EMU CAN STREAM

EMU device is able to send data that can be used by external data loggers or Dashboards using CAN-BUS. Default values of CAN IDs can be modified in options *EMU CAN Data*

CAN BUS speed	Selectable: 125kbps, 250kbps, 500kbps, 1Mbit
Message format	11 bit standard
Data format	INTEL (Little endian)

BASE ID   (can be user defined)

ID	Base ID	Frequency	20Hz				
Byte ofs	Chn name	Width (bits)	Data type	Range	Resolution	Offset	Unit
0	RPM	16 bits	Unsigned	0-16000	1 RPM/bit	0	RPM
2	TPS	8 bits	Unsigned	0-100	0,5%/bit	0	%
3	IAT	8 bits	Signed	-40-127	1 C/bit	0	C
4	MAP	16 bits	Unsigned	0-600	1 kPa/bit	0	kPa
6	INJPW	16 bits	Unsigned	0-50	0.016129	0	ms

ID	Base ID + 1	Frequency	20Hz				
Byte ofs	Chn name	Width (bits)	Data type	Range	Resolution	Offset	Unit
0	AIN #1	16 bits	Unsigned	0-5	0.0048828125 V/bit	0	V
2	AIN #2	16 bits	Unsigned	0-5	0.0048828125 V/bit	0	V
4	AIN #3	16 bits	Unsigned	0-5	0.0048828125 V/bit	0	V
6	AIN #4	16 bits	Unsigned	0-5	0.0048828125 V/bit	0	V

ID	Base ID + 2	Frequency	20Hz				
Byte ofs	Chn name	Width (bits)	Data type	Range	Resolution	Offset	Unit
0	VSPD	16 bits	Unsigned	0-400	1 kmh/h / bit	0	km/h
2	BARO	8 bits	Unsigned	50-130	1 kPa/bit	0	kPa
3	OILT	8 bits	Unsigned	0-160	1 C/bit	0	C
4	OILP	8 bits	Unsigned	0-12	0.0625 bar/bit	0	Bar
5	FUELP	8 bits	Unsigned	0-7	0.0625 bar/bit	0	Bar
6	CLT	16 bits	Signed	-40-250	1 C/bit	0	C

ID	Base ID + 3	Frequency	20Hz				
Byte ofs	Chn name	Width (bits)	Data type	Range	Resolution	Offset	Unit
0	IGNANG	8 bits	Signed	-60-60	0.5 deg/bit	0	Deg
1	DWELL	8 bits	Unsigned	0-10ms	0,05 ms/bit	0	ms
2	LAMBDA	8 bits	Unsigned	0-2	0.0078125 L/bit	0	Lambda
3	LAMCORR	8 bits	Unsigned	75-125	0.5 %/bit	0	%
4	EGT1	16 bits	Unsigned	0-1100	1 C/bit	0	C
6	EGT2	16 bits	Unsigned	0-1100	1 C/bit	0	C

ID	Base ID + 4	Frequency	20Hz				
Byte ofs	Chn name	Width (bits)	Data type	Range	Resolution	Offset	Unit
0	GEAR	8 bits	Unsigned	0-7	1/bit	0	No units
1	ECUTEMP	8 bits	Signed	-40-120	1 C/bit	0	C
2	BATT	16 bits	Unsigned	0-20V	0.027 V/bit	0	V
4	ERRFLAG	16bits	Bitfield				
6	FLAGS1	8 bits	Bitfield				
7	ETHANOL CONTENT	8 bits	Unsigned	0-100	1 %/bit	0	%

ID	Base ID + 5	Frequency	20Hz				
Byte ofs	Chn name	Width (bits)	Data type	Range	Resolution	Offset	Unit
0	DBW POS	8 bits	Unsigned	0-100	0,5%/bit	0	%
1	DBW TRGT	8 bits	Unsigned	0-100	0,5%/bit	0	%
2	TC DRPM RAW	16 bits	Signed	0-1000	1/bit	0	
4	TC DRPM	16 bits	Unsigned	0-400	1/bit	0	
6	TC TORQUE REDUCTION	8 bits	Unsigned	0-100	1%/bit	0	%
7	PIT LIMIT. TORQUE REDUCTION	8 bits	Unsigned	0-100	1%/bit	0	%

