone 1 – target entered zone 2 – over speeding end 3 – over speeding start	TMT250 GH5200 TFT100 TST100	Eventual I/O elements
217	Geofence zone 36	1	Unsigned	0	3	-	-	0 – target left zone 1 – target entered zone 2 – over speeding end 3 – over speeding start	TMT250 GH5200 TFT100 TST100	Eventual I/O elements
218	Geofence zone 37	1	Unsigned	0	3	-	-	0 – target left zone 1 – target entered zone 2 – over speeding end 3 – over speeding start	TMT250 GH5200 TFT100 TST100	Eventual I/O elements
219	Geofence zone 38	1	Unsigned	0	3	-	-	0 – target left zone 1 – target entered zone 2 – over speeding end 3 – over speeding start	TMT250 GH5200 TFT100 TST100	Eventual I/O elements
220	Geofence zone 39	1	Unsigned	0	3	-	-	0 – target left zone 1 – target entered zone 2 – over speeding end 3 – over speeding start	TMT250 GH5200 TFT100 TST100	Eventual I/O elements
221	Geofence zone 40	1	Unsigned	0	3	-	-	0 – target left zone 1 – target entered zone 2 – over speeding end 3 – over speeding start	TMT250 GH5200 TFT100 TST100	Eventual I/O elements
222	Geofence zone 41	1	Unsigned	0	3	-	-	0 – target left zone 1 – target entered zone 2 – over speeding end 3 – over speeding start	TMT250 GH5200 TFT100 TST100	Eventual I/O elements
223	Geofence zone 42	1	Unsigned	0	3	-	-	0 – target left zone 1 – target entered zone 2 – over speeding end 3 – over speeding start	TMT250 GH5200 TFT100 TST100	Eventual I/O elements
224	Geofence zone 43	1	Unsigned	0	3	-	-	0 – target left zone 1 – target entered zone 2 – over speeding end 3 – over speeding start	TMT250 GH5200 TFT100 TST100	Eventual I/O elements
225	Geofence zone 44	1	Unsigned	0	3	-	-	0 – target left zone 1 – target entered zone 2 – over speeding end 3 – over speeding start	TMT250 GH5200 TFT100 TST100	Eventual I/O elements
226	Geofence zone 45	1	Unsigned	0	3	-	-	0 – target left zone 1 – target entered zone 2 – over speeding end 3 – over speeding start	TMT250 GH5200 TFT100 TST100	Eventual I/O elements
227	Geofence zone 46	1	Unsigned	0	3	-	-	0 – target left zone 1 – target entered zone 2 – over speeding end 3 – over speeding start	TMT250 GH5200 TFT100 TST100	Eventual I/O elements
228	Geofence zone 47	1	Unsigned	0	3	-	-	0 – target left zone 1 – target entered zone 2 – over speeding end 3 – over speeding start	TMT250 GH5200 TFT100 TST100	Eventual I/O elements
229	Geofence zone 48	1	Unsigned	0	3	-	-	0 – target left zone 1 – target entered zone 2 – over speeding end 3 – over speeding start	TMT250 GH5200 TFT100 TST100	Eventual I/O elements
230	Geofence zone 49	1	Unsigned	0	3	-	-	0 – target left zone 1 – target entered zone 2 – over speeding end 3 – over speeding start	TMT250 GH5200 TFT100 TST100	Eventual I/O elements

231	Geofence zone 50	1	Unsigned	0	3	-	-	0 – target left zone 1 – target entered zone 2 – over speeding end 3 – over speeding start	TMT250 GH5200 TFT100 TST100	Eventual I/O elements -->
175	Auto Geofence	1	Unsigned	0	1	-	-	0 – target left zone 1 – target entered zone	TMT250 GH5200 TFT100 TST100	Eventual I/O elements
250	Trip	1	Unsigned	0	1	-	-	0 – trip stop 1 – trip start	TMT250 GH5200 TFT100 TST100	Eventual I/O elements
255	Overspeeding Event	1	Unsigned	0	255	-	km/h	At over speeding start km/h, at over speeding end km/h	TMT250 GH5200 TFT100 TST100	Eventual I/O elements
251	Idling	1	Unsigned	0	1	-	-	0 – moving 1 – idling	TFT100	Eventual I/O elements
252	Unplug	1	Unsigned	0	1	-	-	0 – battery present 1 – battery unplug	TST100	Eventual I/O elements
253	Green driving type	1	Unsigned	1	3	-	-	1 – harsh acceleration 2 – harsh braking 3 – harsh cornering	TFT100	Eventual I/O elements
246	Towing	1	Unsigned	0	1	-	-	0 – steady 1 – towing	TFT100	Eventual I/O elements
247	Crash detection	1	Unsigned	1	5	-	-	1 – crash 2 – limited crash trace (device not calibrated) 3 - limited crash trace (device is calibrated) 4 - full crash trace (device not calibrated) 5 - full crash trace (device is calibrated) 6 - crash detected (device not calibrated)	TFT100	Eventual I/O elements
257	Crash trace data	Variable	HEX	0	1200	-	-	Crash trace data	TFT100	Eventual I/O elements
248	Immobilizer	1	Unsigned	0	2	-	-	0 – iButton not connected 1 – iButton connected (Immobilizer) 2 – iButton connected (Authorized Driving)	TFT100	Eventual I/O elements
254	Green Driving Value	1	Unsigned	0	1	0.01	G|rad	Depending on green driving type: if harsh acceleration or braking – g*100 (value 123 -> 1.23g), if harsh cornering – degrees (value in radians)	TFT100	Eventual I/O elements
249	Jamming	1	Unsigned	0	1	-	-	0 – jamming stop 1 – jamming start	TFT100 TST100	Eventual I/O elements
243	Green driving event duration	2	Unsigned	0	65535	-	ms	Duration of event that did generate Green driving	TFT100	Eventual I/O elements
236	Alarm	1	Unsigned	0	1	-	-	0 – Reserved 1 – Alarm event occurred	TMT250 GH5200	Eventual I/O elements
242	ManDown/FallDown	1	Unsigned	0	1	-	-	0 – ManDown/FallDown deactivated 1 – ManDown/FalDown is active	TMT250 GH5200 TST100 TFT100	Eventual I/O elements
310	Movement Event	1	Unsigned	0	1	-	-	0 - Movement event occurred 1 - No Movement event occured	TMT250 GH5200	Eventual I/O elements
389	Button Click	HEX	Unsigned	0x11	0x53	-	-	Button ID (X) and Action (Y) Value 0x**XY** **X** - button ID: 1 - alarm button 2 - power button 3 - button 1 4 - button 2 5 - button 3 **Y** - action: 1 - 1 click 2 - 2 clicks 3 - long click	TMT250 GH5200	Eventual I/O elements
390	Power Event	1	Unsigned	0	1	-	-	1 - Device turned OFF 0 - Device turned ON	TMT250 GH5200	Eventual I/O elements
520	Tamper detection Event	1	Unsigned	0	1	-	-	0 - Tamper restore 1 - Tamper alarm	TMT250	Eventual I/O elements
386	Last Known Position	2	Unsigned	0	65535	-	s	Time in seconds has passed since last GNSS fix	TMT250 GH5200 TFT100 TST100	Eventual I/O elements
400	Amber Alert state	1	Unsigned	0	4	-	-	0 - Turned Off 1 - Turned On, count down timer started 2 - Amber Alert On button pressed to restart active timer 3 - Alarm 4 - Amber Alert turned On when timer is set to 0 seconds	GH5200	Eventual I/O elements
401	Amber Alert timer value	2	Unsigned	0	65535	-	s	Sends Amber Alert time-out configured value	GH5200	Eventual I/O elements
403	Heart Rate Alert	1	Unsigned	0	255	-	BPM	Sends heart rate (BPM) from Xiaomi Mi Band 2	GH5200	Eventual I/O elements
236	Alarm	1	Unsigned	0	1	-	-	0 – Reserved 1 – Alarm event occurred	TAT100 TAT140 TAT141	Eventual I/O elements
20012	Recovery mode alarm	1	Unsigned	0	2	-	-	0 – Reserved 1 – Reserved 2 – Recovery alarm event occurred	TAT100 TAT140 TAT141	Eventual I/O elements
20019	Tamper record event	2	Unsigned	0	3	-	-	0 – Holder is removed 1 – Central is attached 2 – Attached to metal surface 3 – Removed from metal surface	TAT240	Eventual I/O elements
20014	BLE Lost Beacon	1	Unsigned	0	3	-	-	0 – Reserved 1 – Reserved 2 – Reserved 3 – BLE Lost Beacon	TAT100 TAT140 TAT141 TAT240	Eventual I/O elements
463	BLE1 EYE sensor lost alarm	2	HEX	-	-	-	-	BEEF - BLE1 EYE sensor lost alarm	TAT100 TAT140 TAT141 TAT240	Eventual I/O elements
467	BLE2 EYE sensor lost alarm	2	HEX	-	-	-	-	BEEF - BLE2 EYE sensor lost alarm	TAT100 TAT140 TAT141 TAT240	Eventual I/O elements
471	BLE3 EYE sensor lost alarm	2	HEX	-	-	-	-	BEEF - BLE3 EYE sensor lost alarm	TAT100 TAT140 TAT141 TAT240	Eventual I/O elements
475	BLE4 EYE sensor lost alarm	2	HEX	-	-	-	-	BEEF - BLE4 EYE sensor lost alarm	TAT100 TAT140 TAT141 TAT240	Eventual I/O elements

CAN communication I/O elements

CAN BOSCH I/O elements

Property ID in AVL packet	Property Name	Bytes	Type	Value range Min	Value range Max	Multiplier	Units	Description	HW Support	Parameter Group

