Instruction Manual

AEM
PERFORMANCE ELECTRONICS

P/N 30-3813
Ford Coyote 4V 5.0L V8
AEM Infinity Coyote Engine
Harness Adapter

STOP!

THIS PRODUCT HAS LEGAL RESTRICTIONS.
READ THIS BEFORE INSTALLING/USING!

THIS PRODUCT MAY BE USED SOLELY ON VEHICLES USED IN SANCTIONED COMPETITION WHICH MAY NEVER BE USED UPON A PUBLIC ROAD OR HIGHWAY, UNLESS PERMITTED BY SPECIFIC REGULATORY EXEMPTION. (VISIT THE "EMISSIONS" PAGE AT HTTP://WWW.SEMASAN.COM/EMISSIONS FOR STATE BY STATE DETAILS.)

IT IS THE RESPONSIBILITY OF THE INSTALLER AND/OR USER OF THIS PRODUCT TO ENSURE THAT IT IS USED IN COMPLIANCE WITH ALL APPLICABLE LAWS AND REGULATIONS. IF THIS PRODUCT WAS PURCHASED IN ERROR, DO NOT INSTALL AND/OR USE IT. THE PURCHASER MUST ARRANGE TO RETURN THE PRODUCT FOR A FULL REFUND.

THIS POLICY ONLY APPLIES TO INSTALLERS AND/OR USERS WHO ARE LOCATED IN THE UNITED STATES; HOWEVER CUSTOMERS WHO RESIDE IN OTHER COUNTRIES SHOULD ACT IN ACCORDANCE WITH THEIR LOCAL LAWS AND REGULATIONS.

WARNING: This installation is not for the tuning novice! Use this system with EXTREME caution! The AEM Infinity Programmable EMS allows for total flexibility in engine tuning. Misuse or improper tuning of this product can destroy your engine! If you are not well versed in engine dynamics and the tuning of engine management systems DO NOT attempt the installation. Refer the installation to an AEM-trained tuning shop or call 800-423-0046 for technical assistance.

NOTE: All supplied AEM calibrations, Wizards and other tuning information are offered as potential starting points only. IT IS THE RESPONSIBILITY OF THE ENGINE TUNER TO ULTIMATELY CONFIRM IF THE CALIBRATION IS SAFE FOR ITS INTENDED USE. AEM holds no responsibility for any engine damage that results from the misuse or mistuning of this product!

OVERVIEW

The 30-3813 AEM Infinity Coyote Engine Harness Adapter was designed to run the 2011-2014 Ford 5.0L 4V Ti-VCT Coyote engines and Ford Racing Crate Engines part numbers M-6007-M50 and M-6007-A50NA; all with manual transmissions. This is a true standalone system that eliminates the use of the Ford ECU and mass airflow sensor. The use of this harness makes the kit "plug and play" so no cutting or splicing wires is necessary (when used with optional 30-3510-00 AUX harness, sold separately). The base configuration files available for the Infinity EMS are starting points only and will need to be modified for every specific application.

The available Infinity EMS part numbers for this adapter kit are:
- 30-7101 INFINITY-8
- 30-7100 INFINITY-10

Please read this document in its entirety before attempting to start or run an engine.

GETTING STARTED

Refer to the **10-7100 for EMS 30-7100 Infinity Quick Start Guide** for additional information on getting the engine started with the Infinity EMS. The Ford Coyote V8 base session is located in C:\Documents\AEM \Infinity Tuner\Sessions\Base Sessions.

DOWNLOADABLE FILES

Files can be downloaded from www.aeminfinity.com. An experienced tuner must be available to configure and manipulate the data before driving can commence. The Quick Start Guide and Full Manual describe the steps for logging in and registering at www.aeminfinity.com. These documents are available for download here: **http://www.aemelectronics.com/products/support**

Kit Contents

Diagram	AEM P/N	Description	Qty
A	36-3813	AEM Infinity Coyote Engine Harness Adapter	1
B	35-2840	Ignitor, 4-Channel with Thermal Paste	2
C	35-3014	Cable, USB Comms 9.8'	1
D	4-1008	12-Way Aux Connector, Sealed	1
E	4-1009	Dust Cap, Flash Enable	1
F	4-1010	Jumper, Flash Enable	1
G	1062-20-0122	Socket, Aux Connector	12
	10-3813	Instruction Sheet, 30-3813	1

