MaxxECU Default CAN output

MaxxECU default CAN output protocol, version 1.3 (2020-09-29)

- 13 % extra CAN bus load when activated.
- Includes data from version 1.2.
- 0x536 byte 2+3 is now used, was not used (SPARE) in version 1.2

MaxxECU default CAN output protocol, version 1.2 (2014-12-05)

- 7% extra CAN bus load when activated.

Note: DBC files are available on our website download section.

Specification:

- Can baud rate: 500kbit, 11-bit ID.
- Little endian (least significant byte first).
- Most messages contains 4 16-bit values, 8 bytes per message.
- Some messages contains a combination of 8 and 16-bit values, 8 bytes per message.
- All MaxxECUs has a built in termination resistor on CAN 1. External termination (120 ohm) is recommended for bus lengths over 1m.
- **MaxxECU PRO** with a secondary bus (CAN 2) **does not have a built-in terminator resistor**.
- Wiring loom: Twisted pink / gray. Pink = CAN L, grey = CAN H.

CAN ID	Offset	Name	Unit	Scale	Type	Rate	Firmware	Comment	Name	Version
0x520	0	RPM	rpm	1	int16	50Hz	1.67 and newer		FAST1	1.2
0x520	2	Throttle position/pedal	%	0,1	int16	50Hz	1.67 and newer		FAST1	1.2
0x520	4	MAP	kPa	0,1	int16	50Hz	1.67 and newer		FAST1	1.2
0x520	6	Lambda		0,001	int16	50Hz	1.67 and newer	Average lambda	FAST1	1.2
0x521	0	Lambda A		0,001	int16	50Hz	1.67 and newer	Lambda cylinder bank A	FAST2	1.2
0x521	2	Lambda B		0,001	int16	50Hz	1.67 and newer	Lambda cylinder bank B	FAST2	1.2
0x521	4	Ignition angle	BTDC	0,1	int16	50Hz	1.67 and newer		FAST2	1.2

0x521	6	Ignition cut	%	1	int16	50Hz	1.67 and newer	Percent of ignition event being cut (for rev-limit etc)	FAST2	1.2
0x522	0	Fuel pulsewidth primary	ms	0,01	int16	50Hz	1.67 and newer		FAST3	1.2
0x522	2	Fuel duty primary	%	0,1	int16	50Hz	1.67 and newer	Can be over 100%.	FAST3	1.2
0x522	4	Fuel cut	%	1	int16	50Hz	1.67 and newer	Percent of fuel event being cut (for rev-limit etc)	FAST3	1.2
0x522	6	Vehicle Speed	km/h	0,1	int16	50Hz	1.67 and newer	Speed signal for display purpose	FAST3	1.2
0x523	0	Undriven wheels avg spd	km/h	0,1	int16	50Hz	1.67 and newer	Zero when traction ctrl. system not used	FAST4	1.2
0x523	2	Driven wheels avg spd	km/h	0,1	int16	50Hz	1.67 and newer	Zero when traction ctrl. system not used	FAST4	1.2
0x523	4	Wheel slip	%	0,1	int16	50Hz	1.67 and newer	Zero when traction ctrl. system not used	FAST4	1.2
0x523	6	Target slip	%	0,1	int16	50Hz	1.67 and newer	Zero when traction ctrl. system not used	FAST4	1.2
0x524	0	Traction Ctrl Power limit	%	0,1	int16	50Hz	1.67 and newer	Zero when traction ctrl. system not used	FAST5	1.2
0x524	2	Lambda corr A	%	0,1	int16	50Hz	1.67 and newer	Short term lambda-correction applied to bank A cylinders	FAST5	1.2

0x524	4	Lambda corr B	%	0,1	int16	50Hz	1.67 and newer	Short term lambda-correction applied to bank B cylinders	FAST5	1.2
0x524	6	Firmware version		0,001	int16	50Hz	1.67 and newer	Current ECU firmware version	FAST5	1.2
0x530	0	Battery voltage	V	0,01	int16	10Hz	1.67 and newer		SLOW1	1.2
0x530	2	Baro pressure	kPa	0,1	int16	10Hz	1.67 and newer		SLOW1	1.2
0x530	4	Intake air temp	°C	0,1	int16	10Hz	1.67 and newer		SLOW1	1.2
0x530	6	Coolant temp	°C	0,1	int16	10Hz	1.67 and newer		SLOW1	1.2
0x531	0	Total fuel trim	%	0,1	int16	10Hz	1.67 and newer	Total amount of adjustment applied to the fuel pulse, excluding acceleration enrichment	SLOW2	1.2
0x531	2	Ethanol concentration	%	0,1	int16	10Hz	1.67 and newer	Outputs 85% when no sensor is used, or in case of a sensor error.	SLOW2	1.2
0x531	4	Total ignition comp	deg	0,1	int16	10Hz	1.67 and newer	Total amount of adjustment applied to the ignition angle (in degrees)	SLOW2	1.2
0x531	6	EGT 1	°C	1	int16	10Hz	1.67 and newer	Exhaust gas temperature. All values are sent, even for	SLOW2	1.2

