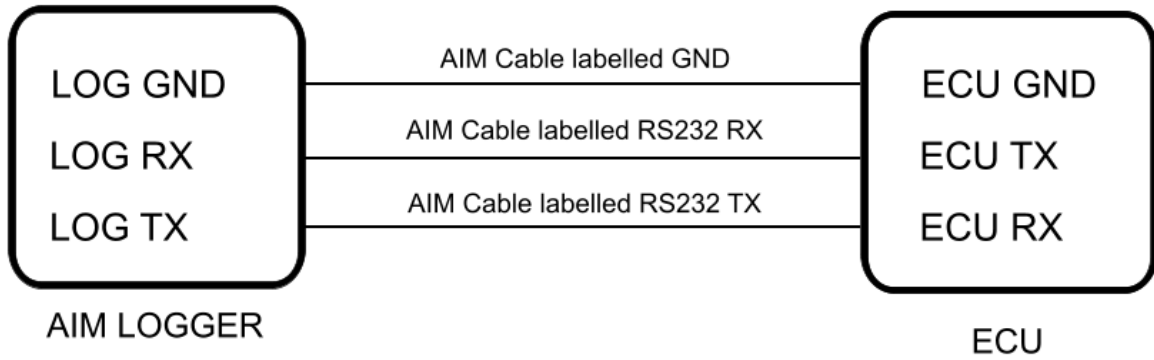


MEGASQ



UIRT MS1 ECU



Racing Data Power

INTRODUCTION

AIM has developed special applications for many of the most popular ECU: by special applications we mean user-friendly systems which allow to easily connect your ECU to our high tech data loggers: user needs only 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 and configuration) values like RPM, engine load, throttle position (TPS), air and water temperature, 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 it is necessary to set it in the logger configuration in Race Studio 2 software.

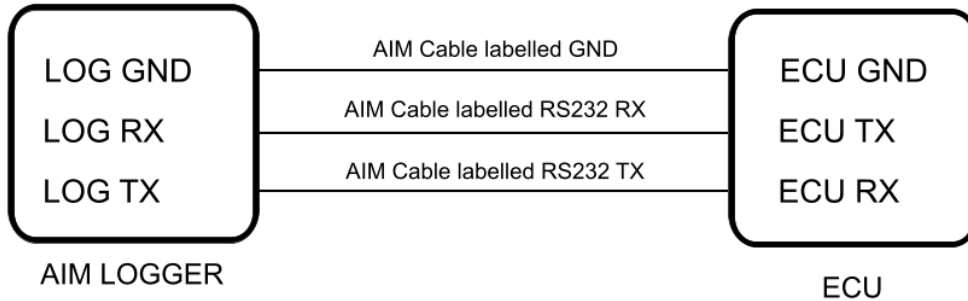
Select Manufacturer “Megasquirt” and Model “MS1”.

Refer to Race Studio Configuration user manual for further information concerning the loggers configuration.

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

1 – Megasquirt MS1 serial communication setup

Megasquirt ECU is equipped with a serial communication setup used to communicate with external loggers whose standard setup is shown here below.



2 – Connecting Megasquirt MS1 ECU to AIM loggers

Megasquirt MS1 is equipped with a DB9 connector used to configure ECU parameters by PC and to communicate with AIM logger.

Warning: set baud rate on 9600 through Megasquirt software, before connecting the logger to the ECU.

To connect AIM logger with Megasquirt connect DB9 cable included in Megasquirt package to the logger.

3 – Communication protocol

Channels received by AIM loggers connected to Megasquirt MS1 ECU are:

ID	Channel Name	Function
ECU_1	MS1_RPM	RPM
ECU_2	MS1_SQUIRT	Control channel
ECU_3	MS1_ENGINE	Control channel
ECU_4	MS1_BARO_ADC	Barometric Analog digital converter
ECU_5	MS1_MAP_ADC	Manifold air pressure A
ECU_6	MS1_MAT	Manifold air temperature
ECU_7	MS1_ECT	Engine coolant temperature
ECU_8	MS1_TPS	Throttle position sensor
ECU_9	MS1_BATT_VOLT	Battery voltage
ECU_10	MS1_EGO_VOLT	Exhaust Gas oxygen voltage
ECU_11	MS1_EGO_CORR1	Exhaust Gas oxygen
ECU_12	MS1_AIR_CORR	Air correction
ECU_13	MS1_WARMUP_ENR	Warm up
ECU_14	MS1_PULSWIDTH1	Pulse width modulation 1
ECU_15	MS1_ACC_ENRICH	Acceleration enrichment
ECU_16	MS1_BARO_CORR	Barometric
ECU_17	MS1_GAMMA_ENRICH	Total gamma enrichment
ECU_18	MS1_CURR_VE1	Current Volumetric Efficiency 1
ECU_19	MS1_PULSWIDTH2	Pulse width modulation 2
ECU_20	MS1_CURR_VE2	Current Volumetric Efficiency
ECU_21	MS1_IDLE_DC	Idle Duty Cycle
ECU_22	MS1_ADVANCE	Advance
ECU_23	MS1_AFR_TARGET	Air fuel ratio
ECU_24	MS1_FUEL_PRESS	Fuel pressure
ECU_25	MS1_EGT	Exhaust Gas Temperature
ECU_26	MS1_IAT_CLT_ANG	Intake air temperature sensor
ECU_27	MS1_KNOCK	Knock sensor
ECU_28	MS1_EGO_CORR2	Exhausted gas oxygen
ECU_29	MS1_PORT_A	Port A
ECU_30	MS1_PORT_B	Port B
ECU_31	MS1_PORT_C	Port C
ECU_32	MS1_PORT_D	Port D
ECU_33	MS1_ECU_STACK	CPU Stack
ECU_34	MS1_TPS_LAST	Throttle position sensor Last
ECU_35	MS1_BCDC	Before top dead center