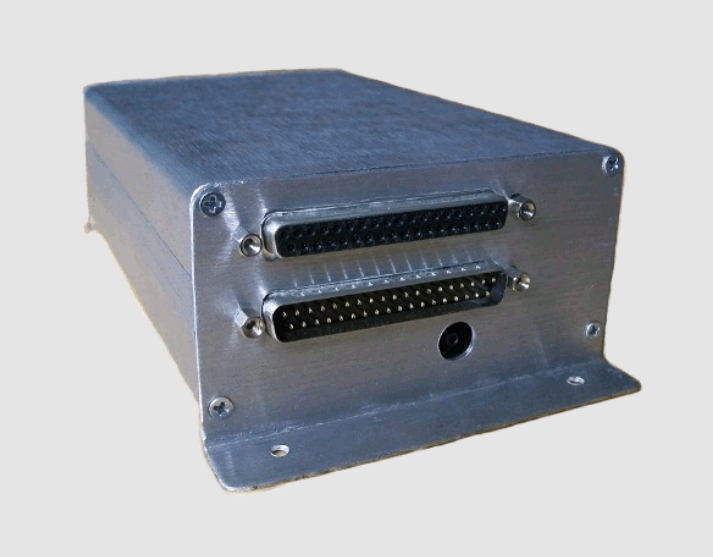
AIM Infotech

Megasquirt MS3
ECU connection

Release 1.00



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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.

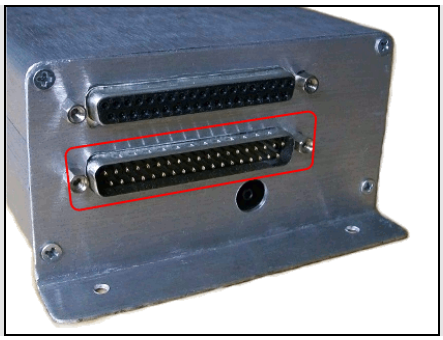
Warning: once the ECU is connected to the logger, set it in the Race Studio 2 software logger configuration: select ECU manufacturer "Megasquirt" and ECU Model "MS3_CAN_BUS".

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 MS3 ECU has CAN communication setup.

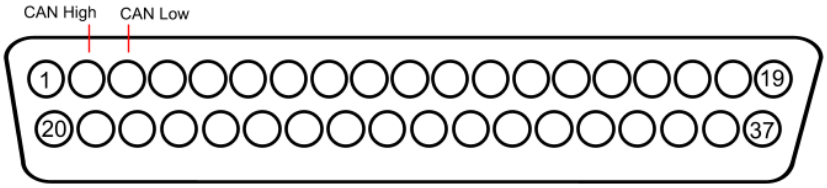
The CAN bus is on the 37 pins male connector shown here below.



2 Connection with AIM loggers

To connect Megasquirt MS3 to AIM loggers follow these instructions.

ECU 37 pins connector	**Pin function**	**AIM cable label**
3	CAN High	CAN+
4	CAN Low	CAN-



3
Available channels

Channels received by AIM loggers connected to Megasquirt MS3 ECU are:

ID	CHANNEL NAME	FUNCTION
ECU_1	MS3_RPM	RPM
ECU_2	MS3_SPEED1	Speed1
ECU_3	MS3_SPEED2	Speed2
ECU_4	MS3_TPS	Throttle Position sensor
ECU_5	MS3_BATT	V Battery
ECU_6	MS3_MAP	Manifold Air pressure
ECU_7	MS3_BARO	Barometric pressure
ECU_8	MS3_ADVANCE	Spark advance
ECU_9	MS3_KNOCK	Knock sensor
ECU_10	MS3_LAMBDA1	Lambda sensor 1
ECU_11	MS3_LAMBDA2	Lambda sensor 2
ECU_12	MS3_EGO_CORR_1	Exhaust gas oxygen correction 1
ECU_13	MS3_EGO_CORR_2	Exhaust gas oxygen correction 2
ECU_14	MS3_AIR_CORR	Air correction
ECU_15	MS3_WARM_ENR	Warm up enrichment
ECU_16	MS3_GAMMA_ENR	Gamma enrichment
ECU_17	MS3_TPSFUELCUT	Throttle Position Sensor fuel cut
ECU_18	MS3_BARO_CORR	Barometric pressure correction
ECU_19	MS3_FUEL_LOAD1	Fuel Load 1
ECU_20	MS3_FUEL_LOAD2	Fuel Load 2
ECU_21	MS3_FUEL_CORR	Fuel correction
ECU_22	MS3_EGO_V1	Exhaust gas oxygen voltage 1
ECU_23	MS3_EGO_V2	Exhaust gas oxygen voltage 2
ECU_24	MS3_IGN_LOAD1	Ignition load 1
ECU_25	MS3_IGN_LOAD2	Ignition load 2

ECU_26	MS3_ACC_ENRICH	Acceleration enrichment
ECU_27	MS3_VE_CURR1	Current VE value in use 1
ECU_28	MS3_VE_CURR2	Current VE value in use 2
ECU_29	MS3_IAC_STEP	Intake air temperature correction step
ECU_30	MS3_COLD_ADV	Cold advance
ECU_31	MS3_MAT	Manifold air temperature
ECU_32	MS3_ECT	Engine cooling temperature
ECU_33	MS3_ENGINE	Engine status
ECU_34	MS3_KNOCK_RET	Knock retard
ECU_36	MS3_DWELL	Coil dwell time
ECU_37	MS3_EGT_6	Exhaust gas temperature 6
ECU_38	MS3_EGT_7	Exhaust gas temperature 7
ECU_39	MS3_VBO2_EN1	VBO2 Enable 1
ECU_40	MS3_VBO2_EN2	VBO2 Enable 2
ECU_41	MS3_IDLE_PWM	Power width modulation
ECU_42	MS3_PW1	Power width 1
ECU_43	MS3_PW2	Power width 2
ECU_44	MS3_ADC6	Analog to digital counter 6
ECU_45	MS3_ADC7	Analog to digital counter 7
ECU_46	MS3_BOOST_DUTY	Boost duty cycle
ECU_47	MS3_SYNCR	Lost sync reason
ECU_48	MS3_STATUS1	ECU Status1
ECU_49	MS3_STATUS2	ECU Status2