Part Number: 230-VM-EFIUCAN

Universal CAN ECU Interface Module

IMPORTANT: Please consult the table below to confirm your ECU is supported by the Universal CAN ECU module. Available channels will vary by ECU type.

Refer to the EFI Interface programming instructions on Page 2 of these instructions to properly setup the module for use with your ECU.

Description:

The Universal CAN ECU interface module is used to convert the CAN bus data stream found in most new vehicles, as well as some popular aftermarket ECUs into CAN bus data that is 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. The number of data channels and sample rates depends on the make and model of ECU. Please consult your ECU manufacturer for further details and specifications.

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.

Supported ECUs:

Available ECU settings, selectable Pre-Programmed CAN protocols:

AEM V2/EMS-4/Infinity EMS	MaxxECU
Big Stuff 3	MEFI-4B
Electromotive TECGT	MegaSquirt-III (DIY Autotune)
EMS EM-Tech	MicroTech
Emtron (Predefined Dataset 1)	MoTeC CAN (Data set 3)
FAST XFI	MSD Atomic LS
Fuel Tech (200,250,300,350,500v1,500v2, 600)	MSD Atomic TBI
Haltech (v1 and v2 protocols)	OBD-II (2008 and later)
Holley Dominator	Polaris RZR
InjePro	Pro EFI
Life Racing F88	User Configured (CAN bus knowledge required)
Link G4+ Series	

Wire Connection:

2 Position Deutsch DTM		
Position	**Color**	**Function**
1	Green	CAN Low
2	Yellow	CAN High

Adapter harnesses available

Although the consumer can terminate the mating Deutsch connector and connect to their ECU, adapter harnesses are available to ease installation. Mating connector is not supplied with the module, but is supplied with below adapter harnesses.

280-CA-EFICAN - Two bare wires for direct CAN interface
280-CA-EFIHOL - Holley Adaptor - includes Holley mating connector
280-CA-EFIFUEL- Fuel Tech Adaptor - includes Fuel Tech mating connector
280-CA-EFILINK- Link Adaptor - includes Link mating connector
280-CA-EFIATBI - Atomic TBI Adaptor - includes Atomic TBI mating connector
280-CA-EFIBS3 - Big Stuff 3 Adaptor - includes Big Stuff 3 mating connector
280-CA-EFIMEFI -MEFI 4B Adaptor - includes MEFI 4B mating connector
280-CA-EFIOBDII - OBDII Adaptor - includes OBDII mating connector

EFI Interface Programming

When the connection to your EFI system is complete, you will need to activate and select your ECU within the Universal CAN Module Settings. This can be done by connecting a PC to activate through the software. Once the ECU is selected, the Car Configuration File in your PC will need to be updated. To perform this, follow the steps below;

1. Connect the Racepak programming cable between your PC's USB port and communication port on your Racepak data logger or dash

2. Open the DataLink software* and select *File* from the main menu area located across the upper area of the screen

3. Select *Open Car Configuration* from the pull down menu.

4. A Select Configuration dialog window will open. A list of folders containing Configuration files will appear on the left side, while the actual Configuration files appear on the right side. Select the appropriate configuration file from this list and then click 'OK'.

5. Click *Edit* on the menu bar and select *Read V-NET Config*.

6. A dialog box (shown right) may appear asking if you wish to make this configuration the default configuration file. If this is the only Racepak system you will be programming, select the top option to make it the default. If using this PC to program more than one Racepak system, select the second box.
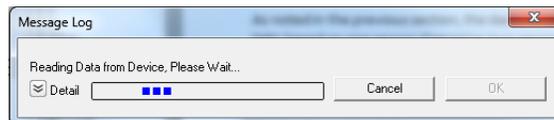
7. A message log will appear and should begin reading your system configuration.

8. When finished the message log should display ******DEVICES READ SUCCESSFULLY**** .
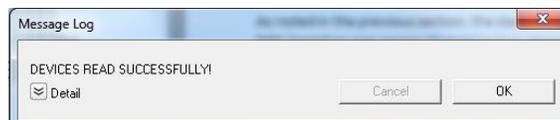
9. Click on the OK button.

   a. Right click on the channel button labeled **ECU Type.**
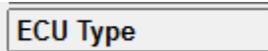
   b. Locate the listing ECU Type under the Custom Programming Options

   c. Click on ECU type and select your ECU from the drop down list on the right
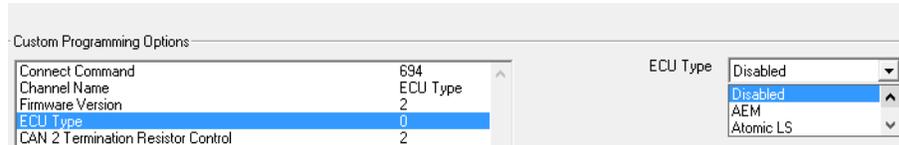
   d. Select **Send Configuration**
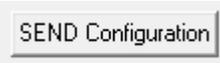
   e. Exit the VNET Input Parameters window to return to the main configuration window and repeat the Read process after which the new ECU channels will appear

10. The channels are now readily available for display on your Racepak dash or for recording to your V-Net data logger.

If you receive an error message during the above process, turn power to the system off and then back on and repeat the send configuration process. If problems persist, check the troubleshooting section in the manual that accompanied your data logger or dash. If you continue to have issues please contact Racepak tech support.

This module requires Racepak DataLink version 4.7.4 or higher. If you have a previous version of DataLink installed please go to www.racepak.com to download latest version.

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.

# Universal CAN ECU Interface Module Firmware Update Instructions

ECU Interface Firmware Update Procedure

Occasionally Racepak will release firmware updates to improve the functionality of the Universal ECU CAN module and/or to support additional ECU types. To view the current version of firmware in your module, right-click the ECU Type channel listed in your configuration file. The firmware version will be located in the lower left-hand corner of the dialog window as shown. If your module is not running the latest version and you wish to update it, please follow the steps below;

1. Connect the mini USB cable included with your Universal ECU CAN module between your PC's USB port and the USB port on the module. *Note: disconnect the USB cable from your Racepak logger or dash to simplify this process.*

2. Download the latest version of the firmware from: https://store.racepak.com/support/downloads/

3. Unzip the file and note the location of the firmware file which will be named *Universal ECU vXX.hex*, where 'XX' refers to the firmware version.

4. Click the *Update* button in the ECU Type channel dialog window to the right of the Firmware Version number.

5. Click *Select* to choose the firmware file.

6. Locate the firmware file, which is often found in the Downloads folder on most machines. Select the firmware file and click Open or simply double-click the name of the file.

7. Once the file has been selected, click the *Start* button.

8. The Status text box should indicate *ECU Interface device detected*. A progress bar beneath the Status text box will indicate the update's progress.

9. Once the firmware has been updated, you will be prompted with a window indicated the updated firmware version. Press *OK* to close this window and then press *OK* a second time to close the ECU Type dialog window.