								unconfigured sensors		
0x532	0	EGT 2	°C	1	int16	10Hz	1.67 and newer		SLOW3	1.2
0x532	2	EGT 3	°C	1	int16	10Hz	1.67 and newer		SLOW3	1.2
0x532	4	EGT 4	°C	1	int16	10Hz	1.67 and newer		SLOW3	1.2
0x532	6	EGT 5	°C	1	int16	10Hz	1.67 and newer		SLOW3	1.2
0x533	0	EGT 6	°C	1	int16	10Hz	1.67 and newer		SLOW4	1.2
0x533	2	EGT 7	°C	1	int16	10Hz	1.67 and newer		SLOW4	1.2
0x533	4	EGT 8	°C	1	int16	10Hz	1.67 and newer		SLOW4	1.2
0x533	6	EGT Highest	°C	1	int16	10Hz	1.67 and newer		SLOW4	1.2
0x534	0	EGT Difference	°C	1	int16	10Hz	1.67 and newer	Difference between the highest and lowest EGT sensor.	SLOW5	1.2
0x534	2	CPU temp	°C	1	int16	10Hz	1.67 and newer	ECU temperature.	SLOW5	1.2
0x534	4	Error code count		1	int16	10Hz	1.67 and newer	The number of current active error codes.	SLOW5	1.2
0x534	6	Lost sync count		1	int16	10Hz	1.67 and newer	Number of times the ECU has detected errors in the engine position sensors.	SLOW5	1.2
0x535	0	User analog input 1	user	0,1	int16	10Hz	1.79 and newer		SLOW6	1.2
0x535	2	User analog input 2	user	0,1	int16	10Hz	1.79 and newer		SLOW6	1.2
0x535	4	User analog input 3	user	0,1	int16	10Hz	1.79 and newer		SLOW6	1.2

0x535	6	User analog input 4	user	0,1	int16	10Hz	1.79 and newer		SLOW6	1.2
0x536	0	Gear		1	int16	10Hz	1.79 and newer	Calculated manual transmission gear or commanded gear	SLOW7	1.2
0x536	2	Boost solenoid duty	%	0,1	int16	10Hz	1.79 and newer		SLOW7	1.2
0x536	4	Oil pressure	kPa	0,1	int16	10Hz	1.135 and newer	**Updated (V1.2 did not transmit anything here)**	SLOW7	1.3
0x536	6	Oil temp	°C	0,1	int16	10Hz	1.135 and newer	**Updated (V1.2 did not transmit anything here)**	SLOW7	1.3
0x537	0	Fuel Pressure 1	kPa	0,1	int16	10Hz	1.135 and newer		SLOW8	1.3
0x537	2	Wastegate pressure	kPa	0,1	int16	10Hz	1.135 and newer		SLOW8	1.3
0x537	4	Coolant pressure	kPa	0,1	int16	10Hz	1.135 and newer		SLOW8	1.3
0x537	6	Boost target	kPa	0,1	int16	10Hz	1.135 and newer		SLOW8	1.3
0x538	0	User channel 1	user	0,1	int16	10Hz	1.135 and newer	User selectable source sensor in MTune.	SLOW9	1.3
0x538	2	User channel 2	user	0,1	int16	10Hz	1.135 and newer	User selectable source sensor in MTune.	SLOW9	1.3
0x538	4	User channel 3	user	0,1	int16	10Hz	1.135 and newer	User selectable source sensor in MTune.	SLOW9	1.3

0x538	6	User channel 4	user	0,1	int16	10Hz	1.135 and newer	User selectable source sensor in MTune.	SLOW9	1.3
0x539	0	User channel 5	user	0,1	int16	10Hz	1.135 and newer	User selectable source sensor in MTune.	SLOW10	1.3
0x539	2	User channel 6	user	0,1	int16	10Hz	1.135 and newer	User selectable source sensor in MTune.	SLOW10	1.3
0x539	4	User channel 7	user	0,1	int16	10Hz	1.135 and newer	User selectable source sensor in MTune.	SLOW10	1.3
0x539	6	User channel 8	user	0,1	int16	10Hz	1.135 and newer	User selectable source sensor in MTune.	SLOW10	1.3
0x525	0	User channel 9	user	0,1	int16	50Hz	1.135 and newer	User selectable source sensor in MTune.	FAST6	1.3
0x525	2	User channel 10	user	0,1	int16	50Hz	1.135 and newer	User selectable source sensor in MTune.	FAST6	1.3
0x525	4	User channel 11	user	0,1	int16	50Hz	1.135 and newer	User selectable source sensor in MTune.	FAST6	1.3
0x525	6	User channel 12	user	0,1	int16	50Hz	1.135 and newer	User selectable source	FAST6	1.3