801	Park Brake	1	Unsigned	0	3	-	-	Park Brake IO element is used to indicate if parking brake is active, according to CAN signal. 0 - Disengaged 1 - Engaged 2 - Error 3 - Unused	TFT100	CAN BOSCH
802	Selected	1	Unsigned	0	3	-	-	Charger state IO element is indicaiting current charger state, according to signal on CAN line. 0 - Disconnected 1 - Connected 2 - Error 3 - Unused	TFT100	CAN BOSCH
803	Selected Charge Mode	1	Unsigned	0	1	-	-	Selected Charge mode IO element is indicating which charge mode is currently in use, according to signal on CAN line. 0 - Default 1 - Fast	TFT100	CAN BOSCH
804	Charger Voltage	2	Unsigned	0	200000	-	mV	Charger Voltage Setpoint	TFT100	CAN BOSCH
805	Charger Current	2	Unsigned	0	200000	-	mA	Charger Current Setpoint	TFT100	CAN BOSCH
806	Charger Control Mode	1	Unsigned	0	1	-	-	Charger Control Mode IO element indicates which cahrger control mode is currently in use. 0-Remote Control C-V-Limiting 1-Open Circuit	TFT100	CAN BOSCH
807	Charger BMS COM Timeout	1	Unsigned	0	1	-	-	BMS COM Timeout IO element indicates if BMS COM Timeout has been expired. 0-Expired 1-Not expired	TFT100	CAN BOSCH
808	Charger CRC Violation	1	Unsigned	0	1	-	-	Charger CRC Violation IO element indicates if charger CRC violation has happened. 0-No CRC Violation happened 1-CRC Violation happened	TFT100	CAN BOSCH
809	Charger MC Violation	1	Unsigned	0	1	-	-	Charger MC Violation IO element indicates if charger MC violation has happened. 0-No MC Violation happened 1-MC Violation happened	TFT100	CAN BOSCH
810	Charger Status	1	Unsigned	0	7	-	-	Charger Status IO element indicates current charger status, according to CAN signal. 0-No Errorbr 1-Minimal Current Limiting 2-Reverse Polarity 3-Reserved 4-Cable Voltage Drop 5-Fan Error 6-AC Undervoltage Disconnect 7-Not Ready For Charging	TFT100	CAN BOSCH
811	Charger Voltage Actual	2	Unsigned	0	200000	-	mV	Acctual Voltage IO element indicates measured actual charging voltage in mV, according to CAN signal.	TFT100	CAN BOSCH
812	Charger Internal Fault	1	Unsigned	0	1	-	mV	Charger Internal Fault IO element indicates if charger internal fault happened, according to CAN signal. 0-Internal Fault happened 1-No InternalFault happened	TFT100	CAN BOSCH
813	Charger Energy	2	Unsigned	0	65535	-	Wh	Charger Energy IO element indicates currently measured charger energy.	TFT100	CAN BOSCH
814	Charger Current Actual	2	Unsigned	0	65535	-	mA	Charger Current IO element indicates currently measured charger current.	TFT100	CAN BOSCH
815	Throttle Position	1	Unsigned	0	100	-	%	Throttle Position IO element indicates currently measured throttle position.	TFT100	CAN BOSCH
816	Brake Pressed	1	Unsigned	0	1	-	-	Brake Pressed IO element indicates if brake is pressed or not. 0-Brake Pressed 1-Brake Not Pressed	TFT100	CAN BOSCH
817	Charge Plug	1	Unsigned	0	1	-	-	Charge Plugged IO element indicates if charger is plugged in or not. 0-Charger Plugged 1-Charger Not Plugged	TFT100	CAN BOSCH
818	Kill Switch Active	1	Unsigned	0	1	-	-	Kill Switch Active IO element indicates if kill switch is active or not. 0-Kill Switch Active 1-Kill Switch Not Active	TFT100	CAN BOSCH
819	Kickstand Release	1	Unsigned	0	1	-	-	Kickstand Release Status IO element indicates if kickstand released or not. 0-Kickstand Released 1-Kickstand Not Released	TFT100	CAN BOSCH
820	Powerstrain State	1	Unsigned	0	6	-	-	Powertrain State IO element indicates current powertrain state. 0-Off 1-Booting 2-Ready 3-Drive 4-Charge 5-Shutdown 6-Error	TFT100	CAN BOSCH
821	Malfunction Indicator	1	Unsigned	0	1	-	-	Malfunction Indication IO element indicates if malfunction indicator is active. 0-Malfunction Indicator Not Active 1-Malfunction Indicator Active	TFT100	CAN BOSCH
822	Current range	2	Unsigned	0	65535	-	-	Current Range IO element indicates currently measured current range	TFT100	CAN BOSCH
823	SoH Battery	1	Unsigned	0	100	-	%	SoH Battery IO element indicates currently measured batery SoH.	TFT100	CAN BOSCH
824	SoC Battery	1	Unsigned	0	100	-	%	SoC Battery IO element indicates currently measured batery SoC.	TFT100	CAN BOSCH
825	Vehicle available	1	Unsigned	0	1	-	-	Vehicle Available IO element indicates if vehicle is currently available or not. 0-Vehicle Not Available 1-Vehicle Available	TFT100	CAN BOSCH
826	Charging Active	1	Unsigned	0	1	-	-	Charging Active IO element indicates if charging is currently active or not. 0-Charging Not Active 1-Charging Active	TFT100	CAN BOSCH
827	Remaining Charge Time	2	Unsigned	0	65535	-	min	Remaining Charging Time IO element indicates remaining charging time until vehicle is fully charged.	TFT100	CAN BOSCH
828	Remaining Capacity	2	Unsigned	0	65535	-	Ah	Remaining Capacity IO element indicates reimaining battery capacity.	TFT100	CAN BOSCH
829	Full Charge Capacity	2	Unsigned	0	65535	-	Ah	Full Charge Capacity IO element indicates full charge battery capacity.	TFT100	CAN BOSCH
830	Driving direction	1	Unsigned	0	3	-	-	Driving Direction IO element indicates current vehicle driving direction. 0-Park 1-Reverse 2-Forward 3-Neutral	TFT100	CAN BOSCH
831	Drive Mode	1	Unsigned	0	3	-	-	Drive Mode IO element indicates current vehicle drive mode. 0-Go 1-Cruise 2-Boost 3-Reserved1	TFT100	CAN BOSCH
832	Park Brake Active	1	Unsigned	0	1	-	-	Park Brake Active IO element indicates if park brake is currently active or not. 0-Park Brake Not Active 1-Park Brake Active	TFT100	CAN BOSCH
833	Total Distance	4	Unsigned	0	1048575	-	km	Total Distance IO element indicates measured vehicle total traveled distance.	TFT100	CAN BOSCH
834	Trip Distance	4	Unsigned	0	4095000	-	m	Trip Distance IO element indicates measured vehicle traveled distance during current trip.	TFT100	CAN BOSCH
835	Vehicle speed	1	Unsigned	0	255	-	km/h	Vehicle Speed IO element indicates currently measured vehicle speed in km/h.	TFT100	CAN BOSCH
836	Ignition Status	1	Unsigned	0	7	-	-	Ignition Status IO element current vehicle ignition status. 0-IGN_LOCK 1-IGN_OFF 2-IGN_ACC 3-Free 4-IGN_ON 5-IGN_START 6-LeM_NM:IGN_OFF 7-LeM_NM:IGN_ON	TFT100	CAN BOSCH

837	Ignition Fast Status	1	Unsigned	0	1	-	-	Ignition Fast Status IO element indicates if ignition is active or not. 0-Ignition Not Active 1-Ignition Active	TFT100	CAN BOSCH
838	Power Consumption	2	Unsigned	0	65535	-	Wh/km	Power Consumption IO element indicates currently measured vehicle power consumption in	TFT100	CAN BOSCH
1121	CAN Unlocked	2	Unsigned	0	1	-	-	Defines if vehicle is unlocked	TFT100	CAN BOSCH
1122	BMS2 Temperature Current Max	2	Signed	-40	86	-	°C		TFT100	CAN BOSCH
1123	BMS2 Temperature Current Min	2	Signed	-40	86	-	°C		TFT100	CAN BOSCH
1124	BMS2 Voltage Cell Min	4	Unsigned	0	7000	-	mV		TFT100	CAN BOSCH
1125	BMS2 Voltage Cell Max	4	Unsigned	0	7000	-	mV		TFT100	CAN BOSCH
1100	BMS0 Temperature Current Max	2	Signed	-40	86	-	°C		TFT100	CAN BOSCH
1101	BMS0 Temperature Current Min	2	Signed	-40	86	-	°C		TFT100	CAN BOSCH
11002	BMS0 Voltage Cell Min	4	Unsigned	0	7000	-	mV		TFT100	CAN BOSCH
11003	BMS0 Voltage Cell Max	4	Unsigned	0	7000	-	mV		TFT100	CAN BOSCH
1104	BMS1 Temperature Current Max	2	Signed	-40	86	-	°C		TFT100	CAN BOSCH
1105	BMS1 Temperature Current Min	2	Signed	-40	86	-	°C		TFT100	CAN BOSCH
1106	BMS1 Voltage Cell Min	4	Unsigned	0	7000	-	mV		TFT100	CAN BOSCH
1107	BMS1 Voltage Cell Max	4	Unsigned	0	7000	-	mV		TFT100	CAN BOSCH

