

AiM Infotech

Marelli SRA

Release 1.01



SRA-EDL8

ECU



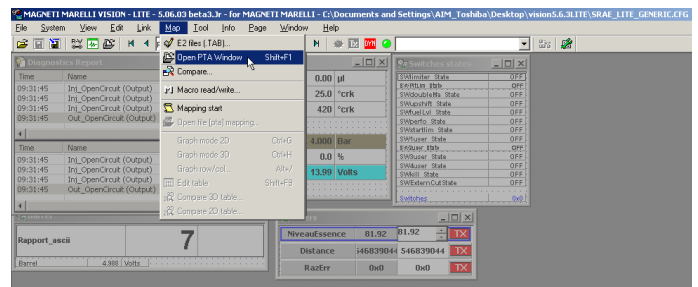
This tutorial explains how to connect Marelli SRA EDL8 ECU to AiM devices.

1 Software setting

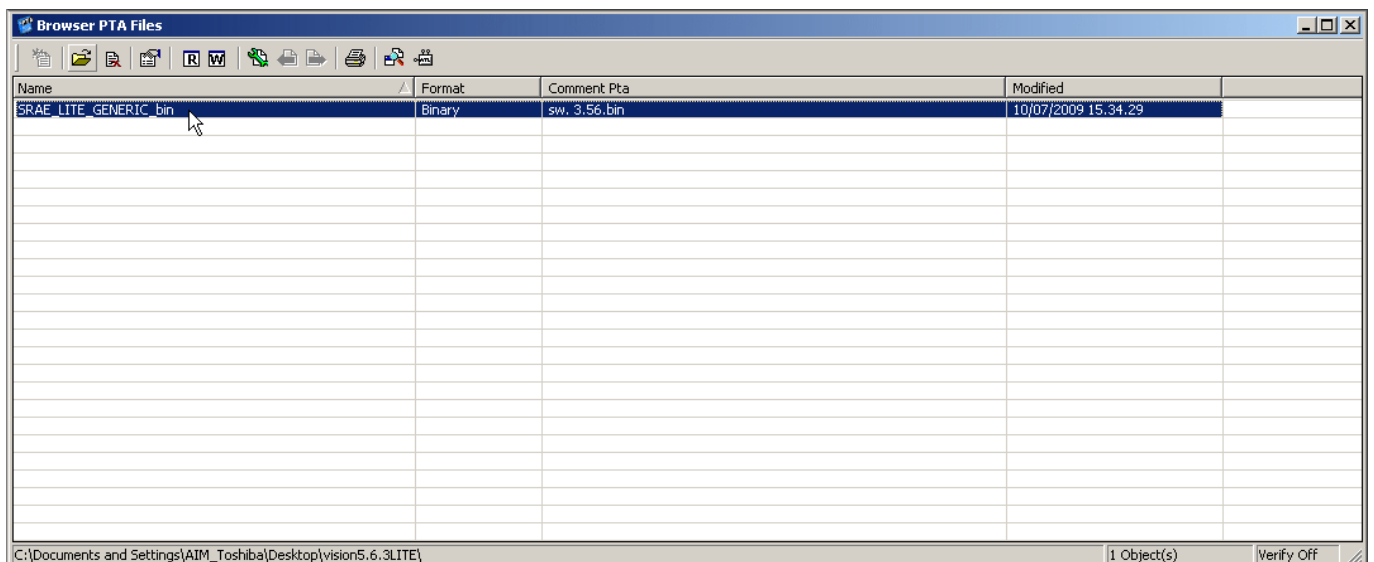
Marelli SRA ECU needs a software setting to correctly communicate with AiM devices. To perform it use Marelli "Vision" software and follow these instruction.

Run the software and follow this path:

- Map→ Open PTA Window



- A MAP file is normally available in the PTA files browser. If not browse the PC and double click on it.





- Scroll "PTA Table" window and double click "Dashboard"

The screenshot shows the 'MAGNETI MARELLI VISION - LITE' software interface. The main window displays a table of components for the file 'sw. 3.56.bin'. The 'DASHBOARD' component is highlighted with a mouse cursor. The table has columns for Title, Reference, *, and Size.

| Title | Reference | * | Size |
|--------------------------|-----------|---|------------|
| TRANSIENTS & CUTOFF | | | [33] |
| INJECTION PHASE | | | [6] |
| KNOCK CONFIGURATION | | | [4] |
| KNOCK | | | [49] |
| TURBO | | | [112] |
| UPSHIFT | | | [22] |
| ALARMS | | | [3] |
| STRATEGIES PWM 1 & 2 | | | [4] |
| USER STRATEGIES | | | [48] |
| ANALOG LAMBDA CONTROL | | | [41] |
| LAMBDA ON/OFF REGULATION | | | [15] |
| ENGINE SUPERVISION | | | [41] |
| DASHBOARD | | | [7] |
| GDU | | | [17] |
| DDU | | | [18] |
| MISCELLANEOUS | | | [11] |
| DIAGNOSTIC ON BOARD | | | [3] |
| SDU | | | [47] |
| GCU Megaline | | | [4] |
| TRACTION CONTROL | | | [68] |

At the bottom of the window, the status bar shows 'Ready', 'Comm: Prot. works...', 'ETH: Pc1', and a green 'CONN ON' button.

