

AIM Infotech

Megasquirt MS2 Extra
Microsquirt
ECU connection

Release 1.00





Megasquirt MS2 Extra Microsquirt ECU Connection

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AIM has developed special applications for many of the most popular ECUs: by special applications we mean user friendly systems which allow to easily connect your ECU to our data loggers: users just need to install harness between the logger and the ECU.

Once connected, the logger displays – and/or records, depending on the logger and on the ECU data stream configuration – values like RPM, engine load, throttle position (TPS), air and water temperatures, battery voltage, speed, gear, lambda value (air/fuel ratio) analog channels...

All AIM loggers include – free of charge – Race Studio 2 software, a powerful tool to configure the system and analyze recorded data on your PC.

Warning: once the ECU is connected to the logger, set it in the Race Studio 2 software logger configuration: select ECU manufacturer "Megasquirt" and ECU Model "MS2_CAN_BUS".

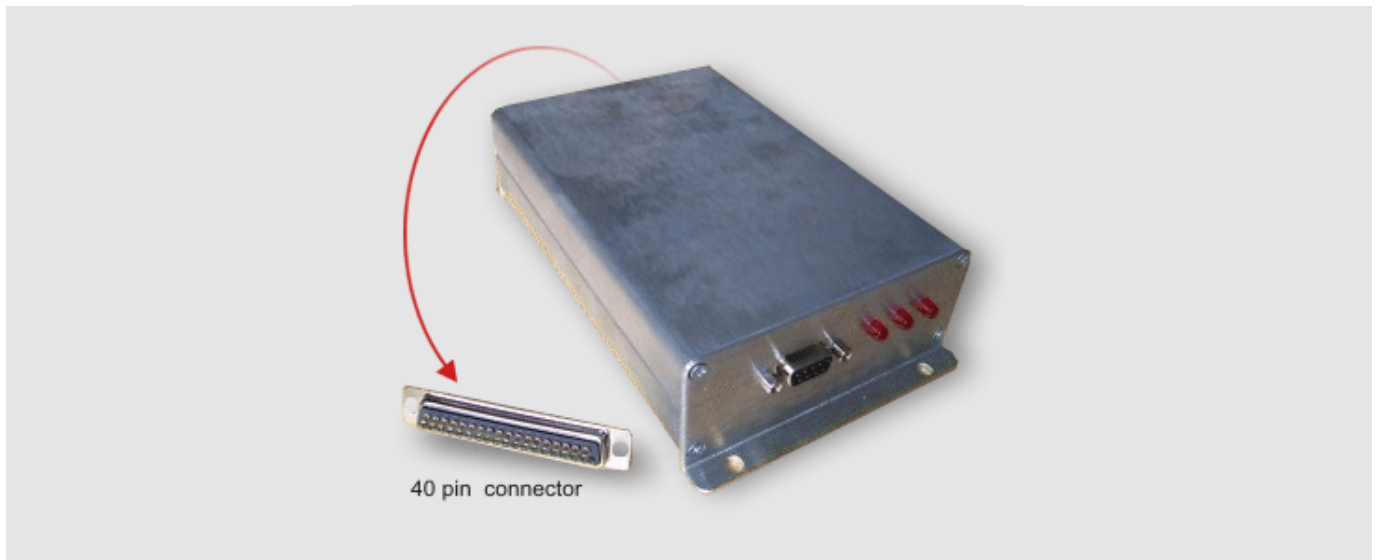
Warning: for any further information concerning ECU firmware/software settings and/or upgrading it is always recommended to address to the ECU dealer.

1

CAN communication setup

Megasquirt MS2 Extra and Microsquirt ECUs have a CAN communication setup.

Megasquirt MS2 Extra CAN bus is on the 40 pins male connector shown here below and on the DB37 connector available on its wiring.



Microsquirt CAN bus is on its 35 pins connector.



2

Connection with AIM loggers

To connect Megasquirt MS2 Extra and Microsquirt to AIM loggers follow these instructions.

2.1

Connection of Megasquirt MS2 Extra

Megasquirt MS2 Extra can be connected to AIM loggers directly using the 40 pins connector or through the DB37 connector available on the ECU wiring. To connect the ECU directly to AIM loggers follow indications shown in this table.