ID	Base ID + 6	Frequency	20Hz				
Byte ofs	Chn name	Width (bits)	Data type	Range	Resolution	Offset	Unit
0	AIN #5	16 bits	Unsigned	0-5	0.0048828125 V/bit	0	V
2	AIN #6	16 bits	Unsigned	0-5	0.0048828125 V/bit	0	V
4	OUTFLAGS1	8 bits	Bitfield				
5	OUTFLAGS2	8 bits	Bitfield				
6	OUTFLAGS3	8 bits	Bitfield				
	OUTFLAGS4	8 bits	Bitfield				

ID	Base ID + 7	Frequency	20Hz				
Byte ofs	Chn name	Width (bits)	Data type	Range	Resolution	Offset	Unit
0	Boost target	16 bits	Unsigned	0-600	1 kPa/bit	0	kPa
2	PWM#1 DC	8 bits	Unsigned	0-100	1%/bit	0	%
3	DSG mode	4 bits	Unsigned	0-15	Values: 2=P 3=R 4=N 5=D 6=S 7=M 15=fault	0	

FLAGS1

Bit idx	Name	Description
0	GEARCUT	1 - Gearcut active
1	ALS	1 - ALS active
2	LC	1 - Launch control active
3	IDLE	1 - Is in idle state
4	TABLE SET	0 - table set 1, 1 - table set 2
5	TC INTERVENTION	1 - traction control intervention
6	PIT LIMITER	1 - Pit limiter active
7	BRAKE SWITCH	1 - Brake switch active

OUTFLAGS1

Bit idx	Name	Description
0	PO1	Parametric output #1 state
1	PO2	Parametric output #2 state
2	PO3	Parametric output #3 state
3	PO4	Parametric output #4 state
4	PO5	Parametric output #5 state
5	VPO1	Virtual output #1 state
6	VPO2	Virtual output #2 state
7	VPO3	Virtual output #3 state

OUTFLAGS2

Bit idx	Name	Description
0	CANSW1	CAN switch #1 state
1	CANSW2	CAN switch #2 state
2	CANSW3	CAN switch #3 state
3	CANSW4	CAN switch #4 state
4	CANSW5	CAN switch #5 state
5	CANSW6	CAN switch #6 state
6	CANSW7	CAN switch #7 state
7	CANSW8	CAN switch #8 state

OUTFLAGS3

Bit idx	Name	Description
0	SW1	MUX switch #1 state
1	SW2	Switch #2 state
2	SW3	Switch #3 state
3	MUXSW1	MUX switch #1 state
4	MUXSW2	MUX switch #2 state
5	MUXSW3	MUX switch #3 state
6	LC MAP SET	Current set of launch control parameters
7	ALS MAP SET	Current set of ALS parameters

OUTFLAGS4

Bit idx	Name	Description
0	FPS	Fuel pump state
1	CF	Coolant fan state
2	ACCLUTCH	AC clutch state
3	ACFAN	AC fan state
4	NITROUS	Nitrous active
5	STARTER_REQ	Starter motor request (from start / stop strategy)
6	BOOST MAP SET	Current set of boost parameters

ERRFLAG

Bit idx	Error name	Description
0	ERR_CLT	Coolant temperature sensor failed
1	ERR_IAT	IAT sensor failed
2	ERR_MAP	MAP sensor failed
3	ERR_WBO	Wide band oxygen sensor failed
4	ERR_EGT1	EGT sensor #1 failed
5	ERR_EGT2	EGT sensor #2 failed
6	EGT_ALARM	EGT too high
7	KNOCKING	Knock detected
8	FFSESNOR	Flex Fuel sensor failed
9	ERR_DBW	Drive by wire failure
10	ERR_FPR	Fuel pressure relative error