CAN Askoll I/O elements

Property ID in AVL packet	Property Name	Bytes	Type	Value range		Multiplier	Units	Description	HW Support	Parameter Group
				Min	Max					
804	Charger Voltage	2	Unsigned	0	0xFFFF	-	mV		TFT100	CAN ASKOLL
805	Charger Current	2	Unsigned	0	0xFFFF	-	mA		TFT100	CAN ASKOLL
821	Malfunction Indication	1	Unsigned	0	1	-	-	0 – Malfunction Indicator Not Active; 1 - Active	TFT100	CAN ASKOLL
822	Current Range	2	Unsigned	0	0xFFFF	-	km		TFT100	CAN ASKOLL
824	SoC Battery	1	Unsigned	0	100	-	%	Indicates currently measured batery SoC in %.	TFT100	CAN ASKOLL
824	SoC Battery	1	Unsigned	0	100	-	%	Indicates currently measured batery SoC.	TFT100	CAN ASKOLL
828	SoC Battery	2	Unsigned	0	0xFFFF	-	Ah	Indicates reimaining battery capacity in Ah.	TFT100	CAN ASKOLL
828	Remaining Battery	2	Unsigned	0	0xFFFF	-	Ah	Indicates reimaining battery capacity.	TFT100	CAN ASKOLL
833	Total Distance	4	Unsigned	0	0xFFFFFFFF	-	km	Indicates measured vehicle total traveled distance.	TFT100	CAN ASKOLL
835	Vehicle Speed	1	Unsigned	0	0xFF	-	km/h	Inicates currently measured vehicle speed.	TFT100	CAN ASKOLL
837	Ignition Fast Status	1	Unsigned	0	1	-	-	Indicates if ignition is active or not. 0 – not active, 1 - active.	TFT100	CAN ASKOLL
843	Helmet Status	1	Unsigned	0	1	-	-	Indicates if Helmet is in or not. 0 – not in, 1 – in.	TFT100	CAN ASKOLL
844	Top Case Sensor	1	Unsigned	0	1	-	-	Indicates if Top Case is open or closed. 0 – closed, 1 – open.	TFT100	CAN ASKOLL
845	Central Stand Up	1	Unsigned	0	1	-	-	Indicates if central stand is up or down. 0 – down, 1 – up.	TFT100	CAN ASKOLL
846	Vehicle Lock	1	Unsigned	0	1	-	-	Indicates if vehicle is locked or not. 0 – unlocked, 1 - locked	TFT100	CAN ASKOLL
847	Over-Under Temperature	1	Unsigned	0	1	-	-	Indicates if there is battery over or under temperature warning. 0 – normal temperature, 1 – over-under temperature	TFT100	CAN ASKOLL
848	Regeneration Disabled	1	Unsigned	0	1	-	-	Indicates if battery regeneration is disabled. 0 – enabled, 1 – disabled.	TFT100	CAN ASKOLL
849	Battery On/Off	1	Unsigned	0	1	-	-	Indicates if battery is on or off. 0 – Battery Off, 1 – Battery On	TFT100	CAN ASKOLL
850	Warning UnderVoltage	1	Unsigned	0	1	-	-	Indicates if there is battery undervoltage warning. 0 – no battery undervoltage, 1 – battery undervoltage.	TFT100	CAN ASKOLL

851	Warning OverVoltage	1	Unsigned	0	1	-	-	Indicates if there is battery overvoltage warning. 0 – No battery overvoltage, 1 – battery overvoltage.	TFT100	CAN ASKOLL
852	Warning OverCurrent	1	Unsigned	0	1	-	-	Indicates if there is battery overcurrent warning. 0 – No battery overcurrent, 1 – battery overcurrent.	TFT100	CAN ASKOLL
853	Warning Short Circuit	1	Unsigned	0	1	-	-	Indicates if there is battery short circuit warning. 0 – No battery short circuit, 1 – battery short circuit.	TFT100	CAN ASKOLL
20015	Seat Sensor	1	Unsigned	0	1	-	-	Seat Sensor status	TFT100	CAN ASKOLL
20016	Central Stand Lock	1	Unsigned	0	1	-	-	Central Stand Lock status	TFT100	CAN ASKOLL

Manual CAN I/O elements

Property ID in AVL packet	Property Name	Bytes	Type	Value range		Multiplier	Units	Description	HW Support	Parameter Group
				Min	Max					
900	Manual CAN 0	8	Unsigned	0	0xFFFFFFFFFFFFFFFF	-	-	Manual CAN0	TFT100	Manual CAN
901	Manual CAN 1	8	Unsigned	0	0xFFFFFFFFFFFFFFFF	-	-	Manual CAN1	TFT100	Manual CAN
902	Manual CAN 2	8	Unsigned	0	0xFFFFFFFFFFFFFFFF	-	-	Manual CAN2	TFT100	Manual CAN
903	Manual CAN 3	8	Unsigned	0	0xFFFFFFFFFFFFFFFF	-	-	Manual CAN3	TFT100	Manual CAN
904	Manual CAN 4	8	Unsigned	0	0xFFFFFFFFFFFFFFFF	-	-	Manual CAN4	TFT100	Manual CAN
905	Manual CAN 5	8	Unsigned	0	0xFFFFFFFFFFFFFFFF	-	-	Manual CAN5	TFT100	Manual CAN
906	Manual CAN 6	8	Unsigned	0	0xFFFFFFFFFFFFFFFF	-	-	Manual CAN6	TFT100	Manual CAN
907	Manual CAN 7	8	Unsigned	0	0xFFFFFFFFFFFFFFFF	-	-	Manual CAN7	TFT100	Manual CAN
908	Manual CAN 8	8	Unsigned	0	0xFFFFFFFFFFFFFFFF	-	-	Manual CAN8	TFT100	Manual CAN
909	Manual CAN 9	8	Unsigned	0	0xFFFFFFFFFFFFFFFF	-	-	Manual CAN9	TFT100	Manual CAN
910	Manual CAN 10	8	Unsigned	0	0xFFFFFFFFFFFFFFFF	-	-	Manual CAN10	TFT100	Manual CAN
911	Manual CAN 11	8	Unsigned	0	0xFFFFFFFFFFFFFFFF	-	-	Manual CAN11	TFT100	Manual CAN
912	Manual CAN 12	8	Unsigned	0	0xFFFFFFFFFFFFFFFF	-	-	Manual CAN12	TFT100	Manual CAN
913	Manual CAN 13	8	Unsigned	0	0xFFFFFFFFFFFFFFFF	-	-	Manual CAN13	TFT100	Manual CAN
914	Manual CAN 14	8	Unsigned	0	0xFFFFFFFFFFFFFFFF	-	-	Manual CAN14	TFT100	Manual CAN
915	Manual CAN 15	8	Unsigned	0	0xFFFFFFFFFFFFFFFF	-	-	Manual CAN15	TFT100	Manual CAN
916	Manual CAN 16	8	Unsigned	0	0xFFFFFFFFFFFFFFFF	-	-	Manual CAN16	TFT100	Manual CAN
917	Manual CAN 17	8	Unsigned	0	0xFFFFFFFFFFFFFFFF	-	-	Manual CAN17	TFT100	Manual CAN
918	Manual CAN 18	8	Unsigned	0	0xFFFFFFFFFFFFFFFF	-	-	Manual CAN18	TFT100	Manual CAN
919	Manual CAN 19	8	Unsigned	0	0xFFFFFFFFFFFFFFFF	-	-	Manual CAN19	TFT100	Manual CAN
920	Manual CAN 20	8	Unsigned	0	0xFFFFFFFFFFFFFFFF	-	-	Manual CAN20	TFT100	Manual CAN
921	Manual CAN 21	8	Unsigned	0	0xFFFFFFFFFFFFFFFF	-	-	Manual CAN21	TFT100	Manual CAN
922	Manual CAN 22	8	Unsigned	0	0xFFFFFFFFFFFFFFFF	-	-	Manual CAN22	TFT100	Manual CAN

923	Manual CAN 23	8	Unsigned	0	0xFFFFFFFFFFFFFFFF	-	-	Manual CAN23	TFT100	Manual CAN
924	Manual CAN 24	8	Unsigned	0	0xFFFFFFFFFFFFFFFF	-	-	Manual CAN24	TFT100	Manual CAN
925	Manual CAN 25	8	Unsigned	0	0xFFFFFFFFFFFFFFFF	-	-	Manual CAN25	TFT100	Manual CAN
926	Manual CAN 26	8	Unsigned	0	0xFFFFFFFFFFFFFFFF	-	-	Manual CAN26	TFT100	Manual CAN
927	Manual CAN 27	8	Unsigned	0	0xFFFFFFFFFFFFFFFF	-	-	Manual CAN27	TFT100	Manual CAN
928	Manual CAN 28	8	Unsigned	0	0xFFFFFFFFFFFFFFFF	-	-	Manual CAN28	TFT100	Manual CAN
929	Manual CAN 29	8	Unsigned	0	0xFFFFFFFFFFFFFFFF	-	-	Manual CAN29	TFT100	Manual CAN

Default J1939 I/O elements

Property ID in AVL packet	Property Name	Bytes	Type	Value range		Multiplier	Units	Description	HW Support	Parameter Group
				Min	Max					
930	Accelerator Pedal 1 Low Idle Switch	8	Unsigned	0	3	-	-	Switch signal which indicates the state of the accelerator pedal 1 low idle switch. 0 - Accelerator pedal 1 not in low idle condition 1 - Accelerator pedal 1 in low idle condition 2 - Error 3 - Not available	TFT100	Default J1939
931	Accelerator Pedal Kickdown Switch	8	Unsigned	0	3	-	-	Switch signal which indicates whether the accelerator pedal kickdown switch is opened or closed. 0 - Kickdown passive 1 - Kickdown active 2 - Error 3 - Not available	TFT100	Default J1939
932	Road Speed Limit Status	8	Unsigned	0	3	-	-	Status (active or not active) of the system used to limit maximum vehicle velocity. 0 - Active 1 - Not Active 2 - Error 3 - Not available	TFT100	Default J1939
933	Accelerator Pedal 2 Low Idle Switch	8	Unsigned	0	3	-	-	Switch signal which indicates the state of the accelerator pedal 2 low idle switch. 0 - Accelerator pedal 2 not in low idle condition 1 - Accelerator pedal 2 in low idle condition 2 - Error 3 - Not available	TFT100	Default J1939
934	Accelerator Pedal Position 1	8	Unsigned	0	100	-	%	This parameter is intended for the primary accelerator control in an application.	TFT100	Default J1939
936	Engine Percent Load At Current Speed	8	Unsigned	0	250	-	%	The ratio of actual engine percent torque (indicated) to maximum indicated torque available at the current engine speed, clipped to zero torque during engine braking.	TFT100	Default J1939
937	Remote Accelerator Pedal Position	8	Unsigned	0	100	-	%	The ratio of actual position of the remote analog engine speed/torque request input device (such as an accelerator pedal or throttle lever) to the maximum position of the input device.	TFT100	Default J1939