- Double click "Type of Dash Board"

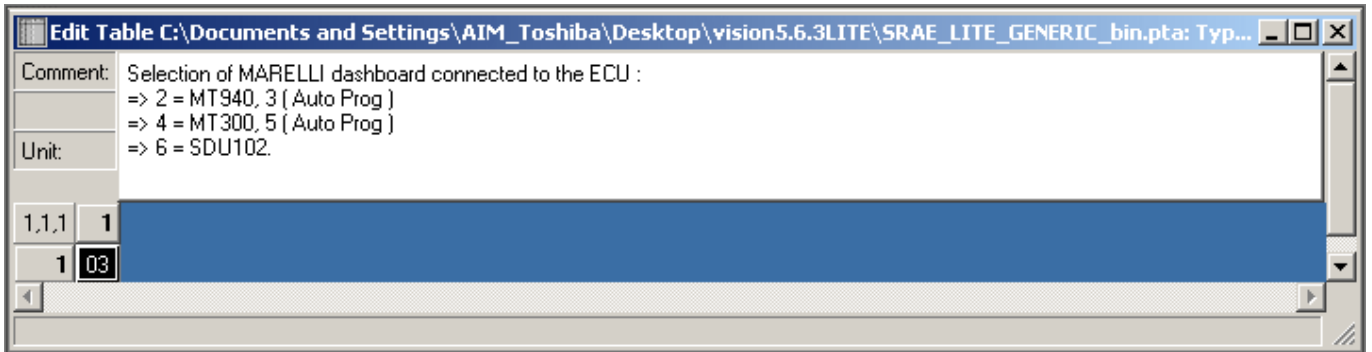
The screenshot shows the 'PTA table' window for the file 'sw. 3.56.bin'. The 'Type of Dash Board' component is selected and highlighted. The table provides details for this component, including its reference, size, and other parameters.

| Title | Reference | * | Size |
|---------------------------|------------------|---|-------------|
| Type of Dash Board | EE.CfgU.TypeD... | X | = 03 |
| Dashboard Channels | EE.DefDash.In... | X | 1x12x1 |
| Dash Alarms | EE.DefDash.Alarm | X | 2x8x1 |
| Min & Max Dash Alarms | EE.DefDash.Lim | X | 2x8x1 |
| Dash Page Program | EE.DefDash.Aff | X | 5x3x1 |
| Channel Conditioning | EE.DefDash.Ca... | X | = 13 |
| Threshold of Conditioning | EE.DefDash.Se... | X | = 02000.000 |

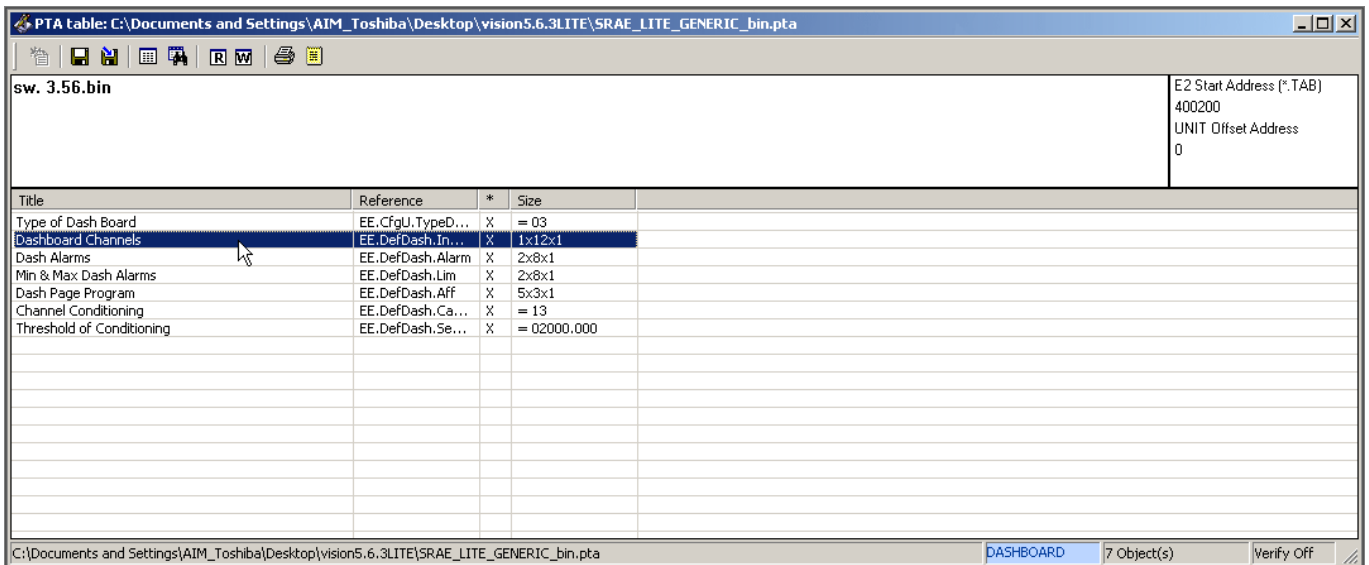
The status bar at the bottom shows 'DASHBOARD' and '7 Object(s)'. A 'Verify Off' button is visible on the right.



