AiM Infotech

DTA S Series CAN Protocol

and RS232 update to CAN

Release 1.02

ECU

1 Supported models

This tutorial explains how to connect DTA S series ECU to AiM devices. Supported ECU models are:

- S40;
- S40 Pro;
- S60;
- S60 Pro;
- S80;
- S80 Pro;
- S100;
- S100 Pro.

2 Firmware prerequisites

DTA S Series ECUs have been using CAN bus communication protocol only from a defined firmware version onward. Here you find complete indication of all firmware versions needed for each supported S Series ECU.

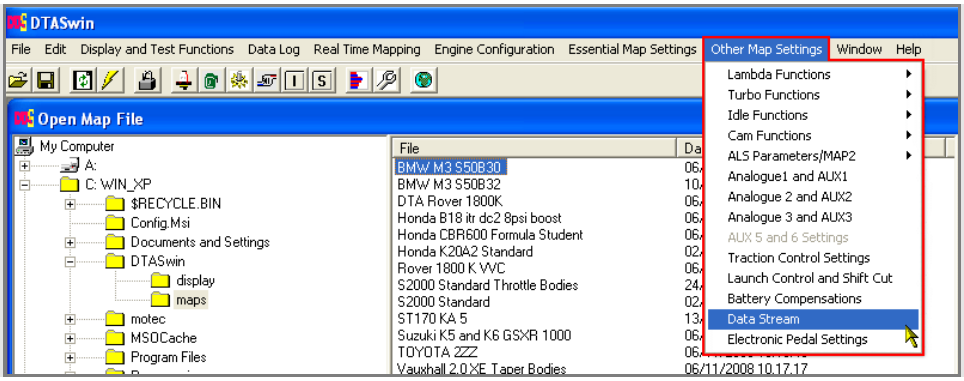
- S40/S40 Pro from firmware version V37.00 onward;
- S60/S60 Pro from firmware version V36.00 onward;
- S80/S60 Pro from firmware version V40.00 onward;
- S100/S100 Pro from firmware version V43.00 onward.

Please note: in case your ECU has a firmware version older than these above specified, please upgrade the firmware.

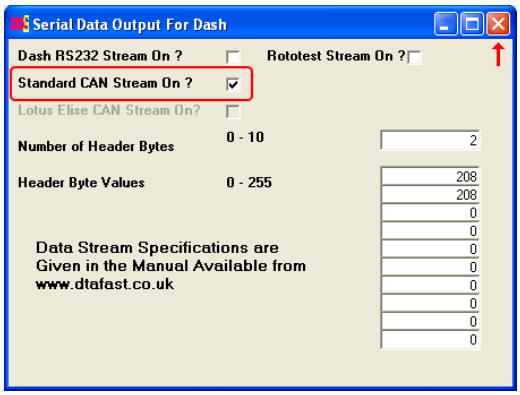
3
Software setting

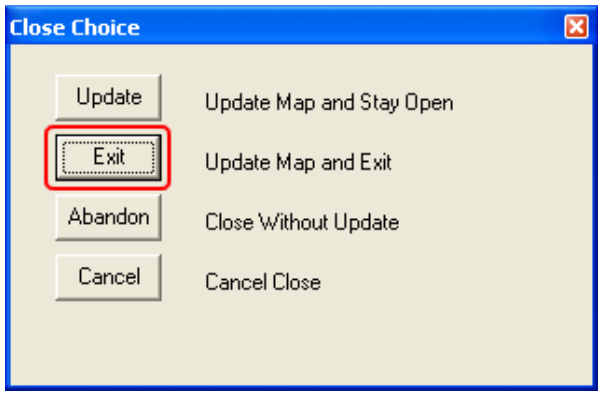
For DTA ECUs to communicate with AiM devices a software setting is needed. DTA ECU comes with DTAWin software. To configure it in order to communicate with AiM devices follow these steps.

- Run DTAWin software and follow the path: “Other Map settings –> Data stream” as here below.



- “Serial Data Output For Dash” window appears: enable “Standard CAN Stream on?” as here below on the left.





- Click on the red cross top right of “Serial Data Output for Dash” panel to close the window;
- “Close choice” panel, shown above on the left, appears select “Exit” and exit the software.

