AiM Infotech

Microtec M197
for Ducati Bikes

Release 1.00

ECU

This tutorial explains how to connect Microtec M197 ECU to AiM devices.

1 Supported Ducati Models

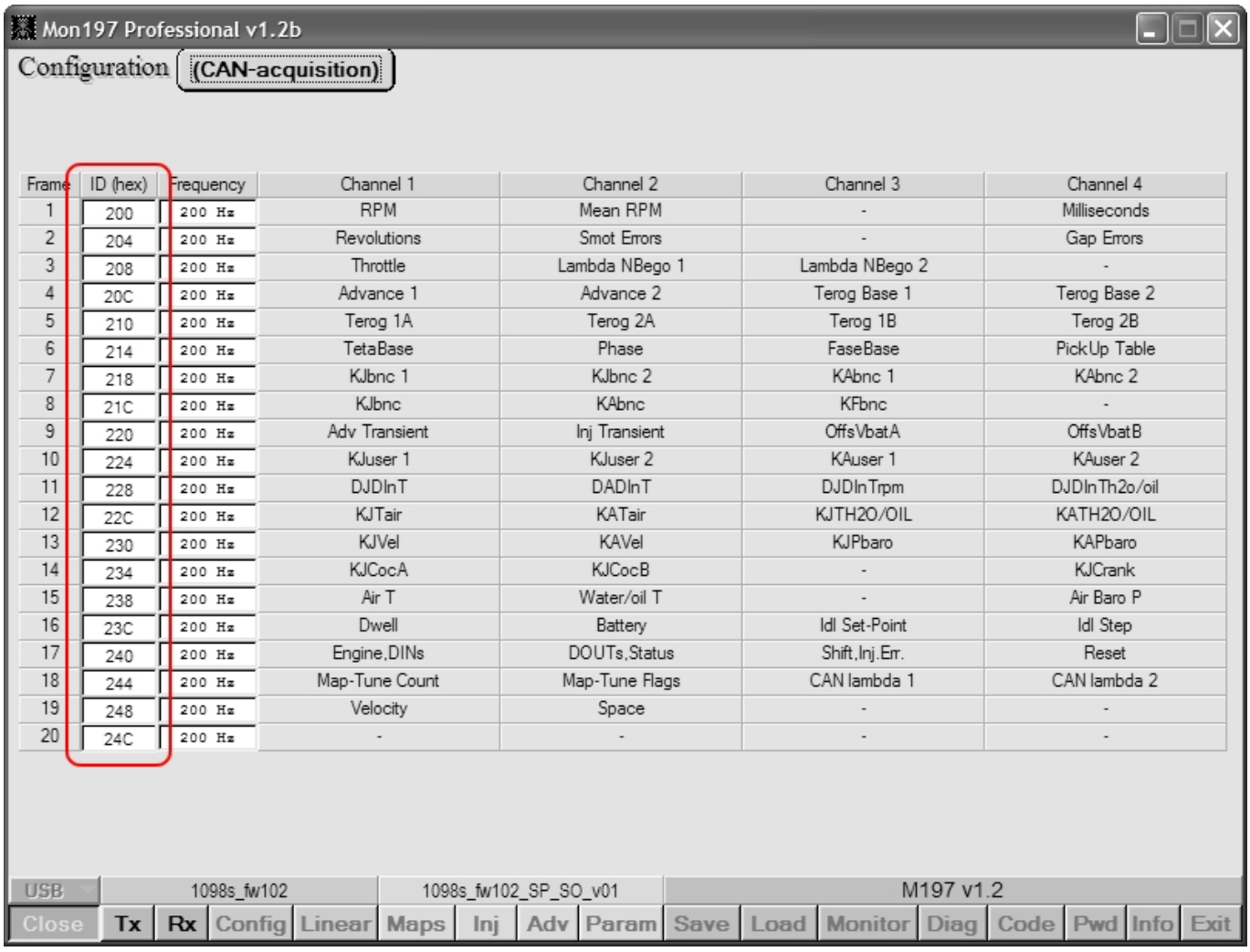
At July 2013 Microtec M197 can replace these Ducati bikes ECU:

- Hypermotard 1100
- Monster
  - 400
  - 620
  - 695
  - 750
  - 800
  - 900
  - 1000
  - S2R 800
  - S2R 1000
  - S4
  - S4R
- Multistrada
  - 620
  - 1000
  - 1100
- Superclassic
  - GT1000
  - Paulsmart 1000
  - Sport 1000
- Sport Turing
  - ST2
  - ST3
  - ST4
- Street fighter 1098
- Super Bike
  - 749
  - 848
  - 998
  - 1098
  - 108R
  - 1198
- Super Sport
  - 620
  - 750
  - 800
  - 900
  - 1000

Please note: always check Microtec website at www.microtec.cc to see which bike models are fully compatible.