938	Accelerator Pedal 2 Position	8	Unsigned	0	10	-	%	The ratio of actual position of the second analog engine speed/torque request input device (such as an accelerator pedal or throttle lever) to the maximum position of the input device. This parameter is intended for secondary accelerator control in an application.	TFT100	Default J1939
939	Vehicle Acceleration Rate Limit Status	8	Unsigned	0	3	-	-	Status (active or not active) of the system used to limit maximum forward vehicle acceleration. 0 - Limit not active 1 - Limit active 2 - Reserved 3 - Not available	TFT100	Default J1939
940	Momentary Engine Maximum Power Enable Feedback	8	Unsigned	0	3	-	-	Momentarily requesting Engine Maximum Power Enable - feature support feedback 0 - disabled 1 - supported 2 - reserved 3 - don't care	TFT100	Default J1939
941	DPF Thermal Management Active	8	Unsigned	0	3	-	-	Indicates that the exhaust temperatures have been elevated for regeneration of the diesel particulate filter aftertreatment system or in preparation of regeneration of the diesel particulate aftertreatment system. 0 - DPF Thermal Management is not active 1 - DPF Thermal Management is active 2 - Reserved 3 - Don't care	TFT100	Default J1939
942	SCR Thermal Management Active	8	Unsigned	0	3	-	-	Indicates that the exhaust temperatures have been elevated for regeneration of the SCR aftertreatment system or in preparation of regeneration of the SCR aftertreatment system. 0 - SCR Thermal Management is not active 1 - SCR Thermal Management is active 2 - Reserved 3 - Don't care	TFT100	Default J1939
943	Actual Maximum Available Engine - Percent Torque	8	Unsigned	0	100	-	%	This is the maximum amount of torque that the engine can immediately deliver as a percentage of the reference engine torque.	TFT100	Default J1939
944	Estimated Pumping - Percent Torque	8	Unsigned	-125	125	-	%	The calculated torque that indicates the estimated amount of torque loss due to the engine air handling system.	TFT100	Default J1939
945	Engine Torque Mode	8	Unsigned	0	15	-	-	State signal which indicates which engine torque mode is currently generating, limiting, or controlling the torque. Mode 0 - “No request”: engine torque may range from 0 to full load only due to low idle governor output. Modes 1 to 14 indicate that there is either a torque request or the identified function is currently controlling the engine: engine torque may range from 0 (no fueling) to the upper limit. Mode 15 -	TFT100	Default J1939

946	Actual Engine - Percent Torque (Fractional)	8	Unsigned	0	0.875	-	%	This parameter displays an additional torque in percent of the reference engine torque. 0 - +0.000% 1 - +0.125% ... 9 - +0.875% 10 to 15 - not available	TFT100	Default J1939
947	Driver's Demand Engine - Percent Torque	8	Unsigned	-125	125	-	%	The requested torque output of the engine by the driver.	TFT100	Default J1939
948	Actual Engine - Percent Torque	8	Unsigned	-125	125	-	%	The calculated output torque of the engine.	TFT100	Default J1939
949	Engine Speed	8	Unsigned	0	8031.875	-	rpm	Actual engine speed which is calculated over a minimum crankshaft angle of 720 degrees divided by the number of cylinders.	TFT100	Default J1939
950	Source Address of Controlling Device for Engine Control	8	Unsigned	0	255	-	SA	The source address of the SAE J1939 device currently controlling the engine.	TFT100	Default J1939
951	Engine Starter Mode	8	Unsigned	0	15	-	-	There are several phases in a starting action and different reasons why a start cannot take place. 0 - start not requested 1 - starter active but not engaged 2 - starter active and engaged 3 - start finished; starter not active after having been actively engaged (after 50ms mode goes to 0) 4 - starter inhibited due to engine already running 5 - starter inhibited due to engine not ready for start (preheating) 6 - starter inhibited due to driveline engaged or other transmission inhibit 7 - starter inhibited due to active immobilizer 8 - starter inhibited due to starter over-temp 9 - starter inhibited due to intake air shutoff valve being active 10 - starter inhibited due to active emissions control system condition 11 - starter inhibited due to ignition key cycle required 12 - starter inhibited - reason unknown 13 - error (legacy implementation only, use 14) 14 - error 15 - not available	TFT100	Default J1939
952	Engine Demand – Percent Torque	8	Unsigned	-125	125	-	%	The calculated torque that indicates the estimated amount of torque loss due to the engine air handling system.	TFT100	Default J1939
953	Aftertreatment 1 Diesel Oxidation Catalyst Intake Temperature	8	Unsigned	-273	1734.96875	-	°C	Temperature of engine combustion byproducts entering the diesel oxidation catalyst in exhaust bank 1.	TFT100	Default J1939
954	Aftertreatment 1 Diesel Oxidation Catalyst Outlet Temperature	8	Unsigned	-273	1734.96875	-	°C	Temperature of engine combustion byproducts leaving the diesel oxidation catalyst exhaust in exhaust bank 1.	TFT100	Default J1939
955	Aftertreatment 1 Diesel Oxidation Catalyst Differential Pressure	8	Unsigned	0	6425.5	-	kPa	Exhaust differential pressure measured between the intake and exhaust of a diesel oxidation catalyst in exhaust bank 1.	TFT100	Default J1939
956	Aftertreatment 1 Diesel Oxidation Catalyst Intake Temperature Preliminary FMI	8	Unsigned	0	31	-	-	Used to identify the applicable J1939-73 FMI detected in the diesel oxidation catalyst intake temperature sensor by the manufacturer's sensor control software in exhaust bank 1. A value of 31 is sent to indicate that no failure has been detected or this parameter is not supported.	TFT100	Default J1939

957	Aftertreatment 1 Diesel Oxidation Catalyst Outlet Temperature Preliminary FMI	8	Unsigned	0	31	-	-	Used to identify the applicable J1939-73 FMI detected in the diesel oxidation catalyst outlet gas temperature sensor by the manufacturer's sensor control software in exhaust bank 1. A value of 31 is sent to indicate that no failure has been detected or this parameter is not supported.	TFT100	Default J1939
958	Aftertreatment 1 Diesel Oxidation Catalyst Differential Pressure Preliminary FMI	8	Unsigned	0	31	-	-	Used to identify the applicable J1939-73 FMI detected in the diesel oxidation catalyst differential pressure sensor by the manufacturer's sensor control software in exhaust bank 1. A value of 31 is sent to indicate that no failure has been detected or this parameter is not supported.	TFT100	Default J1939
959	Aftertreatment 1 Diesel Particulate Filter Soot Load Percent	8	Unsigned	0	250	-	%	Indicates the soot load percent of diesel particulate filter 1.	TFT100	Default J1939
960	Aftertreatment 1 Diesel Particulate Filter Ash Load Percent	8	Unsigned	0	250	-	%	Indicates the ash load percent of diesel particulate filter 1.	TFT100	Default J1939
961	Aftertreatment 1 Diesel Particulate Filter Time Since Last Active Regeneration	8	Unsigned	0	42110812 15	-	s	Indicates the time since the last active regeneration event of diesel particulate filter 1.	TFT100	Default J1939
962	Aftertreatment 1 Diesel Particulate Filter Soot Load Regeneration Threshold	8	Unsigned	0	160.6375	-	%	This parameter indicates the value that will first cause DPF regeneration in aftertreatment 1.	TFT100	Default J1939
963	Aftertreatment 1 Exhaust Temperature 2	8	Unsigned	-273	1734.96875	-	°C	The reading from the exhaust temperature sensor located midstream of the other two temperature sensors in the aftertreatment system in exhaust bank 1.	TFT100	Default J1939
964	Aftertreatment 1 Diesel Particulate Filter Intermediate Temperature	8	Unsigned	-273	1734.96875	-	°C	Temperature of engine combustion byproducts at a mid-point in the diesel particulate filter in exhaust bank 1.	TFT100	Default J1939
965	Aftertreatment 1 Diesel Particulate Filter Differential Pressure	8	Unsigned	0	6425.5	-	kPa	Exhaust differential pressure measured between the intake and exhaust of a diesel particulate filter in exhaust bank 1.	TFT100	Default J1939
966	Aftertreatment 1 Exhaust Temperature 2 Preliminary FMI	8	Unsigned	0	31	-	-	Used to identify the applicable J1939-73 FMI detected in the exhaust temperature 2 sensor by the manufacturer's sensor control software in exhaust bank 1. In the case of multiple failures the most severe is communicated. A value of 31 is sent to indicate that no failure has been detected or this parameter is not supported.	TFT100	Default J1939
967	Aftertreatment 1 Diesel Particulate Filter Differential Pressure Preliminary FMI	8	Unsigned	0	31	-	-	Used to identify the applicable J1939-73 FMI detected in the diesel particulate filter differential pressure sensor by the manufacturer's sensor control software in exhaust bank 1. In the case of multiple failures the most severe is communicated. A value of 31 is sent to indicate that no failure has been detected or this parameter is not supported.	TFT100	Default J1939

968	Aftertreatment 1 Diesel Particulate Filter Intermediate Temperature Preliminary FMI	8	Unsigned	0	31	-	-	Used to identify the applicable J1939-73 FMI detected in the diesel particulate filter intermediate temperature sensor by the manufacturer's sensor control software in exhaust bank 1. In the case of multiple failures the most severe is communicated. A value of 31 is sent to indicate that no failure has been detected or this parameter is not supported.	TFT100	Default J1939
969	Aftertreatment 1 Exhaust Temperature 1	8	Unsigned	-273	1734.96875	-	°C	The reading from the exhaust temperature sensor located farthest upstream in the aftertreatment system in exhaust bank 1.	TFT100	Default J1939
970	Aftertreatment 1 Diesel Particulate Filter Intake Temperature	8	Unsigned	-273	1734.96875	-	°C	Temperature of engine combustion byproducts entering the diesel particulate filter in exhaust bank 1.	TFT100	Default J1939
971	Aftertreatment 1 Exhaust Temperature 1 Preliminary FMI	8	Unsigned	0	31	-	-	Used to identify the applicable J1939-73 FMI detected in the exhaust temperature 1 sensor by the manufacturer's sensor control software in exhaust bank 1. In the case of multiple failures the most severe is communicated. A value of 31 is sent to indicate that no failure has been detected or this parameter is not supported.	TFT100	Default J1939
972	Aftertreatment 1 Diesel Particulate Filter Intake Temperature Preliminary FMI	8	Unsigned	0	31	-	-	Used to identify the applicable J1939-73 FMI detected in the diesel particulate filter intake temperature sensor by the manufacturer's sensor control software in exhaust bank 1. In the case of multiple failures the most severe is communicated. A value of 31 is sent to indicate that no failure has been detected or this parameter is not supported.	TFT100	Default J1939
973	Trip Fuel (Gaseous)	8	Unsigned	0	2105540507.5	-	kg	Total fuel consumed (trip drive fuel + trip PTO governor moving fuel + trip PTO governor non-moving fuel + trip idle fuel) since the last trip reset.	TFT100	Default J1939
974	Total Fuel Used (Gaseous)	8	Unsigned	0	2105540507.5	-	kg	Total fuel consumed (trip drive fuel + trip PTO governor moving fuel + trip PTO governor non-moving fuel + trip idle fuel) over the life of the engine.	TFT100	Default J1939
989	Trip Vehicle Distance	8	Unsigned	0	526385151.875	-	km	Distance traveled during all or part of a journey.	TFT100	Default J1939
990	Total Vehicle Distance	8	Unsigned	0	526385151.875	-	km	Accumulated distance traveled by vehicle during its operation.	TFT100	Default J1939
991	Engine Total Hours of Operation	8	Unsigned	0	2105540600.75	-	h	Accumulated time of operation of engine.	TFT100	Default J1939
992	Engine Total Revolutions	8	Unsigned	0	4211081215000	-	r	Accumulated number of revolutions of engine crankshaft during its operation.	TFT100	Default J1939
993	Total Vehicle Hours	8	Unsigned	0	2105540600.75	-	h	Accumulated time of operation of vehicle.	TFT100	Default J1939
994	Total Power Takeoff Hours	8	Unsigned	0	2105540600.75	-	h	Accumulated time of operation of power takeoff device.	TFT100	Default J1939
995	Engine Trip Fuel	8	Unsigned	0	2105540507.5	-	l	Fuel consumed during all or part of a journey.	TFT100	Default J1939
996	Engine Total Fuel Used	8	Unsigned	0	2105540507.5	-	l	Accumulated amount of fuel used during vehicle operation.	TFT100	Default J1939
1002	Engine Coolant Temperature	8	Unsigned	-40	210	-	°C	Temperature of liquid found in engine cooling system.	TFT100	Default J1939

