

AiM Infotech

Microtec M205 ECU

Release 1.02

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ECU



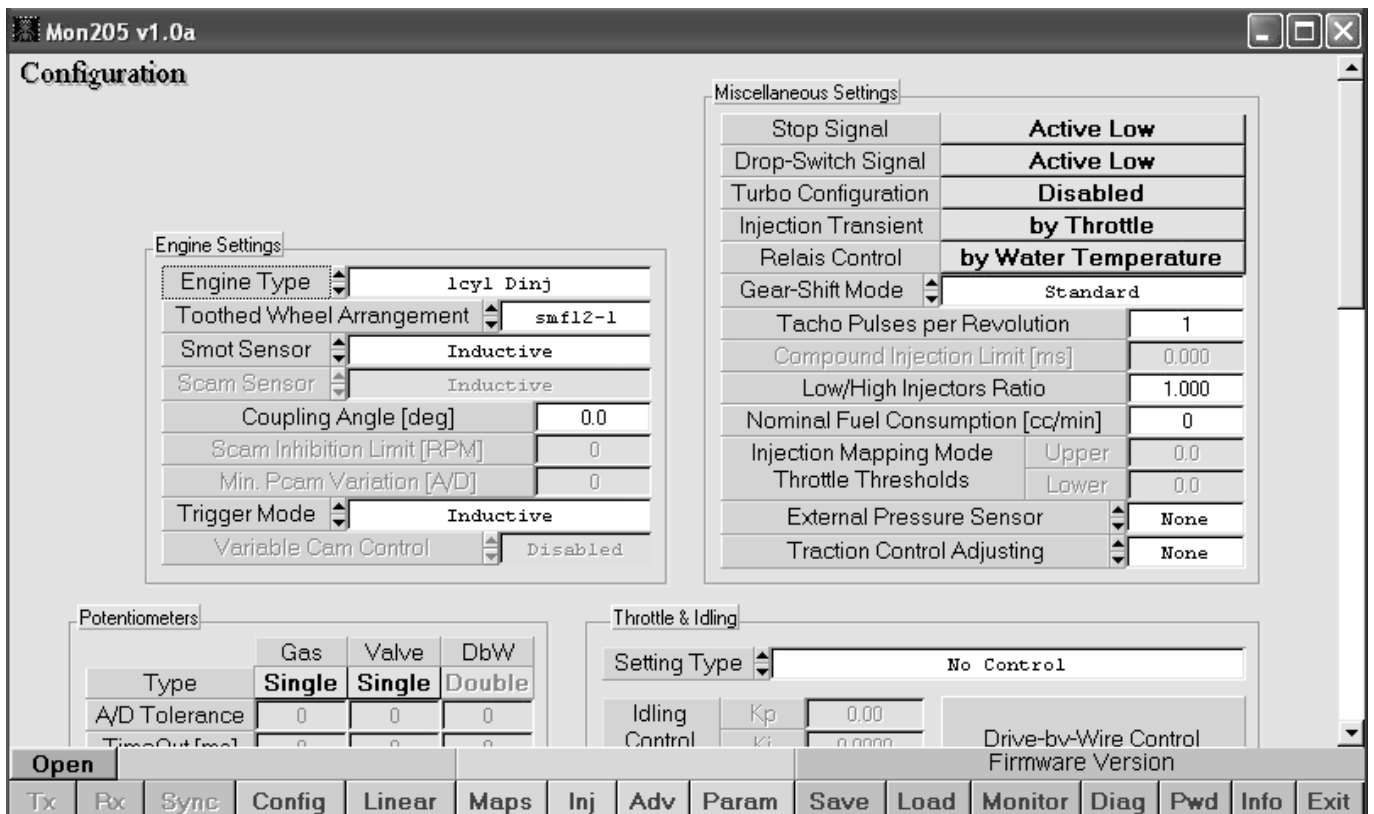
This tutorial explains how to connect Microtec M205 ECU to AiM devices.