ECU 40 pins connector	Pin function	AIM cable label
6	CAN High	CAN+
11	CAN Low	CAN-

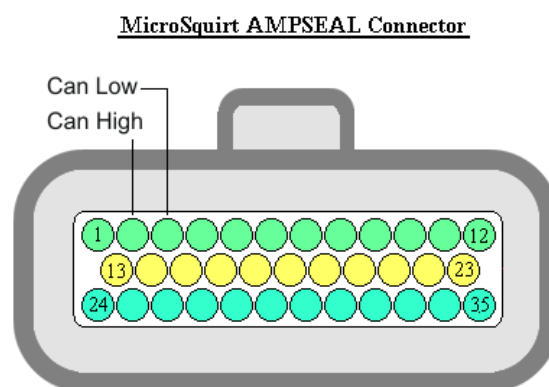
To connect the ECU with AIM loggers using the DB37 connector follow indications shown in this table:

DB37 connector	Pin function	AIM cable label
3	CAN High	CAN+
4	CAN Low	CAN-

2.1

Connection of Microsquirt

To connect Microsquirt to AIM loggers use the Ampseal 35 pins connector shown here below:





3

Available channels

Channels received by AIM loggers connected to Megasquirt MS2 Extra and Microsquirt ECUs are:

ID	CHANNEL NAME	FUNCTION
ECU_1	MS2_RPM	RPM
ECU_2	MS2_TPS	Throttle Position Sensor
ECU_3	MS2_BATT	V battery
ECU_4	MS2_MAP	Manifold air pressure
ECU_5	MS2_BARO	Barometric pressure
ECU_6	MS2_ADVANCE	Spark advance
ECU_7	MS2_KNOCK	Knock sensor
ECU_8	MS2_LAMBDA1	Lambda sensor 1
ECU_9	MS2_LAMBDA2	Lambda sensor 2
ECU_10	MS2_EGO_CORR_1	Exhaust gas oxygen correction 1
ECU_11	MS2_EGO_CORR_2	Exhaust gas oxygen correction 2
ECU_12	MS2_AIR_CORR	Air correction
ECU_13	MS2_WARM_ENR	Warm up enrichment
ECU_14	MS2_GAMMA_ENR	Gamma enrichment
ECU_15	MS2_TPSFUELCUT	Throttle Position Sensor fuel cut
ECU_16	MS2_BARO_CORR	Barometric pressure correction
ECU_17	MS2_FUEL_LOAD1	Fuel Load 1
ECU_18	MS2_FUEL_LOAD2	Fuel Load 2
ECU_19	MS2_FUEL_CORR	Fuel correction
ECU_20	MS2_EGO_V1	Exhaust gas oxygen voltage 1
ECU_21	MS2_EGO_V2	Exhaust gas oxygen voltage 2
ECU_22	MS2_IGN_LOAD1	Ignition load 1
ECU_23	MS2_IGN_LOAD2	Ignition load 2
ECU_24	MS2_ACC_ENRICH	Acceleration enrichment
ECU_25	MS2_VE_CURR1	Current VE value in use 1



ECU_26	MS2_VE_CURR2	Current VE value in use 2
ECU_27	MS2_IAC_STEP	Intake air temperature correction step
ECU_28	MS2_COLD_ADV	Cold advance
ECU_29	MS2_MAT	Manifold air temperature
ECU_30	MS2_ECT	Engine cooling temperature
ECU_31	MS2_ENGINE	Engine status
ECU_32	MS2_KNOCK_RET	Knock retard
ECU_33	MS2_MAF	Mass air flow
ECU_34	MS2_DWELL	Coil dwell time
ECU_35	MS2_EGT_6	Exhaust gas temperature 6
ECU_36	MS2_EGT_7	Exhaust gas temperature 7
ECU_37	MS2_VBO2_EN1	VBO2 Enable 1
ECU_38	MS2_VBO2_EN2	VBO2 Enable 2
ECU_39	MS2_IDLE_PWM	Power width modulation
ECU_40	MS2_PW1	Power width 1
ECU_41	MS2_PW2	Power width 2
ECU_42	MS2_ADC6	Analog to digital counter 6
ECU_43	MS2_ADC7	Analog to digital counter 7
ECU_44	MS2_BOOST_DUTY	Boost duty cycle
ECU_45	MS2_SYNCR	Lost sync reason
ECU_46	MS2_INJ_ADV1	Injection advance 1
ECU_47	MS2_INJ_ADV2	Injection advance 2
ECU_48	MS2_STATUS1	ECU Status1
ECU_49	MS2_STATUS2	ECU Status2