1003	Engine Fuel 1 Temperature 1	8	Unsigned	-40	210	-	°C	Temperature of fuel (or gas) of the first fuel type.	TFT100	Default J1939
1004	Engine Oil Temperature 1	8	Unsigned	-273	1734.96875	-	°C	Temperature of the engine lubricant.	TFT100	Default J1939
1005	Engine Turbocharger 1 Oil Temperature	8	Unsigned	-273	1734.96875	-	°C	Temperature of the turbocharger lubricant.	TFT100	Default J1939
1006	Engine Intercooler Temperature	8	Unsigned	-40	210	-	°C	Temperature of liquid found in the intercooler located after the turbocharger.	TFT100	Default J1939
1007	Engine Charge Air Cooler Thermostat Opening	8	Unsigned	0	100	-	%	The current position of the thermostat used to regulate the temperature of the engine charge air cooler. A value of 0% represents the thermostat being completely closed and 100% represents the thermostat being completely open.	TFT100	Default J1939
1008	Engine Fuel Delivery Pressure	8	Unsigned	0	1000	-	kPa	Gage pressure of fuel in system as delivered from supply pump to the injection pump.	TFT100	Default J1939
1009	Engine Extended Crankcase Blow-by Pressure	8	Unsigned	0	12.5	-	kPa	Differential crankcase blow-by pressure as measured through a tube with a venturi.	TFT100	Default J1939
1010	Engine Oil Level	8	Unsigned	0	100	-	%	Ratio of current volume of engine sump oil to maximum required volume.	TFT100	Default J1939
1011	Engine Oil Pressure 1	8	Unsigned	0	1000	-	kPa	Gage pressure of oil in engine lubrication system as provided by oil pump.	TFT100	Default J1939
1012	Engine Crankcase Pressure 1	8	Unsigned	-250	251.99	-	kPa	First instance of the gage pressure inside engine crankcase.	TFT100	Default J1939
1013	Engine Coolant Pressure 1	8	Unsigned	0	500	-	kPa	Gage pressure of liquid found in engine cooling system.	TFT100	Default J1939
1014	Engine Coolant Level 1	8	Unsigned	0	100	-	%	Ratio of volume of liquid found in engine cooling system to total cooling system volume.	TFT100	Default J1939
1015	Two Speed Axle Switch	8	Unsigned	0	3	-	-	Switch signal which indicates the current axle range. 0 - Low speed range 1 - High speed range 2 - Error 3 - Not available	TFT100	Default J1939
1016	Two Speed Axle Switch	8	Unsigned	0	3	-	-	Switch signal which indicates when the parking brake is set. 0 - Parking brake not set 1 - Parking brake set 2 - Error 3 - Not available	TFT100	Default J1939
1017	Cruise Control Pause Switch	8	Unsigned	0	3	-	-	Switch signal which indicates the position of the Cruise Control Pause Switch used on Remote Cruise Control applications. The Cruise Control Pause Switch signal temporarily disables the Cruise Control function. 0 - Off 1 - On 2 - Error Indicator 3 - Take No Action	TFT100	Default J1939
1018	Park Brake Release Inhibit Request	8	Unsigned	0	3	-	-	Park Brake Release Inhibit Request signals the desire that an applied park brake remain applied and limit the ability of the vehicle to be moved. 0 - Park Brake Release Inhibit not requested 1 - Park Brake Release Inhibit requested 2 - SAE reserved 3 - Unavailable	TFT100	Default J1939

1019	Wheel-Based Vehicle Speed	8	Unsigned	0	250.996	-	km/h	Speed of the vehicle as calculated from wheel or tailshaft speed.	TFT100	Default J1939
1020	Cruise Control Active	8	Unsigned	0	3	-	-	Cruise control is switched on. 0 - Cruise control switched off 1 - Cruise control switched on 2 - Error 3 - Not available	TFT100	Default J1939
1021	Cruise Control Enable Switch	8	Unsigned	0	3	-	-	Switch signal which indicates that it is possible to manage the cruise control function. 0 - Cruise control disabled 1 - Cruise control enabled 2 - Error 3 - Not available	TFT100	Default J1939
1022	Brake Switch	8	Unsigned	0	3	-	-	Switch signal which indicates that the driver operated brake foot pedal is being pressed. 0 - Brake pedal released 1 - Brake pedal depressed 2 - Error 3 - Not Available	TFT100	Default J1939
1023	Clutch Switch	8	Unsigned	0	3	-	-	Switch signal which indicates that the clutch pedal is being pressed. 0 - Clutch pedal released 1 - Clutch pedal 2 - Error 3 - Not available	TFT100	Default J1939
1024	Cruise Control Set Switch	8	Unsigned	0	3	-	-	Switch signal of the cruise control activator which indicates that the activator is in the position "set." 0 - Cruise control activator not in the position "set" 1 - Cruise control activator in position "set" 2 - Error 3 - Not available	TFT100	Default J1939
1025	Cruise Control Coast (Decelerate) Switch	8	Unsigned	0	3	-	-	Switch signal of the cruise control activator which indicates that the activator is in the position "coast (decelerate)." 0 - Cruise control activator not in the position "coast" 1 - Cruise control activator in position "coast" 2 - Error 3 - Not available	TFT100	Default J1939
1026	Cruise Control Resume Switch	8	Unsigned	0	3	-	-	Switch signal of the cruise control activator which indicates that the activator is in the position "resume." 0 - Cruise control activator not in the position "resume" 1 - Cruise control activator in position "resume" 2 - Error 3 - Not available	TFT100	Default J1939
1027	Cruise Control Accelerate Switch	8	Unsigned	0	3	-	-	Switch signal of the cruise control activator which indicates that the activator is in the position "accelerate." 0 - Cruise control activator not in the position "accelerate" 1 - Cruise control activator in position "accelerate" 2 - Error 3 - Not available	TFT100	Default J1939
1028	Cruise Control Set Speed	8	Unsigned	0	250.996	-	km/h	Value of set (chosen) velocity of velocity control system.	TFT100	Default J1939

1029	PTO Governor State	8	Unsigned	0	3	-	-	Cruise control is switched on. It is not ensured that the engine is controlled by cruise control, as in the case of a large driver's demand the engine is controlled by the driver while cruise control is active (maximum selection of cruise control and driver's demand). 0 - Cruise control switched off 1 - Cruise control switched on 2 - Error 3 - Not available	TFT100	Default J1939
1030	Cruise Control States	8	Unsigned	0	31	-	-	This parameter is used to indicate the current state or mode of operation by the power takeoff (PTO) governor. 0 - Off/Disabled 1 - Hold 2 - Remote Hold 3 - Standby 4 - Remote Standby 5 - Set 6 - Decelerate/Coast 7 - Resume 8 - Accelerate 9 - Accelerator Override 10 - Preprogrammed set speed 1 11 - Preprogrammed set speed 2 12 - Preprogrammed set speed 3 13 - Preprogrammed set speed 4 14 - Preprogrammed set speed 5 15 - Preprogrammed set speed 6 16 - Preprogrammed set speed 7 17 - Preprogrammed set speed 8 18 - PTO set speed memory 1 19 - PTO set speed memory 2 20 - PTO set speed memory 3 21 - Reserved 22 - Reserved 23 - Reserved 24 - Reserved 25 - Reserved 26 - Reserved 27 - Reserved 28 - Reserved 29 - Reserved 30 - Reserved 31 - Not available	TFT100	Default J1939
1031	Engine Idle Increment Switch	8	Unsigned	0	7	-	-	This parameter is used to indicate the current state, or mode, of operation by the cruise control device. This is a status parameter. 0 - Off/Disabled 1 - Hold 2 - Accelerate 3 - Decelerate 4 - Resume 5 - Set 6 - Accelerator Override 7 - Not available	TFT100	Default J1939
1032	Engine Idle Decrement Switch	8	Unsigned	0	3	-	-	Switch signal which indicates the position of the idle increment switch. 0 - Off 1 - On 2 - Error 3 - Not available	TFT100	Default J1939
1033	Engine Diagnostic Test Mode Switch	8	Unsigned	0	3	-	-	Switch signal which indicates the position of the idle decrement switch. 0 - Off 1 - On 2 - Error 3 - Not available	TFT100	Default J1939

