

Part Number: 230-VM-EFIMOTSR

MoTeC M4 / M48 Serial Interface Module

Module Configuration Setup:

Module Type: MOTEC_RS232
Data Set 5, 19200 Baud Rate

Serial Number: 501370

Channel Number	Channel Name	V_Net ID #	EFI Variable	Default Units
1	EFI Engine RPM	0x532	Engine RPM	RPM
2	EFI. TPS.	0x538	Throttle Position	%
3	EFI MAP Press	0x53C	Manifold Pressure	kPa
4	EFI Intake Temp	0x529	Air Temperature	Deg C
5	EFI H2O Temp	0x536	Engine Temperature	Deg C
6	EFI A/F 1	0x539	Lambda	Lambda
7	EFI Voltage	0x52A	Battery Voltage	Volts
8	EFI Speed	0x533	Drive Speed	KPH
9	EFI Gear	0x551	Gear	
10	Engine Load	0x53B	Load Point	%
11	Injector Pulse Width	0x520	Injector Act. Pulse Width	ms
12	Injector Duty Cycle	0x521	Injector Duty Cycle	%
13	Timing Ign. 1	0x555	Ignition Advance	DBTDC

Description:

The MoTeC interface module is used to convert the data stream from the MoTeC RS232 output in to a format compatible with the RacePak V-Net System. Data from the module is then available for use with the full range of RacePak V-Net devices including on board displays, real time telemetry, and data logging applications. The module also provides setup capability to accommodate selection of scaling units, data logging sample rates and even custom sensor calibration. Up to 13 different data channels can be monitored and recorded.

Module Installation:

The V-Net connector module can be inserted at any location in the V-Net data bus in your vehicle. Select locations where the connector module can be mounted safely. Avoid mounting near heat sources and high voltage ignition wires. The connector module must be mounted in a location that does not exceed 185°F or the module will be damaged.

Connection for M4 with Serial Number 3000 and Above:

M4	V-Net DB9	Function
Pin 21	5	Ground
Pin 22	2	M4 RS232 TXD

Connection for M4 with Serial Number Below 3000 and M48:

*Requires CIM module from MoTeC.

CIM Module	V-Net DB9
Ground	Pin 5
RS232 TXD	Pin 2

M4 / M48 Programming:

You must program the M4 / M48 to output data set 5 at the baud rate 19200.

Software Setup and Module Configuration – Requires DataLink 3.7.2 or above

Before you can use this module with your V-Net Series data logger, you will need to update your Car Configuration File in your PC. To perform this step you will need to connect the data logger to your PC using the units serial interface cable (See your units instruction manual for details). Next start the RacePak DataLink program. If you selected your car configuration file as the default configuration file, the file will be opened and the file tab for the car configuration file will be selected. If it is not, open your car configuration file by selecting the **Open Car Configuration** menu item located in the **Files** main menu selection.

Next apply power to your on board system, wait 10 seconds and select the **Read VNET Config** menu item located in the **Edit** main menu selection. The DataLink program will read in the configuration of your system. If everything works properly, a new channel button will be added to the configuration file for each of the data channels shown on the previous page.

If a new button is added, however, the button is captioned per the unit serial number (example: **SN 1001**), you have sensors in your system programmed to with the same V-Net ID as one of the channels in this module. You must change the V-Net ID on one of the sensors. In the case of duplicate sensors measuring the same value either remove the duplicate module or rename one of the modules with the E2 (engine 2) parameters.

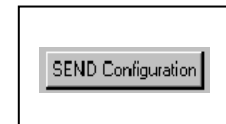
To edit the setup parameters of any of the data channels, position the mouse cursor over the channel button and click the right mouse button. The VNET Input Channel Parameters dialog box will be displayed. A Portion of this dialog box is show below.

Locate the Input Number text box this value corresponds to the data channel from the module as outlined on page 1. If you change any of the default configurations for the channel be sure you are editing the proper input channel as pointed to by this value.

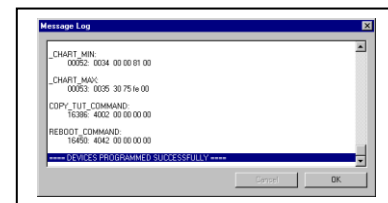
Locate the text box labeled **MOTEC INTERFACE MODULE INSTRUCTIONS**. This text box provides online instructions for modifying the setup of this module. Read the instructions and modify the setup as desired. (Please note the scroll bars located on the left- hand portion of the text box are used to scroll through the instructions.



When you have finished editing the configuration on your PC, you will need to send the information to the sensor module. Be sure the serial interface cable is connected to your data logger and power is applied to the system. To send the information position the mouse cursor over the **Send Configuration** button and click the left mouse button. The progress box as shown to the left will be displayed.



When finished sending the message “**Device Programmed Successfully**” should be displayed at the bottom of the progress box. If you receive an error message, turn power to the system off and then back on and repeat the send configuration process. If problems persist, check the troubleshooting section in your manual and then contact RacePak.



IMPORTANT INFORMATION FOR V300 AND V500 DATA LOGGERS:

V300 Data Loggers Require Firmware Version 36 or Higher.
V500 Data Loggers Require Firmware Version 53 or Higher.

If you do not know how to check the firmware version currently installed in your V300 or V500 data logger, please call us 949-709-5555 for assistance.

If you have a V300 or V500 data logger and do not meet the minimum firmware version requirement, you will need to send your data logger to Racepak to have the firmware upgraded.

All other Racepak data loggers, including V300SD, will work with all firmware versions and do not require any firmware updates to work properly with this module.