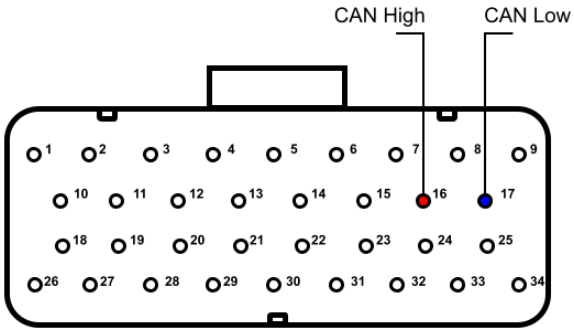
For any further information concerning ECU firmware/software settings and/or upgrading it is always recommended to address to the ECU dealer.

4
Wiring connection

DTA ECU CAN communication protocol is on the ECU front connector(s). DTA S40 has only one front connector while the others have two.

4.1
S40/S40 Pro ECU wiring connection

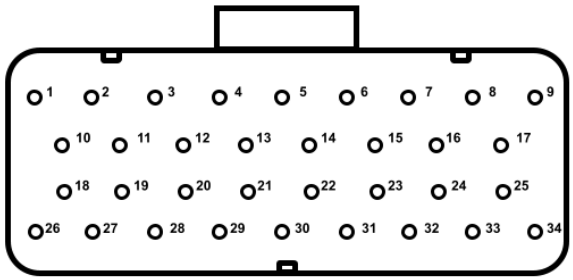
DTA S40/S40 Pro ECU features one 34 pins front male connector. Here below are connector drawing and connection table.

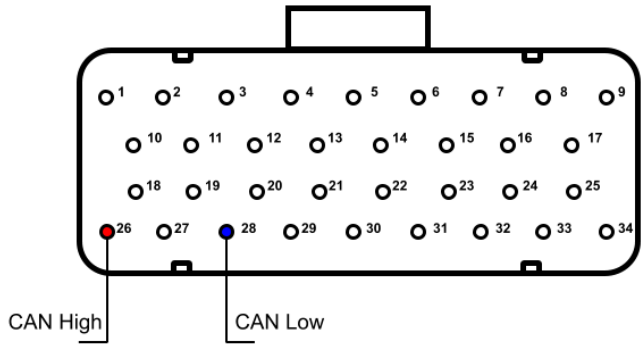


DTA S4O/S40 Pro connector	Pin function	AiM cable
16	CAN+	CAN+
17	CAN-	CAN-

4.2
S60/S60 Pro, S80/S80 Pro and S100/S100 Pro ECU wiring connection

DTA S60/S60 Pro, S80/S80 Pro and S100/S100 Pro ECUs have two34 pins front male connectors. They can be distinguished by the number of bottom keys: the one to be used for CAN connection is that with two bottom keys. Here below are connector drawings as well as connection table.





DTA connector	Pin function	AiM cable
26	CAN+	CAN+
28	CAN-	CAN-

5
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 “DTA”
- ECU Model “S SERIES PRO (CAN)”;

6
Available channels

Channels received by AiM loggers connected to "DTA" "S SERIES PRO (CAN)" protocol are:

ID	CHANNEL NAME	FUNCTION
ECU_1	DTA_RPM	RPM
ECU_2	DTA_SPEED	Speed
ECU_3	DTA_TPS	Throttle position sensor
ECU_4	DTA_ECT	Engine cooling temperature
ECU_5	DTA_AIR_TEMP	Intake air temperature
ECU_6	DTA_OIL_TEMP	Oil temperature
ECU_7	DTA_OIL_PRESS	Oil pressure
ECU_8	DTA_MAP	Manifold air pressure
ECU_9	DTA_FUEL_PRESS	Fuel pressure
ECU_10	DTA_FUEL_L_h	Fuel consumption per hour in litres
ECU_11	DTA_FUEL_L_100km	Fuel consumption per 100 km in litres
ECU_12	DTA_LAMBDA	Lambda value
ECU_13	DTA_ADVANCE	Spark advance
ECU_14	DTA_INJECTIME	Injection time
ECU_15	DTA_GEAR	Engaged gear
ECU_16	DTA_BATT	Battery voltage
ECU_17	DTA_ANA1	Analog 1
ECU_18	DTA_ANA2	Analog 2
ECU_19	DTA_ANA3	Analog 3
ECU_20	DTA_CAM_ADV	CAM Advance
ECU_21	DTA_CAM_TAR	CAM Target
ECU_22	DTA_CAM_PWM	CAM Pulse with Modulation
ECU_23	DTA_KNOCK_ERR	Knock error
ECU_24	DTA_CAM_ERR	CAM error