1033	Engine Diagnostic Test Mode Switch	8	Unsigned	0	3	-	-	Switch signal which indicates the position of the engine diagnostic test mode switch. 0 - Off 1 - On 2 - Error 3 - Not available	TFT100	Default J1939
1034	Engine Shutdown Override Switch	8	Unsigned	0	3	-	-	Switch signal which indicates the position of the engine shutdown override switch. This switch function allows the operator to override an impending engine shutdown. 0 - Off 1 - On 2 - Error 3 - Not available	TFT100	Default J1939
1035	Engine Fuel Rate	8	Unsigned	0	3212.75	-	l/h	Amount of fuel consumed by engine per unit of time.	TFT100	Default J1939
1036	Engine Instantaneous Fuel Economy	8	Unsigned	0	125.498046875	-	km/L	Current fuel economy at current vehicle velocity.	TFT100	Default J1939
1037	Engine Average Fuel Economy	8	Unsigned	0	125.498046875	-	km/L	Average of instantaneous fuel economy for that segment of vehicle operation of interest.	TFT100	Default J1939
1038	Engine Throttle Valve 1 Position 1	8	Unsigned	0	100	-	%	The position of the valve used to regulate the supply of a fluid, usually air or fuel/air mixture, to an engine. 0% represents no supply and 100% is full supply.	TFT100	Default J1939
1039	Engine Throttle Valve 2 Position	8	Unsigned	0	100	-	%	The sensed position feedback of the valve, coming from a second electrical actuator for a second throttle plate, used to regulate the supply of a fluid, usually air or fuel//air mixture. 0% represents no supply and 100% is full supply.	TFT100	Default J1939
1040	Barometric Pressure	8	Unsigned	0	125	-	kPa	Absolute air pressure of the atmosphere.	TFT100	Default J1939
1041	Cab Interior Temperature	8	Unsigned	-273	1734.96875	-	°C	Temperature of air inside the part of the vehicle that encloses the driver and vehicle operating controls.	TFT100	Default J1939
1042	Ambient Air Temperature	8	Unsigned	-273	1734.96875	-	°C	Temperature of air surrounding vehicle.	TFT100	Default J1939
1043	Engine Intake 1 Air Temperature	8	Unsigned	-40	210	-	°C	Temperature of air entering vehicle air induction system.	TFT100	Default J1939
1044	Road Surface Temperature	8	Unsigned	-273	1734.96875	-	°C	Indicated temperature of road surface over which vehicle is operating.	TFT100	Default J1939
1045	Aftertreatment 1 Diesel Particulate Filter Intake Pressure	8	Unsigned	0	125	-	kPa	Exhaust pressure as a result of particle accumulation on filter media placed in the exhaust stream.	TFT100	Default J1939
1046	Engine Intake Manifold #1 Pressure	8	Unsigned	0	500	-	kPa	The gauge pressure measurement of the air intake manifold. If there are multiple air pressure sensors in the intake stream, this is the last one in flow direction before entering the combustion chamber. This should be the pressure used to drive gauges and displays.	TFT100	Default J1939
1047	Engine Intake Manifold 1 Temperature	8	Unsigned	-40	210	-	°C	Temperature of pre-combustion air found in intake manifold of engine air supply system.	TFT100	Default J1939
1048	Engine Intake Air Pressure	8	Unsigned	0	500	-	kPa	Absolute air pressure at input port to intake manifold or air box.	TFT100	Default J1939
1049	Engine Air Filter 1 Differential Pressure	8	Unsigned	0	12.5	-	kPa	Change in engine air system pressure, measured across the filter, due to the filter and any accumulation of solid foreign matter on or in the filter.	TFT100	Default J1939

1050	Engine Exhaust Temperature	8	Unsigned	-273	1734.96875	-	°C	Temperature of combustion byproducts leaving the engine.	TFT100	Default J1939
1051	Engine Coolant Filter Differential Pressure	8	Unsigned	0	125	-	kPa	Change in coolant pressure, measured across the filter, due to the filter and any accumulation of solid or semisolid matter on or in the filter.	TFT100	Default J1939
1052	SLI Battery 1 Net Current	8	Unsigned	-125	125	-	A	Net flow of electrical current into/out of the first battery or first set of batteries used for starting the engine, for lighting, and for ignition (SLI).	TFT100	Default J1939
1053	Alternator Current	8	Unsigned	0	250	-	A	Measure of electrical current flow from the alternator.	TFT100	Default J1939
1054	Charging System Potential (Voltage)	8	Unsigned	0	3212.75	-	V	Electrical potential measured at the charging system output. The charging system may be any device charging the batteries. This includes alternators, generators, solid state charger and other charging devices.	TFT100	Default J1939
1055	Battery Potential / Power Input 1	8	Unsigned	0	3212.75	-	V	This parameter measures the first source of battery potential as measured at the input of the ECU/actuator etc. coming from one or more batteries, irrespective of the distance between the component and the battery.	TFT100	Default J1939
1056	Key Switch Battery Potential	8	Unsigned	0	3212.75	-	V	Battery potential measured at the input of the electronic control unit supplied through a key switch or similar switching device.	TFT100	Default J1939
1057	Transmission Clutch 1 Pressure	8	Unsigned	0	4000	-	kPa	Gage pressure of oil within a wet clutch.	TFT100	Default J1939
1058	Transmission Oil Level 1	8	Unsigned	0	100	-	%	First instance of a transmission oil level indicator. Conveys the ratio of volume of transmission sump oil to recommended volume.	TFT100	Default J1939
1059	Transmission Filter Differential Pressure	8	Unsigned	0	500	-	kPa	Change in transmission fluid pressure, measured after the filter, due to accumulation of solid or semisolid material on or in the filter.	TFT100	Default J1939
1060	Transmission 1 Oil Pressure	8	Unsigned	0	4000	-	kPa	Gage pressure of lubrication fluid in transmission 1, measured after pump.	TFT100	Default J1939
1061	Transmission Oil Temperature 1	8	Unsigned	-273	1734.96875	-	°C	First instance of transmission lubricant temperature.	TFT100	Default J1939
1062	Transmission Oil Level 1 High / Low	8	Unsigned	-62.5	62.5	-	l	First instance of a transmission oil level indicator. Conveys the amount of current volume of transmission sump oil compared to recommended volume. Positive values indicate overfill. Zero means the transmission fluid is filled to the recommended level.	TFT100	Default J1939

1063	Transmission Oil Level 1 Countdown Timer	8	Unsigned	0	15	-	-	Countdown timer for the first instance of a transmission oil level indicator. Once all vehicle conditions (such as vehicle stopped, etc) are met, some transmissions may require a 'settling time' to allow the fluid level to normalize. This parameter indicates how much of the required settling time remains. 0 - less than 1 minute 1 - One minute 2 - Two minutes 3 - Three minutes 4 - Four minutes 5 - Five minutes 6 - Six minutes 7 - Seven minutes 8 - Eight minutes 9 - Nine minutes 10 - Ten minutes 11 - Eleven minutes 12 - Twelve minutes 13 - Thirteen minutes 14 - Error 15 - Not Available	TFT100	Default J1939
1064	Transmission Oil Level 1 Measurement Status	8	Unsigned	0	15	-	-	Measurement status for the first instance of a transmission oil level indicator. If conditions are not acceptable, this parameter conveys to the operator what prevents conditions from being acceptable. 0 - Conditions valid for transmission oil level measurement 1 - Conditions not valid – Settling timer still counting down 2 - Conditions not valid – Transmission in gear 3 - Conditions not valid – Transmission fluid temperature too low 4 - Conditions not valid – Transmission fluid temperature too high 5 - Conditions not valid – Vehicle moving; output shaft speed too high 6 - Conditions not valid – Vehicle not level 7 - Conditions not valid – Engine speed too low 8 - Conditions not valid – Engine speed too high 9 - Conditions not valid – No request for reading 10 - Not defined 11 - Not defined 12 - Not defined 13 - Conditions not valid - Other 14 - Error 15 - Not available	TFT100	Default J1939
1065	Washer Fluid Level	8	Unsigned	0	100	-	%	Ratio of volume of liquid to total container volume of fluid reservoir in windshield wash system.	TFT100	Default J1939
1066	Fuel Level 1	8	Unsigned	0	100	-	%	Ratio of volume of fuel to the total volume of fuel storage container.	TFT100	Default J1939
1067	Engine Fuel Filter Differential Pressure	8	Unsigned	0	500	-	kPa	Change in fuel delivery pressure, measured across the filter, due to accumulation of solid or semisolid matter on the filter element.	TFT100	Default J1939
1068	Engine Oil Filter Differential Pressure	8	Unsigned	0	125	-	kPa	Change in engine oil pressure, measured across the filter, due to the filter and any accumulation of solid or semisolid material on or in the filter.	TFT100	Default J1939

1069	Cargo Ambient Temperature	8	Unsigned	-273	1734.96875	-	°C	Temperature of air inside vehicle container used to accommodate cargo.	TFT100	Default J1939
1070	Fuel Level 2	8	Unsigned	0	100	-	%	Ratio of volume of fuel to the total volume of fuel in the second or right-side storage container.	TFT100	Default J1939
1071	Engine Oil Filter Differential Pressure (Extended Range)	8	Unsigned	0	1250	-	kPa	Change in engine oil pressure, measured across the filter, due to the filter and any accumulation of solid or semisolid material on or in the filter.	TFT100	Default J1939