# 1 Software Setup

Microtec ECU needs to be set up via MON205 software. Run it and press "Config" on the software bottom keyboard.



Scroll the page that appears.



Bottom on the page you find:

- "CAN Acquisition Channels" table on the left: set all channels Frequency "OFF"
- "MXL" case on the right: set "Auxiliary CAN".

The screenshot shows the 'Mon205 v1.0a' software window. The main area is titled 'CAN Acquisition Channels' and contains a table with columns: Frame, ID (hex), Frequency, Channel 1, Channel 2, Channel 3, and Error. The 'Frequency' column for all rows is set to '0xFF'. A dropdown menu is open for the 'Frequency' of Frame 3, showing options: 0xFF (selected), 50 Hz, 100 Hz, 200 Hz, and 500 Hz. On the right side, there is a dropdown menu for 'MXL' (highlighted in red) with options: 'Auxiliary CAN' (selected), 'Disable', 'Main CAN', and 'Auxiliary CAN' (with a checkmark).

Frame	ID (hex)	Frequency	Channel 1	Channel 2	Channel 3	Error
1	200	0xFF	RPM	Mean RPM	Revolutions	Er
2	204	0xFF	Smot Errors	Scam Errors	Gap Errors	
3	208	0xFF	CU Life (High-Word)	ECU Life (Low-Word)	Engine-ON Time (High-Word)	Engine-ON Time (Low-word)
4	20C	0xFF	Velocity Front-Right	Velocity Rear-Right	Space Front-Right	Space Rear-Right
5	210	0xFF	Velocity Front-Left	Velocity Rear-Left	Space Front-Left	Space Rear-Left
6	214	0xFF	Dwell	TetaBase	Fase	FaseBase
7	218	0xFF	Terog High 1	Terog Low 1	TerogBase 1	KJCyl 1
8	21C	0xFF	Terog High 2	Terog Low 2	TerogBase 2	KJCyl 2
9	220	0xFF	Terog High 3	Terog Low 3	TerogBase 3	KJCyl 3
10	224	0xFF	Terog High 4	Terog Low 4	TerogBase 4	KJCyl 4
11	228	0xFF	ALS Advance Correction	Terog Low 5	TerogBase 5	KJCyl 5
12	22C	0xFF	Injection Cuts Cycle & Count	Terog Low 6	TerogBase 6	KJCyl 6
13	230	0xFF	Skipped Sparks Count	Terog Low 7	TerogBase 7	KJCyl 7
14	234	0xFF	Auxiliary Throttle Position	Terog Low 8	TerogBase 8	KJCyl 8
15	238	0xFF	Advance 1	KACyl 1	Advance 2	KACyl 2
16	23C	0xFF	Advance 3	KACyl 3	Advance 4	KACyl 4
17	240	0xFF	Advance 5	KACyl 5	Advance 6	KACyl 6
18	244	0xFF	Advance 7	KACyl 7	Advance 8	KACyl 8
19	248	0xFF	KJbnc 1	KAbnc 1	KJbnc 2	KAbnc 2
20	24C	0xFF	KJbnc 3	KAbnc 3	KJbnc 4	KAbnc 4
21	250	0xFF	KJbnc 5	KAbnc 5	KJbnc 6	KAbnc 6
22	254	0xFF	KJbnc 7	KAbnc 7	KJbnc 8	KAbnc 8
23	258	0xFF	KJcrank	OffsVbatH	OffsVbatL	DAPickUp
24	25C	0xFF	KJCalib1	KJCalib2 / KJTCA	KACalib1	KACalib2 / KATCA
25	260	0xFF	KJknock1	KJknock2	KAKnock1	KAKnock2
26	264	0xFF	KJGear	KJVel	KAGear	KAVel
27	268	0xFF	KJbnc	KAbnc	KJbnc	KAbnc

At the bottom of the window, there is a toolbar with buttons: Open, Tx, Rx, Sync, Config, Linear, Maps, Inj, Adv, Param, Save, Load, Monitor, Diag, Pwd, Info, Exit. On the right side of the toolbar, there is a 'Firmware Version' label.