								sensor in MTune.		
0x526	0:0	Shiftcut active			int8	50Hz	1.135 and newer		FAST7	1.3
0x526	0:1	Rev-limit active				50Hz	1.135 and newer		FAST7	1.3
0x526	0:2	Anti-lag active				50Hz	1.135 and newer		FAST7	1.3
0x526	0:3	Launch control active				50Hz	1.135 and newer		FAST7	1.3
0x526	0:4	Traction power limiter active				50Hz	1.135 and newer		FAST7	1.3
0x526	0:5	Throttle blip active				50Hz	1.135 and newer		FAST7	1.3
0x526	0:6	AC/idle up active				50Hz	1.135 and newer		FAST7	1.3
0x526	0:7	Knock detected				50Hz	1.135 and newer	Visible for 250msec after a detected knock.	FAST7	1.3
0x526	1:0	Brake pedal active			int8	50Hz	1.135 and newer		FAST7	1.3
0x526	1:1	Clutch pedal active				50Hz	1.135 and newer		FAST7	1.3
0x526	1:2	Speed limit active				50Hz	1.135 and newer		FAST7	1.3
0x526	1:3	GP limiter active				50Hz	1.135 and newer		FAST7	1.3
0x526	1:4	User cut active				50Hz	1.135 and newer		FAST7	1.3
0x526	1:5	ECU is logging				50Hz	1.135 and newer		FAST7	1.3
0x526	1:6	Nitrous active				50Hz	1.135 and newer		FAST7	1.3
0x526	1:7	SPARE				50Hz	1.135 and newer	**Reserved for future usage**	FAST7	1.3
0x526	2	SPARE			int16	50Hz	1.135 and newer	**Reserved for future usage**	FAST7	1.3
0x526	4	Rev-limit RPM	rpm	1	int16	50Hz	1.135 and newer		FAST7	1.3

0x526	6	SPARE	rpm	1	int16	50Hz	1.135 and newer	**Reserved for future usage**	FAST7	1.3
0x527	0	Acceleration Forward	G	0,01	int16	50Hz	1.135 and newer		FAST8	1.3
0x527	2	Acceleration Right	G	0,01	int16	50Hz	1.135 and newer		FAST8	1.3
0x527	4	Acceleration Up	G	0,01	int16	50Hz	1.135 and newer		FAST8	1.3
0x527	6	Lambda target		0,001	int16	50Hz	1.135 and newer		FAST8	1.3
0x528	0	Knocklevel All peak		1	int16	50Hz	1.135 and newer		FAST9	1.3
0x528	2	Knock correction	deg	0,1	int16	50Hz	1.135 and newer		FAST9	1.3
0x528	4	Knock count		1	int16	50Hz	1.135 and newer		FAST9	1.3
0x528	6	Last knock cylinder		1	int16	50Hz	1.135 and newer		FAST9	1.3
0x540	0	Active boost table		1	int8	10Hz	1.135 and newer		SLOW11	1.3
0x540	1	Active Tune selector		1	int8	10Hz	1.135 and newer		SLOW11	1.3
0x540	2	Virtual fuel tank	L	0,1	int16	10Hz	1.135 and newer		SLOW11	1.3
0x540	4	Transmission temp	°C	0,1	int16	10Hz	1.135 and newer		SLOW11	1.3
0x540	6	Differential temp	°C	0,1	int16	10Hz	1.135 and newer		SLOW11	1.3
0x541	0	VVT intake cam 1 position	deg	0,1	int16	10Hz	1.135 and newer		SLOW12	1.3
0x541	2	VVT exhaust cam 1 position	deg	0,1	int16	10Hz	1.135 and newer		SLOW12	1.3
0x541	4	VVT intake cam 2 position	deg	0,1	int16	10Hz	1.135 and newer		SLOW12	1.3
0x541	6	VVT exhaust cam 2 position	deg	0,1	int16	10Hz	1.135 and newer		SLOW12	1.3
0x542	0	VVT intake cam target position	deg	0,1	int16	10Hz	1.135 and newer		SLOW13	1.3

0x542	2	VVT exhaust cam target position	deg	0,1	int16	10Hz	1.135 and newer		SLOW13	1.3
0x542	4	ECU errors code(s)		0,1	int16	10Hz	**1.149 and newer**	Rotates all stored error codes, 0x0000 when no code stored.	SLOW13	1.3
0x542	6	SPARE		0,1	int16	10Hz	1.135 and newer	**Reserved for future usage**	SLOW13	1.3

Known CAN colisions with this protocol

Default V1.3 0x540, collide with the VAG DSG, use Default V1.2 instead on any DSG application.