FLEX I/O elements

Property ID in AVL packet	Property Name	Bytes	Type	Value range		Multiplier	Units	Description	HW Support	Parameter Group
				Min	Max					
815	Throttle Position	8	Unsigned	0	100	-	%	Throttle position in percentage	TFT100	CAN FLEX
816	Brake Pressed	8	Unsigned	0	1	-	-	Brake Pressed	TFT100	CAN FLEX
817	Charge Plugged	8	Unsigned	0	1	-	-	Charge plugged	TFT100	CAN FLEX
818	Kill Switch Active	8	Unsigned	0	1	-	-	Kill switch status	TFT100	CAN FLEX
819	Kistand Release Status	8	Unsigned	0	1	-	-	Kistand release status	TFT100	CAN FLEX
820	Powerstrain State	8	Unsigned	0	7	-	-	Powerstrain state	TFT100	CAN FLEX
821	Malfunction Indication	8	Unsigned	0	1	-	-	Malfunction indication	TFT100	CAN FLEX
822	Estimated Range	8	Unsigned	0	65535	-	km	Estimated range	TFT100	CAN FLEX
824	SoC Battery	8	Unsigned	0	100	-	%	SoC Battery level in percentage	TFT100	CAN FLEX
828	Remaining Capacity	8	Unsigned	0	65535	-	Ah	Remaining capacity	TFT100	CAN FLEX
829	Full Charge Capacity	8	Unsigned	0	65535	-	Ah	Full Charge Capacity	TFT100	CAN FLEX
831	Drive Mode	8	Unsigned	0	3	-	-	Drive Mode state	TFT100	CAN FLEX
833	Total Distance	8	Unsigned	0	1048575	-	km	Total Distance traveled	TFT100	CAN FLEX
835	Vehicle Speed	8	Unsigned	0	255	-	km/h	Vehicle speed	TFT100	CAN FLEX
836	Ignition Status	8	Unsigned	0	255	-	-	Current ignition status	TFT100	CAN FLEX
844	Top Case Sensor	8	Unsigned	0	1	-	-	Top Case sensor indicator	TFT100	CAN FLEX
1126	Max Available Power	8	Unsigned	0	36000	-	W	Maximum available power	TFT100	CAN FLEX
1127	Handlebar Lock	8	Unsigned	0	1	-	-	Handlebar lock status	TFT100	CAN FLEX
1128	Rear Brake Pressed	8	Unsigned	0	1	-	-	Rear brake status	TFT100	CAN FLEX
1129	COM Error	8	Unsigned	0	1	-	-	COM Error	TFT100	CAN FLEX
1130	RPM	8	Unsigned	0	1	-	rpm	RPM	TFT100	CAN FLEX
1131	Torque Current	8	Unsigned	0	1	-	A	Torque current	TFT100	CAN FLEX
1132	SN High	8	Unsigned	-	-	-	-	SN High	TFT100	CAN FLEX
1133	SN Low	8	Unsigned	-	-	-	-	SN Low	TFT100	CAN FLEX
1134	Lowest Battery Voltage	8	Unsigned	0	65535	-	mV	Lowest battery voltage	TFT100	CAN FLEX
1135	Lowest Battery ID	8	Unsigned	-	-	-	-	Lowest battery ID	TFT100	CAN FLEX
1136	Highest Battery Voltage	8	Unsigned	0	65535	-	mV	Highest battery voltage	TFT100	CAN FLEX
1137	Highest Battery ID	8	Unsigned	-	-	-	-	Highest battery ID	TFT100	CAN FLEX
1138	Highest Mismatch Voltage	8	Unsigned	0	65535	-	mV	Highest mismatch voltage	TFT100	CAN FLEX
1139	Highest Mismatch ID	8	Unsigned	-	-	-	-	Highest mismatch ID	TFT100	CAN FLEX
1140	Lowest Battery Temperature	8	Unsigned	0	65535	-	°C	Lowest battery temperature	TFT100	CAN FLEX
1141	Lowest Temperature Battery ID	8	Unsigned	-	-	-	-	Lowest temperature battery ID	TFT100	CAN FLEX
1142	Highest Battery Temperature	8	Unsigned	0	65535	-	°C	Highest battery temperature	TFT100	CAN FLEX
1143	Highest Temperature Battery ID	8	Unsigned	-	-	-	-	Highest temperature battery ID	TFT100	CAN FLEX
1144	Time To Full Load	8	Unsigned	0	65535	-	s	Time to full load	TFT100	CAN FLEX
1145	Time To Empty	8	Unsigned	0	65535	-	s	Time to empty	TFT100	CAN FLEX
1146	Time To Full	8	Unsigned	0	65535	-	s	Time to full	TFT100	CAN FLEX
1147	Cluster State	8	Unsigned	0	5	-	-	Cluster state	TFT100	CAN FLEX
1148	Cluster SoC	8	Unsigned	0	255	-	%	Cluster SoC	TFT100	CAN FLEX
1149	Max Discharge Current	8	Unsigned	0	255	-	A	Max discharge current	TFT100	CAN FLEX
1150	Recuperation Allowed	8	Unsigned	0	1	-	-	Recuperation status	TFT100	CAN FLEX
1151	Switch Process Needed	8	Unsigned	0	1	-	-	Switch process status	TFT100	CAN FLEX
1152	SoC Switch Level	8	Unsigned	0	255	-	%	SoC switch level	TFT100	CAN FLEX
1153	Part Charge Capacity	8	Unsigned	0	65535	-	Ah	Part charge capacity	TFT100	CAN FLEX
1154	Cluster Voltage	8	Unsigned	0	65535	-	V	Cluster voltage	TFT100	CAN FLEX
1155	Cluster Current	8	Unsigned	0	65535	-	A	Cluster current	TFT100	CAN FLEX
1156	Major Version	8	Unsigned	-	-	-	-	Major version	TFT100	CAN FLEX
1157	Minor Version	8	Unsigned	-	-	-	-	Minor version	TFT100	CAN FLEX
1158	Patch Version	8	Unsigned	-	-	-	-	Patch version	TFT100	CAN FLEX
1159	Recognized Batteries	8	Unsigned	0	255	-	-	Recognized batteries	TFT100	CAN FLEX
1160	Activated Batteries	8	Unsigned	0	255	-	-	Activated batteries	TFT100	CAN FLEX
1161	Faulty Batteries	8	Unsigned	0	255	-	-	Faulty batteries	TFT100	CAN FLEX
1162	Battery 1 Voltage	8	Unsigned	0	65535	-	V	Battery 1 voltage	TFT100	CAN FLEX
1163	Battery 1 Current	8	Unsigned	0	65535	-	A	Battery 1 current	TFT100	CAN FLEX
1164	Battery 1 State	8	Unsigned	0	65535	-	-	Battery 1 State	TFT100	CAN FLEX
1165	Battery 1 SoC	8	Unsigned	0	255	-	%	Battery 1 SoC	TFT100	CAN FLEX
1166	Battery 1 Temperature 1	8	Unsigned	0	127	-	°C	Battery 1 temperature 1	TFT100	CAN FLEX
1167	Battery 1 Temperature 2	8	Unsigned	0	127	-	°C	Battery 1 temperature 2	TFT100	CAN FLEX
1168	Battery 1 Power Stage Temp	8	Unsigned	0	127	-	°C	Battery 1 power stage temp 1	TFT100	CAN FLEX
1169	Battery 1 Remaining Capacity	8	Unsigned	0	65535	-	mAh	Battery 1 remaining capacity	TFT100	CAN FLEX
1170	Battery 2 Voltage	8	Unsigned	0	65535	-	V	Battery 2 voltage	TFT100	CAN FLEX
1171	Battery 2 Current	8	Unsigned	0	65535	-	A	Battery 2 current	TFT100	CAN FLEX
1172	Battery 2 State	8	Unsigned	0	65535	-	-	Battery 2 state	TFT100	CAN FLEX
1173	Battery 2 SoC	8	Unsigned	0	255	-	%	Battery 2 SoC	TFT100	CAN FLEX
1174	Battery 2 Temperature 1	8	Unsigned	0	127	-	°C	Battery 2 temperature 1	TFT100	CAN FLEX
1175	Battery 2 Temperature 2	8	Unsigned	0	127	-	°C	Battery 2 temperature 2	TFT100	CAN FLEX
1176	Battery 2 Power Stage Temp	8	Unsigned	0	127	-	°C	Battery 2 power stage temp	TFT100	CAN FLEX
1177	Battery 2 Remaining Capacity	8	Unsigned	0	65535	-	mAh	Battery 2 remaining capacity	TFT100	CAN FLEX
1178	Battery ID 0 Error Code	8	Unsigned	-	-	-	-	Battery ID 0 error code	TFT100	CAN FLEX
1179	Battery ID 1 Error Code	8	Unsigned	-	-	-	-	Battery ID 1 error code	TFT100	CAN FLEX
1180	Cluster Error Code	8	Unsigned	-	-	-	-	Cluster error code	TFT100	CAN FLEX
1181	Max Charge Current	8	Unsigned	0	65535	-	A	Max charge current	TFT100	CAN FLEX
1182	Lowest Battery 2 Temperature	8	Unsigned	0	65535	-	°C	Lowest battery 2 voltage	TFT100	CAN FLEX
1183	Highest Battery 2 Temperature	8	Unsigned	0	65535	-	°C	Highest battery 2 temperature	TFT100	CAN FLEX
1184	Lowest Battery 2 Voltage	8	Unsigned	0	65535	-	mV	Lowest battery 2 voltage	TFT100	CAN FLEX
1185	Highest Battery 2 Voltage	8	Unsigned	0	65535	-	mV	Highest battery 2 voltage	TFT100	CAN FLEX

RS485 communication I/O elements

SuperSoco I/O elements

Property ID in AVL packet	Property Name	Bytes	Type	Value range		Multiplier	Units	Description	HW Support	Parameter Group
				Min	Max					
855	Power	1	Unsigned	0	1	-	-	0 - Power Off 1 - Power ON	TFT100	RS485 SUPERSOCO
856	Current Trip Range	4	Unsigned	0	0	-	-	Current trip Range IO element indicates currently measured current range	TFT100	RS485 SUPERSOCO
857	Total Trip Range	4	Unsigned	0	0	-	-	Total trip Range IO element indicates currently measured total range	TFT100	RS485 SUPERSOCO
858	Battery Capacity	1	Unsigned	0	255	-	-	Battery capacity I/O element shows battery capacity left.	TFT100	RS485 SUPERSOCO
859	Low Voltage	1	Unsigned	0	1	-	-	Low Voltage status	TFT100	RS485 SUPERSOCO
860	High Temperature	1	Unsigned	0	1	-	-	High Temperature status	TFT100	RS485 SUPERSOCO
861	Upload Time	1	Unsigned	0	1	-	-	Upload time status	TFT100	RS485 SUPERSOCO
862	Moving Abnormal	1	Unsigned	0	1	-	-	Moving abnormal status	TFT100	RS485 SUPERSOCO
863	Range	2	Unsigned	0	65535	-	km	Range indicator	TFT100	RS485 SUPERSOCO
864	Lock Status	1	Unsigned	0	1	-	-	Lock status	TFT100	RS485 SUPERSOCO
865	Vehicle FW version	2	Unsigned	0	65535	-	-	Vehicle FW version	TFT100	RS485 SUPERSOCO
866	Total Range	4	Unsigned	0	0	-	m	Total range indicator	TFT100	RS485 SUPERSOCO
867	Battery Energy	2	Unsigned	0	0	-	kW*h	Battery Energy indicator	TFT100	RS485 SUPERSOCO
868	Power System Error	8	Unsigned	-	-	-	-		TFT100	RS485 SUPERSOCO
869	Power Train Error	8	Unsigned	-	-	-	-		TFT100	RS485 SUPERSOCO
870	Instrument System Error	8	Unsigned	-	-	-	-		TFT100	RS485 SUPERSOCO