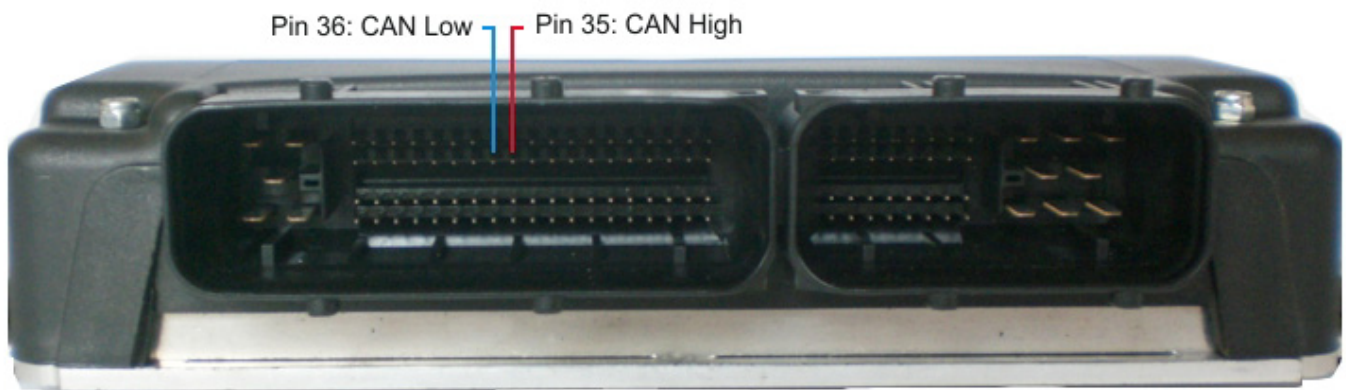
When configuration is over transmit it to the ECU

## 2

### Wiring connection

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Microtec M205 ECU is equipped with a CAN communication protocol on the ECU front connector. As shown below the connector is divided in two parts but pins are numbered in a single sequence from 1 to 121. Below you find connection table.



Connector pin	Pin function	AiM cable
35	CAN High	CAN+
36	CAN Low	CAN-

## 3

### AiM device configuration

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

- select ECU manufacturer "Microtec"
- ECU Model "M172\_M205"

## 4

# Available channels

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Channels received by AiM devices connected to "Microtec" "M172\_M205" protocol are.

<b>ID</b>	<b>CHANNEL NAME</b>	<b>FUNCTION</b>
ECU_1	MT_RPM_IST	Instantaneous RPM
ECU_2	MT_RPM	Average RPM
ECU_3	MT_SPD_FRONT	Front speed
ECU_4	MT_SPD_REAR	Rear speed
ECU_5	MT_SMOT_E	Smot errors
ECU_6	MT_SCAM_E	Scam errors
ECU_7	MT_TPS	Throttle position sensor
ECU_8	MT_LAM1	Lambda value 1
ECU_9	MT_BATTVOLT	Battery supply
ECU_10	MT_MILLISECONDS	Milliseconds counter
ECU_11	MT_GEAR_POT	Gear potentiometer
ECU_12	MT_GEAR	Engaged gear
ECU_13	MT_AIRBOX_P	Air box pressure
ECU_14	MT_BARO_P	Barometric pressure
ECU_15	MT_ADVANCE1	Cycle advance 1
ECU_16	MT_ADVANCE2	Cycle advance 2
ECU_17	MT_ADVANCE3	Cycle advance 3
ECU_18	MT_ADVANCE4	Cycle advance 4
ECU_19	MT_TEROG_H1	High injector erogation time cylinder 1
ECU_20	MT_TEROG_H2	High injector erogation time cylinder 2
ECU_21	MT_TEROG_H3	High injector erogation time cylinder 3
ECU_22	MT_TEROG_H4	High injector erogation time cylinder 4
ECU_23	MT_TEROG_L1	Low injector erogation time cylinder 1
ECU_24	MT_TEROG_L2	Low injector erogation time cylinder 2
ECU_25	MT_TEROG_L3	Low injector erogation time cylinder 3