2
Software Setup

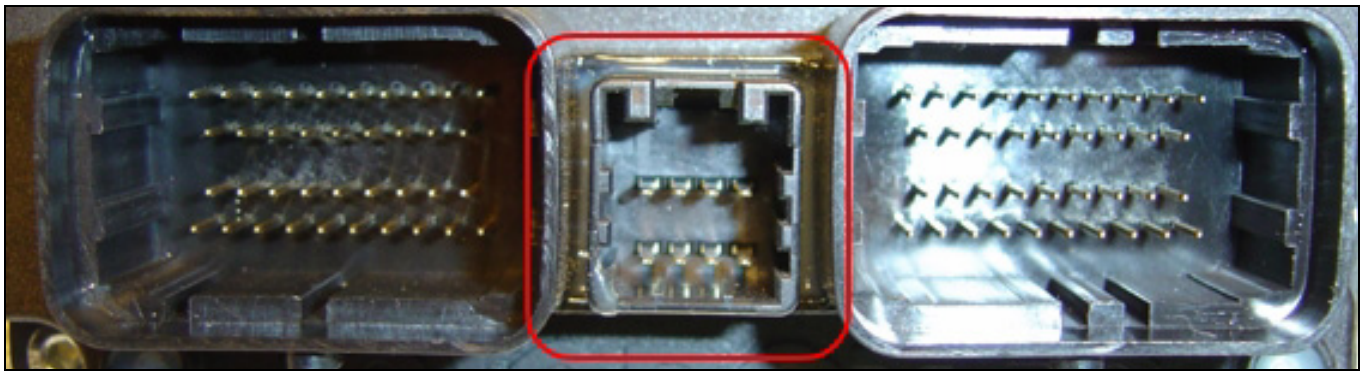
On this ECU CAN line is disabled by default. Please address to Microtec to know how to enable the CAN line. Once performed this step it is important that that CAN Acquisition configuration page IDs (hex) are set as here below.



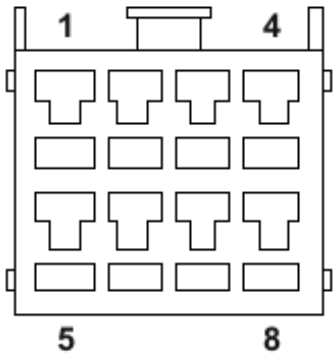
Frame	ID (hex)	Frequency	Channel 1	Channel 2	Channel 3	Channel 4
1	200	200 Hz	RPM	Mean RPM	-	Milliseconds
2	204	200 Hz	Revolutions	Smot Errors	-	Gap Errors
3	208	200 Hz	Throttle	Lambda NBego 1	Lambda NBego 2	-
4	20C	200 Hz	Advance 1	Advance 2	Terog Base 1	Terog Base 2
5	210	200 Hz	Terog 1A	Terog 2A	Terog 1B	Terog 2B
6	214	200 Hz	TetaBase	Phase	FaseBase	PickUp Table
7	218	200 Hz	KJbnc 1	KJbnc 2	KAbnc 1	KAbnc 2
8	21C	200 Hz	KJbnc	KAbnc	KFbnc	-
9	220	200 Hz	Adv Transient	Inj Transient	OffsVbatA	OffsVbatB
10	224	200 Hz	KJuser 1	KJuser 2	KAuser 1	KAuser 2
11	228	200 Hz	DJDInT	DADInT	DJDInTrpm	DJDInTh2o/oil
12	22C	200 Hz	KJTair	KATair	KJTH2O/OIL	KATH2O/OIL
13	230	200 Hz	KJVel	KAVel	KJPbaro	KAPbaro
14	234	200 Hz	KJCocA	KJCocB	-	KJCrank
15	238	200 Hz	Air T	Water/oil T	-	Air Baro P
16	23C	200 Hz	Dwell	Battery	Idl Set-Point	Idl Step
17	240	200 Hz	Engine,DINs	DOUTs,Status	Shift,Inj.Err.	Reset
18	244	200 Hz	Map-Tune Count	Map-Tune Flags	CAN lambda 1	CAN lambda 2
19	248	200 Hz	Velocity	Space	-	-
20	24C	200 Hz	-	-	-	-

3
CAN connection

Microtec M197 ECU is equipped with a CAN communication protocol on the ECU central AMP male connector, highlighted here below.



The AMP female connector that is to be plugged in is shown below with the connection table



Female connector pin	Pin function	AiM cable
2	CAN High	CAN+
3	CAN Low	CAN-

4
AiM Logger configuration

Once the ECU connected to the logger, set up the logger as follows:

Run Race Studio 2 software and select:

- Device Configuration –> Select the device you are using;
- select the configuration or press “New” to create a new one;
- select ECU manufacturer “Microtec” and ECU Model “M197_Ducati”
- transmit the configuration to the device pressing “Transmit”.

5
Available channels

Channels received by AiM devices connected to Microtec M197_Ducati protocol are.

ID	CHANNEL NAME	FUNCTION
ECU_1	M_RPM_MEAN	RPM average value
ECU_2	M_RPM_INST	Instantaneous RPM
ECU_3	M_SPEED	Vehicle speed
ECU_4	M_THROTT	Throttle
ECU_5	M_ADV1	Cycle Advance 1
ECU_6	M_ADV2	Cycle Advance 2
ECU_7	M_TEROG_B1	Injector erogation time cylinder 1
ECU_8	M_TEROG_B2	Injector erogation time cylinder 2
ECU_9	M_TETABASE	Ignition base advance
ECU_10	M_PHASE	Injection phase
ECU_11	M_PHASEBASE	Injection phase base
ECU_12	M_AIRT	Intake air temperature
ECU_13	M_ECT	Engine coolant temperature
ECU_14	M_BARO_PRESS	Barometric pressure
ECU_15	M_DWELL	Dwell time
ECU_16	M_BATT_VOLT	Battery voltage
ECU_18	M_LAMBDA1_CAN	Lambda value 1 via CAN
ECU_19	M_LAMBDA2_CAN	Lambda value 2 via CAN
ECU_20	M_STOP_SW	Stop switch
ECU_21	M_CLUTCH_SW	Clutch switch
ECU_22	M_NEUTRAL_SW	Neutral switch
ECU_23	M_SIDE_STAND	Side stand
ECU_24	M_LAM1_NBEGO	Lambda value 1
ECU_25	M_LAM2_NBEGO	Lambda value 2