BLE Sensor I/O elements

Property ID in AVL packet	Property Name	Bytes	Type	Value range		Multiplier	Units	Description	HW Support	Parameter Group
				Min	Max					
25	BLE Temperature #1	2	Signed	-400	12050	-	°C	Degrees (°C), -40 - +125;	TMT250 GH5200 TFT100 TST100 TAT100 TAT140 TAT141	Bluetooth Low Energy
26	BLE Temperature #2	2	Signed	-400	12050	-	°C	Degrees (°C), -40 - +125;	TMT250 GH5200 TFT100 TST100 TAT100 TAT140 TAT141	Bluetooth Low Energy
27	BLE Temperature #3	2	Signed	-400	12050	-	°C	Degrees (°C), -40 - +125;	TMT250 GH5200 TFT100 TST100 TAT100 TAT140 TAT141	Bluetooth Low Energy

28	BLE Temperature #4	2	Signed	-400	12050	-	°C	Degrees (°C), -40 - +125;	TMT250 GH5200 TFT100 TST100 TAT100 TAT140 TAT141	Bluetooth Low Energy
29	BLE Battery #1	1	Unsigned	0	100	-	%	Battery level of sensor #1	TMT250 GH5200 TFT100 TST100 TAT100 TAT140 TAT141	Bluetooth Low Energy
20	BLE Battery #2	1	Unsigned	0	100	-	%	Battery level of sensor #2	TMT250 GH5200 TFT100 TST100 TAT100 TAT140 TAT141	Bluetooth Low Energy
22	BLE Battery #3	1	Unsigned	0	100	-	%	Battery level of sensor #3	TMT250 GH5200 TFT100 TST100 TAT100 TAT140 TAT141	Bluetooth Low Energy
23	BLE Battery #4	1	Unsigned	0	100	-	%	Battery level of sensor #4	TMT250 GH5200 TFT100 TST100 TAT100 TAT140 TAT141	Bluetooth Low Energy

86	BLE Humidity #1	2	Unsigned	0	1000	-	%RH	Humidity	TMT250 GH5200 TFT100 TST100 TAT100 TAT140 TAT141	Bluetooth Low Energy
104	BLE Humidity #2	2	Unsigned	0	1000	-	%RH	Humidity	TMT250 GH5200 TFT100 TST100 TAT100 TAT140 TAT141	Bluetooth Low Energy
106	BLE Humidity #3	2	Unsigned	0	1000	-	%RH	Humidity	TMT250 GH5200 TFT100 TST100 TAT100 TAT140 TAT141	Bluetooth Low Energy
108	BLE Humidity #4	2	Unsigned	0	1000	-	%RH	Humidity	TMT250 GH5200 TFT100 TST100 TAT100 TAT140 TAT141	Bluetooth Low Energy
331	BLE 1 Custom #1	256	HEX	0	4294967295	-	-	Custom IO element for BLE sensor	TMT250 GH5200 TFT100 TST100 TAT100 TAT140 TAT141	Bluetooth Low Energy
463	BLE 1 Custom #2	256	HEX	0	4294967295	-	-	Custom IO element for BLE sensor	TMT250 GH5200 TFT100 TST100	Bluetooth Low Energy

464	BLE 1 Custom #3	256	HEX	0	42949 67295	-	-	Custom IO element for BLE sensor	TMT250 GH5200 TFT100 TST100	Bluetooth Low Energy
465	BLE 1 Custom #4	256	HEX	0	42949 67295	-	-	Custom IO element for BLE sensor	TMT250 GH5200 TFT100 TST100	Bluetooth Low Energy
466	BLE 1 Custom #5	256	HEX	0	42949 67295	-	-	Custom IO element for BLE sensor	TMT250 GH5200 TFT100 TST100	Bluetooth Low Energy
332	BLE 2 Custom #1	256	HEX	0	42949 67295	-	-	Custom IO element for BLE sensor	TMT250 GH5200 TFT100 TST100 TAT100	Bluetooth Low Energy
467	BLE 2 Custom #2	256	HEX	0	42949 67295	-	-	Custom IO element for BLE sensor	TMT250 GH5200 TFT100 TST100	Bluetooth Low Energy
468	BLE 2 Custom #3	256	HEX	0	42949 67295	-	-	Custom IO element for BLE sensor	TMT250 GH5200 TFT100 TST100	Bluetooth Low Energy
469	BLE 2 Custom #4	256	HEX	0	42949 67295	-	-	Custom IO element for BLE sensor	TMT250 GH5200 TFT100 TST100	Bluetooth Low Energy
470	BLE 2 Custom #5	256	HEX	0	42949 67295	-	-	Custom IO element for BLE sensor	TMT250 GH5200 TFT100 TST100	Bluetooth Low Energy
333	BLE 3 Custom #1	256	HEX	0	42949 67295	-	-	Custom IO element for BLE sensor	TMT250 GH5200 TFT100 TST100 TAT100	Bluetooth Low Energy

471	BLE 3 Custom #2	256	HEX	0	42949 67295	-	-	Custom IO element for BLE sensor	TMT250 GH5200 TFT100 TST100	Bluetooth Low Energy
472	BLE 3 Custom #3	256	HEX	0	42949 67295	-	-	Custom IO element for BLE sensor	TMT250 GH5200 TFT100 TST100	Bluetooth Low Energy
473	BLE 3 Custom #4	256	HEX	0	42949 67295	-	-	Custom IO element for BLE sensor	TMT250 GH5200 TFT100 TST100	Bluetooth Low Energy
474	BLE 3 Custom #5	256	HEX	0	42949 67295	-	-	Custom IO element for BLE sensor	TMT250 GH5200 TFT100 TST100	Bluetooth Low Energy
334	BLE 4 Custom #1	256	HEX	0	42949 67295	-	-	Custom IO element for BLE sensor	TMT250 GH5200 TFT100 TST100 TAT100 TAT140 TAT141	Bluetooth Low Energy
475	BLE 4 Custom #2	256	HEX	0	42949 67295	-	-	Custom IO element for BLE sensor	TMT250 GH5200 TFT100 TST100	Bluetooth Low Energy
476	BLE 4 Custom #3	256	HEX	0	42949 67295	-	-	Custom IO element for BLE sensor	TMT250 GH5200 TFT100 TST100	Bluetooth Low Energy
477	BLE 4 Custom #4	256	HEX	0	42949 67295	-	-	Custom IO element for BLE sensor	TMT250 GH5200 TFT100 TST100	Bluetooth Low Energy
478	BLE 4 Custom #5	256	HEX	0	42949 67295	-	-	Custom IO element for BLE sensor	TMT250 GH5200 TFT100 TST100	Bluetooth Low Energy

385	Beacon ID's	-	HEX	-	-	-	-	Data structure: Data part: 1 Byte Beacon flag: 1 Byte Beacon ID (iBeacon/Eddystone): 20 Bytes/16 Bytes Signal strength: 1 Byte	TMT250 GH5200 TFT100 TST100	Bluetooth Low Energy
874	Bluetooth Home Zone Violation state	1	HEX	-	0x0F	-	-	Bits describe the causes of violations: 0 - Back to Bluetooth Home Zone 1 - Movement (Only for Ela MOV sensor) 2 - RSSI threshold violation 4 - BLE missing	GH5200	Bluetooth Low Energy
889	Proximity Violation state	1	HEX	-	0x0F	-	-	Bits describe the causes of violations: 1 - RSSI threshold violation 0 - End of RSSI violation	GH5200	Bluetooth Low Energy
875	Proximity violation source with Teltonika devices	12	ASCII	-	-	-	-	MAC address which violates personal space *Example of encoded HEX ASCII text*: HEX: `44 35 41 34 31 42 38 42 31 30 37 35` HEX ASCII to text: `D5A41B8B1075` (NOTE! From firmware version Rev.329 device sends **IMEI** instead of MAC address) *Example*: HEX -> ASCII (String) 30313437313539423832414546 43 -> 0147159B82AEFC HEX -> DEC 0147159B82AEFC -> 359633105628924	GH5200	Bluetooth Low Energy
876	Proximity violation source with iBeacons	32	ASCII	-	-	-	-	*Example of UUID encoded HEX to ASCII format*: HEX: `41 41 41 41 41 41 41 41 41 41 41 41 41 41 41 41 42 42 43 43 35 32 36 46 36 46 36 44 33 31` HEX to ASCII format: `AAAAAAAAAAAAAAAAAABBCC526F6F6D31`	GH5200	Bluetooth Low Energy
890	Proximity duration	2	Unsigned	0	65535	-	s	Violation time in *seconds*. Included as an IO element with AVL ID 875	GH5200	Bluetooth Low Energy
891	BLE MAC address	12	ASCII	-	-	-	-	BLE MAC address of device. *Example of encoded HEX ASCII text*: HEX: `44 35 41 34 31 42 38 42 31 30 37 35` HEX ASCII to text: `D5A41B8B1075`	GH5200	Bluetooth Low Energy
263	BT Status	1	Unsigned	0	4	-	-	0 - BT is disabled 1 - BT Enabled, not device connected 2 - Device connected, BTv3 Only 3 - Device connected, BLE only 4 - Device connected, BLE + BT	TMT250 GH5200 TFT100 TST100	Bluetooth Low Energy
871	BLE Lock Status	1	Unsigned	0	1	-	-	0 – Unlocked 1 – Locked On	TST100	Bluetooth Low Energy
872	BLE Lock Battery	1	Unsigned	0	100	-	%	Battery level of Bluetooth lock	TST100	Bluetooth Low Energy
873	BLE Lock Discovered	1	Unsigned	0	1	-		1 - Bluetooth lock Discovered	TST100	Bluetooth Low Energy
585	BLE Devices	-	HEX	-	-	-	-	Data structure: Number of beacons: 1 Byte MAC Adress: 6 Bytes RSSI: 1 Byte Slot: 1 Byte Main size: 1 Byte Main Data: 0-32 Bytes Additional Data size: 1 Byte Additional Data: 0-32 Bytes	TMT250 GH5200	Bluetooth Low Energy