ECU_26	MT_TEROG_L4	Low injector erogation time cylinder 4
ECU_27	MT_TEROG_B1	Base injector erogation time cylinder 1
ECU_28	MT_TEROG_B2	Base injector erogation time cylinder 2
ECU_29	MT_TEROG_B3	Base injector erogation time cylinder 3
ECU_30	MT_TEROG_B4	Base injector erogation time cylinder 4
ECU_31	MT_KACYL1	Injection advance correction for cylinder 1
ECU_32	MT_KACYL2	Injection advance correction for cylinder 2
ECU_33	MT_KACYL3	Injection advance correction for cylinder 3
ECU_34	MT_KACYL4	Injection advance correction for cylinder 4
ECU_35	MT_KJCYL1	Injection time correction for cylinder 1
ECU_36	MT_KJCYL2	Injection time correction for cylinder 2
ECU_37	MT_KJCYL3	Injection time correction for cylinder 3
ECU_38	MT_KJCYL4	Injection time correction for cylinder 4
ECU_39	MT_DADINT	Advance offset from ignition transient
ECU_40	MT_DJDINT	Total injection offset from transient
ECU_41	MT_DJDINTRPM	Injection offset from RPM transient
ECU_42	MT_DJDINTH20	Injection offset from engine cooling temperature
ECU_43	MT_TETABASE	Ignition base advance
ECU_44	MT_PHASE	Injection phase
ECU_45	MT_FASEBASE	Injection phase base
ECU_46	MT_MAP_SEL	Map selection potentiometer
ECU_47	MT_ADV_TRANS	Ignition transient (from RPM variation)
ECU_48	MT_INJ_TRANS	Injection transient
ECU_49	MT_VALVE_POS	Valve position
ECU_50	MT_DWELL_T	Dwell time
ECU_51	MT_KJTAIR	Injection time correction from air temperature
ECU_52	MT_KJTH20	Injection time correction from water temperature
ECU_53	MT_KJPAIRBOX	Injection time correction from air box pressure
ECU_54	MT_KJPBARO	Injection time correction from barometric air pressure
ECU_55	MT_KATAIR	Offset advance from air temperature
ECU_56	MT_KATH20	Offset advance from water temperature
ECU_57	MT_KAPAIRBOX	Offset advance from air box pressure



ECU_58	MT_KAPBARO	Offset advance from barometric air pressure
ECU_59	MT_KJGEAR	Injection time correction from engaged gear
ECU_60	MT_KAGEAR	Offset advance from engaged gear
ECU_61	MT_AIRT	Intake air temperature
ECU_62	MT_ECT	Engine cooling temperature
ECU_63	MT_FUEL_CAL1	Fuel calibration 1
ECU_64	MT_FUEL_CAL2	Fuel calibration 2
ECU_65	MT_OFFSVBATH	High injectors V battery offset time
ECU_66	MT_OFFSVBATL	Low injectors V battery offset time
ECU_67	MT_FLAG_MOTORE	Engine flag
ECU_68	MT_SEGNALI_IN	Input signal
ECU_69	MT_SEGNALI_OUT	Output signal
ECU_70	MT_FLAG_STATO	Status flag
ECU_71	MT_FLAG_CAMBIATA	Engine shift flag
ECU_72	MT_INJ_ERR	Injection error
ECU_73	MT_FLAG_RESET	Reset flag
ECU_74	MT_SPACE_FRONT	Front run space
ECU_75	MT_SPACE_REAR	Rear run space