AiM Infotech

Ford Mustang

Release 1.03

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Car models and years
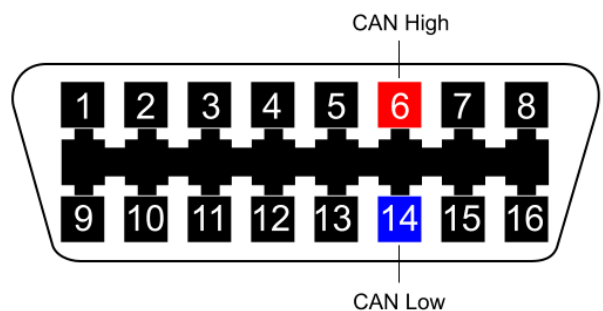
This tutorial explains how to connect Ford cars to AiM devices. Supported car models and years are:

* Ford Mustang   2005-2009   all models
* Ford Mustang   2010   all models
* Ford Mustang   2011-2014   all models

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CAN bus connection

Ford Mustang cars feature a data communication bus based on CAN on the OBDII plug normally visible left over the steering wheel as shown here below on the left. On the right you see the OBDII connector pinout while under connection table is shown.

Pin number	Pin function	AiM cable label
6	CAN High	CAN+
14	CAN Low	CAN-

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AiM device configuration

Before connecting the ECU to AiM device set this up using AiM Race Studio software. The parameters to select in the device configuration are:

- ECU manufacturer "Ford" and, according to your Mustang production year,
- ECU Model
    - "Mustang 2005/09"
    - "Mustang 2010"
    - "Mustang 2011" for cars produced between 2011 and 2014

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Available channels

Channels received by AiM devices connected to Ford Mustang depends on the selected protocol.

4.1

Ford "Mustang 2005/09" protocol

Channels received by AiM devices connected to "Ford" "Mustang 2005/2009" protocol are:

ID	CHANNEL NAME	FUNCTION
ECU_1	M_RPM	RPM
ECU_2	M_SPEED	Speed
ECU_3	M_PEDAL_POS	Pedal position sensor
ECU_4	M_WH_SPD_FL	Front left wheel speed
ECU_5	M_WH_SPD_FR	Front right wheel speed
ECU_6	M_WH_SPD_RL	Rear left wheel speed
ECU_7	M_WH_SPD_RR	Rear right wheel speed
ECU_8	M_TENGINE	Engine temperature

ECU_9	M_ETC_TELTAL	Engine Traction control tell tale
ECU_10	M_TBO_BST	Turbo boost
ECU_11	M_FUEL_LEV	Filtered fuel level
ECU_12	M_FUEL_I_1	Instant fuel level sensor 1
ECU_13	M_FUEL_I_2	Instant fuel level sensor 2
ECU_14	M_FUEL_AVE	Fuel average level
ECU_15	M_FFLUX	Fuel flux
ECU_16	M_CLCH_SW	Clutch switch
ECU_17	M_TCS_BRK	Traction control brake switch
ECU_18	M_TCS_ENG	Traction control engine switch
ECU_19	M_BRK_SW	Brake switch
ECU_20	M_ABS_TELTAL	ABS tell tale
ECU_21	M_AXLE_RATIO_R	Rear axle ratio
ECU_22	M_MIL_TELTAL	Malfunction indicator lamp
ECU_23	M_FAILSAFE_COOL	Failsafe coolant tell tale
ECU_24	M_GEAR	Engaged gear
ECU_25	M_TYRE	Tyre revs per km
ECU_26	M_SMART_AL	Smart alarm

Technical note: not all data channels outlined in the ECU template are validated for each manufacturer model or variant; some of the outlined channels are model and year specific, and therefore may not be applicable.

4.2
Ford "Mustang 2010" protocol

Channels received by AiM devices connected to "Ford" "Mustang 2010" protocol are:

ID	CHANNEL NAME	FUNCTION
ECU_1	M_RPM	RPM
ECU_2	M_SPEED	Speed
ECU_3	M_PEDAL_POS	Pedal position sensor
ECU_4	M_WH_SPD_FL	Front left wheel speed
ECU_5	M_WH_SPD_FR	Front rear wheel speed
ECU_6	M_WH_SPD_RL	Rear left wheel speed
ECU_7	M_WH_SPD_RR	Rear right wheel speed
ECU_8	M_ECT	Engine cooling temperature
ECU_9	M_ETC_TELTAL	Engine traction control
ECU_10	M_TURBO_BOOST	Turbo boost
ECU_11	M_FUEL_LVLMEAN	Average fuel level
ECU_12	M_FUEL_INST_1	Instant fuel level sensor 1
ECU_13	M_FUEL_INST_2	Instant fuel level sensor 2
ECU_14	M_FUEL_AVERAGE	Fuel average level
ECU_15	M_FUEL_FLOW	Fuel flow
ECU_16	M_CLUTCH_SW	Clutch switch on/off
ECU_17	M_TCS_BRK_EVE	Traction control brake switch
ECU_18	M_TCS_ENG_EVE	Traction control engine switch
ECU_19	M_BRK_LAMP_SW	Brake lamp switch
ECU_20	M_ABS_TELTAL	ABS tell tale
ECU_21	M_AXLE_RATIO	Axle ratio
ECU_22	M_MIL_TELTAL	Malfunctioning indicator lamp
ECU_23	M_FAILSAFECOOL	Failsafe coolant tell tale
ECU_24	M_GEAR	Engaged gear
ECU_25	M_TYRE_SIZE	Tyre size