- Double click the only settable cell and fill in "3" (Auto Prog)



- Double click "Dashboard Channels"





- Fill "Dashboard channels" table with the following values:

- 0000
- 0001
- 0005
- 0006
- 0004
- 0009
- 000B
- 0026
- 001E
- 0002
- 0007
- 0017

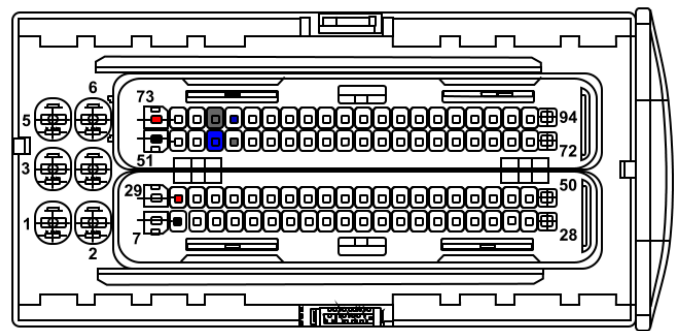
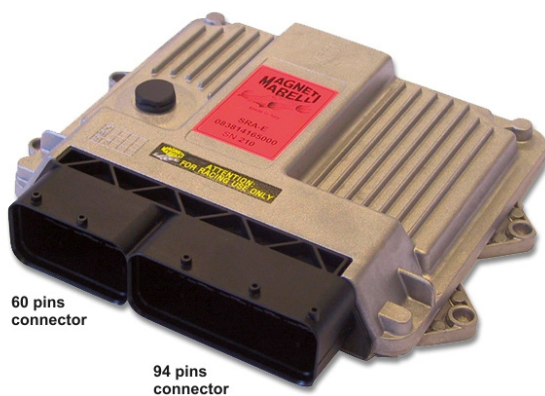
The screenshot shows a window titled "Edit Table C:\Documents and Settings\AIM_Toshiba\Desktop\vision5.6.3LITE\SRAE_LITE_GENERIC_bin.pta: Das...". The window contains a table with the following data:

| 1,1,1 | 1 |
|-------|------|
| 13 | 0000 |
| 14 | 0001 |
| 15 | 0005 |
| 16 | 0006 |
| 17 | 0004 |
| 18 | 0009 |
| 19 | 000B |
| 20 | 0026 |
| 21 | 001E |
| 22 | 0002 |
| 23 | 0007 |
| 24 | 0017 |

Additional information from the screenshot: A comment box contains the text "List of 12 dashboard channels. (See documentation for the channel numbers) Warning :HEXADECIMAL FORMAT". The unit is set to "Unit:".

2 Connection to AiM devices

Magneti Marelli SRA EDL8 ECU features a bus communication protocol based on CAN on the 94 pins front right connector. Here below it is indicated on the left; on the right is connector pinout in detail.



Here below is connection table. The ECU has two CAN lines: CAN0 and CAN1; AiM suggests to use CAN1.

Please note: be sure to **never** cross CAN High and CAN low of different CAN lines.

| 94 Pins connector pin | Pin function | AiM cable |
|-----------------------|-----------------------|-------------|
| 76 | CAN0 High | CAN+ |
| 54 | CAN0 Low | CAN- |
| 55 | CAN1 High | CAN+ |
| 77 | CAN2 Low | CAN- |
| 8 or 51 | Ground | GND |
| 73 or 30 | Battery Positive Pole | 9-15 VDC |

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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 "MARELLI"
- ECU Model "SRA_EDL8 "

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Available channels

Channels received by AiM devices connected to "MARELLI" "SRA_SRAE_SRT" protocol are:

| ID | CHANNEL NAME | FUNCTION |
|-----------|---------------------|----------------------------|
| ECU_1 | EDL8_RPM | RPM |
| ECU_2 | EDL8_TPS | Throttle position sensor |
| ECU_3 | EDL8_ECT | Engine coolant temperature |
| ECU_4 | EDL8_OILT | Oil temperature |
| ECU_5 | EDL8_OILP | Oil pressure |
| ECU_6 | EDL8_FUELP | Fuel pressure |
| ECU_7 | EDL8_BATTV | Battery supply |
| ECU_8 | EDL8_GEAR | Engaged gear |
| ECU_9 | EDL8_LAMBDA | Lambda value |
| ECU_10 | EDL8_SPEED | Vehicle speed |
| ECU_11 | EDL8_MAP | Manifold air pressure |
| ECU_12 | EDL8_AIR_T | Intake air temperature |