Part Number: 230-VM-EFIUCAN

Universal CAN ECU Interface Module

IMPORTANT: Available channels will vary by ECU type. Please consult the table below to confirm your ECU is supported by the Universal CAN ECU module. See included chart for list of available channels from each ECU. List may vary slightly as interfaces are sometimes being updated with information from ECU manufacturer.

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	Holley Dominator
Electromotive TECGT	Fuel Tech (200,250,300,350,500v1,500v2, 600)
MoTeC CAN (Data set 3)	Link G4+ Series
MegaSquirt-III (DIY Autotune)	MSD Atomic LS
MicroTech	MSD Atomic TBI
Pro EFI	Big Stuff 3
User Configured (CAN bus knowledge required)	MEFI-4B
FAST XFI	OBD-II (2008 and later)
InjPro	Haltech

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

See included chart for list of available channels from each ECU. List may vary slightly as interfaces are sometimes being updated with information from ECU manufacturer.

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.
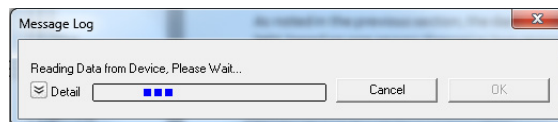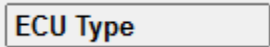

7. A message log will appear and should begin reading your system configuration.

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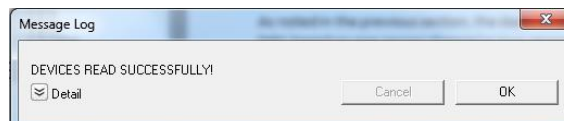
9. Click on the OK button.

   a. Right click on the channel button labeled **ECU Type.**

      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
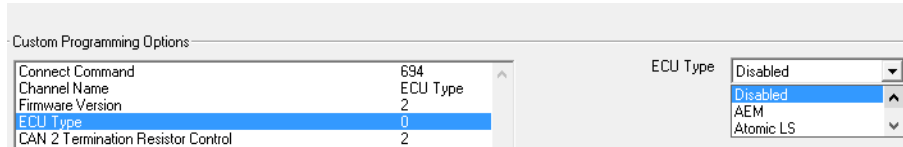
   d. Select **Send Configuration**

      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.

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 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.

Available ECU Channels

Channels Displayed	AEM	Motec (Data Set 3)	MegaSquirt-III DIY Autotune	Micro Tech	PRO EFI	FAST XFI CAN	Holley EFI	Fuel Tech	Link G4+ Series	MSD Atomic LS	MSD Atomic TBI	Big Stuff 3	Elecromotive TecGT	MEFI-4B
Engine RPM	X	X	X	X		X	X	X	X	X	X	X	X	X
Engine Load	X	X												
Throttle Position	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Air/Fuel Ratio 1	X	X	X			X	X	X		X		X	X	X
Air/Fuel Ratio 2	X	X					X		X					X
Air / Fuel Correction		X			X									
Air / Fuel Average							X							
EFI Voltage	X	X					X	X	X			X		
Battery Voltage			X	X				X		X	X		X	X
Water Temperature	X	X	X	X		X	X	X	X	X	X	X	X	X
Charge Temperature							X							
Manifold Temperature		X										X	X	X
Intake Air Temperature	X	X		X		X	X	X	X	X				
Oil Temperature									X					X
MAP A.B.S. Pressure													X	X
Manifold Pressure (Boost)		X	X	X	X	X	X	X	X	X	X	X		X
Boost Stage												X		
Turbo RPM												X		
Exhaust Gas Temperature 1	X	X												
Exhaust Gas Temperature 2	X													
Exhaust Gas Temperature 3	X													
Exhaust Gas Temperature 4	X													
Cam Angle 1									X					
Ignition Timing 1	X	X	X	X	X	X	X	X	X	X	X	X	X	
Knock													X	X
Knock Retard		X					X		X				X	
Injector Pulse Width		X	X	X		X	X		X				X	
Main Pulse Width Bank 1		X						X						
Main Pulse Width Bank 2		X						X						
Aux Pulse Width				X										
Injector Duty Cycle		X			X	X	X		X	X	X			
Injector Duty Cycle A								X						
Injector Duty Cycle B								X						
O2 Correction					X									
Power Adder Correction					X									
Wheel Speed				X										
Speed	X	X	X	X	X	X	X		X	X		X		X
Gear Indicator	X	X	X				X		X				X	
Fuel Pressure		X					X	X	X	X	X	X		
Pump Pressure														X
Oil Pressure		X					X	X	X	X			X	X
Crankcase Vacuum													X	
Custom 1	X	X	X	X	X								X	
Custom 2	X	X	X	X	X								X	
Custom 3	X		X	X									X	
Custom 4	X		X	X									X	
Control Flags				X										
Idle Air Control Position							X							
Injector Timing									X					
Barometer							X		X	X				
Fuel Flow						X	X							X
Lambda 1			X					X						
Manifold Vacuum														
Air Fuel Target		X		X			X						X	
Bottle Pressure (nitrous)				X										
Waste Duty				X										
Waste Setpoint				X										
Fuel Composition			X											
MIL Check Engine														
Miss Counter														
Fuel Consumption														
Traction Control Retard			X											
Launch Control Retard			X											
2-Step Button Status									X	X				
Fuel Pump State									X					
AC State									X					
Fan State									X					
Fan Stat 1										X	X			
Fan Stat 2										X	X			
Traction State									X					
Drag Speed									X					
Closed Loop Stat										X	X			
Rev Limiti Stat									X					
TCM Gear									X					
IAC Position												X		
DTC Counts												X		
O2 Stat												X		
FP Cav Stat												X		
Nitrous Stat												X		
BML Stat												X		
Fuel Press Stat												X		