ECU_26	M_SMART_ALARM1	Smart Alarm1
ECU_27	M_SB_CTRL_TEL	Stability control tell tale
ECU_28	M_SB_CTRL_MTXT	Stability control message transmission
ECU_29	M_ABS_EVENT	ABS Event in progress
ECU_30	M_ESP_EVENT	ESP Event in progress
ECU_31	M_TRQ_ACT (Nm)	Torque actuator
ECU_32	M_BRK_WARN_TEL	Brake warning tell tale
ECU_33	M_VEH_YAW_RATE	Vehicle yaw rate
ECU_34	M_VEH_LAT_ACC	Vehicle lateral acceleration
ECU_35	M_STEER_WH_ANG	Steering wheel angle
ECU_36	M_TYRE_RV_MILE	Tyre revolution per mile

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4.3
Ford "Mustang 2011" protocol

Channels received by AiM devices connected to "Ford" "Mustang_2011" protocol are:

ID	CHANNEL NAME	FUNCTION
ECU_1	M_RPM	RPM
ECU_2	M_SPEED	Vehicle speed
ECU_3	M_WH_SPD_FL	Front left wheel speed
ECU_4	M_WH_SPD_FR	Front right wheel speed
ECU_5	M_WH_SPD_RL	Rear left wheel speed
ECU_6	M_WH_SPD_RR	Rear right wheel speed
ECU_7	M_TPS	Throttle position sensor
ECU_8	M_PPS	Pedal position sensor
ECU_9	M_VEH_YAW_RATE	Vehicle yaw rate
ECU_10	M_VEH_LAT_ACC	Vehicle lateral acceleration

ECU_11	M_STEER_WH_ANG	Steering wheel angle
ECU_12	M_TRQ_ACT_Nm	Torque actuator
ECU_13	M_TRQ_SOURCE	Torque source
ECU_14	M_BRK_LAMP_SW	Brake lamp switch
ECU_15	M_IAT	Intake air temperature
ECU_16	M_ABS_EVENT	ABS Event in progress
ECU_17	M_ESP_EVENT	ESP Event in progress
ECU_18	M_SPARK_ADV	Spark advance
ECU_19	M_LOAD	Engine load
ECU_20	M_ACC_FUEL_CONS	Acceleration fuel consumption
ECU_21	M_DES_LAMBDA1	Desired lambda 1 value
ECU_22	M_DES_LAMBDA2	Desired lambda 2 value
ECU_23	M_LAMBDA1	Lambda 1 value
ECU_24	M_LAMBDA2	Lambda 2 value
ECU_25	M_VCT_ANG_INT1	Variable camshaft timing angle intake bank 1
ECU_26	M_VCT_ANG_INT2	Variable camshaft timing angle intake bank 2
ECU_27	M_VCT_ANG_EXH1	Variable camshaft timing angle exhaust bank 1
ECU_28	M_VCT_ANG_EXH2	Variable camshaft timing angle exhaust bank 2
ECU_29	M_VCT_COM_INT1	Variable camshaft timing commanded angle intake bank 1
ECU_30	M_VCT_COM_INT2	Variable camshaft timing commanded angle intake bank 2
ECU_31	M_VCT_COM_EXH1	Variable camshaft timing commanded angle exhaust bank 1
ECU_32	M_VCT_COM_EXH2	Variable camshaft timing commanded angle exhaust bank 2
ECU_33	M_ECT	Engine coolant temperature
ECU_34	M_GEAR	Engaged gear
ECU_35	M_TYRE_SIZE	Tyre size
ECU_36	M_ABS_TELTAL	ABS
ECU_37	M_BRK_WARN_TEL	Brake warning
ECU_38	M_SMART_ALARM1	Smart alarm 1
ECU_39	M_MIL_TELTAL	Malfunction indication lamp
ECU_40	M_FAILSAFECOOL	Fail safe cooling mode
ECU_41	M_ETC_TELTAL	Engine traction control
ECU_42	M_FUEL_FLOW	Fuel flow

ECU_43	M_CHT	Cylinder head temperature
ECU_44	M_CODES_COUNTER	Codes counter
ECU_45	M_CPP_TOP_FLAG	Clutch pedal position top flag
ECU_46	M_CPP_BOT_FLAG	Clutch pedal position bottom flag
ECU_47	M_HSF_FLAG	Fan on/off flag
ECU_48	M_PLSC_FLAG	PLSC on/off flag
ECU_49	M_INJON	Injection on
ECU_50	M_FUEL_SOURCE	Fuel source
ECU_51	M_SPARK_SOURCE	Spark source
ECU_52	M_VCT_SCH_MODE	Variable cam timing scheduled mode
ECU_53	M_CMP_FAIL_FLAG	Camshaft position sensor failure flag
ECU_54	M_EPOS_STATUS	Exhaust gas recirculation valve position sensor flag
ECU_55	M_COIL_ERR_FLAG	Coil error flag

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