Note: D, E ,F
are installed
on harness
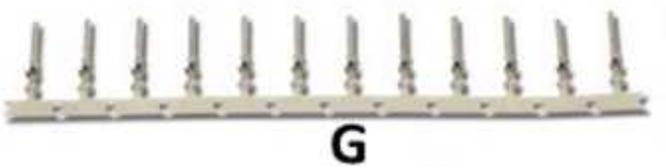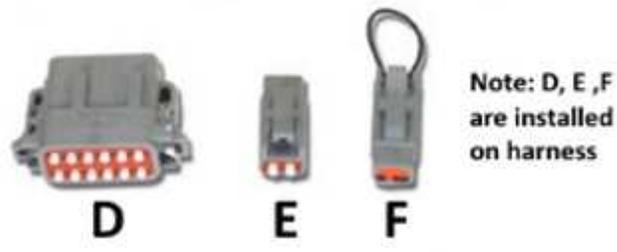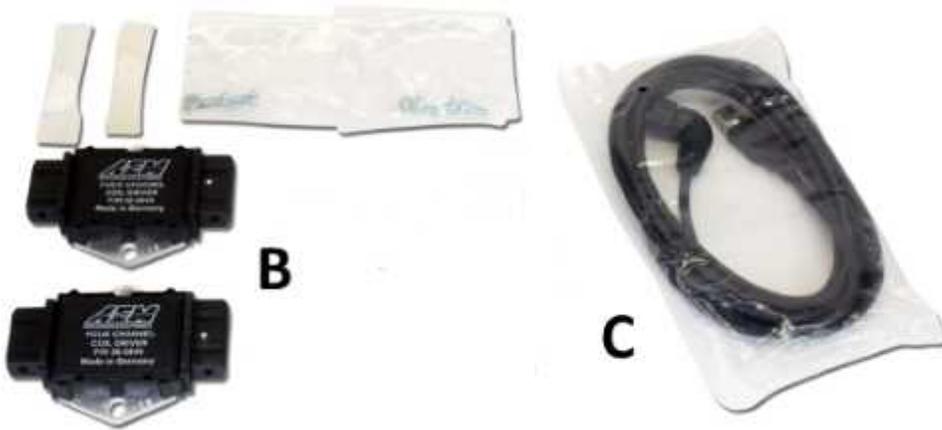
Important Application Notes

The 30-3813 AEM Infinity Coyote Engine Harness Adapter allows for a "plug and play" installation of either an AEM Infinity-8 or Infinity-10 ECU to a 2011-2014 Ford 5.0L 4V Ti-VCT Coyote Engine with a manual transmission. These engines are available as crate engines from Ford Racing by the following part numbers:

5.0L 4V Ti-VCT Mustang Crate Engine - Ford Racing P/N M-6007-M50
5.0L Coyote Aluminator NA Crate Engine - Ford Racing P/N M-6007-A50NA
5.0L Coyote Aluminator SC Crate Engine - Ford Racing P/N M-6007-A50SC
5.0L Aluminator XS Crate Engine - Ford Racing P/N M-6007-A50XS

Both of these crate engines come with an engine wiring harness that plugs directly into the AEM wire harness. The AEM Infinity Coyote Engine Harness Adapter includes a fused power distribution module with relays for radiator fan, coils, injectors, ECU, starter solenoid, and fuel pump.

The OEM Ford two-wire ignition coils (Motorcraft P/N BR3Z-12029-A) are controlled by the AEM Infinity ECU, but they are not driven directly. This kit includes the two AEM 4 Channel Coil Drivers (AEM P/N 30-2840) required to drive these coils.

The AEM Infinity ECU will run the engine with a speed density fueling calculation, eliminating the need for an OEM airbox and mass airflow sensor (MAF). Required are an intake air temperature (IAT) sensor and manifold absolute pressure (MAP) sensor. AEM also offers an auxiliary sub-harness to make adding these sensors a plug and play installation.

30-2010   **Air Temp Sensor Kit, 3/8" NPT**
30-2130-50   **3.5bar (50PSIa) Stainless Steel MAP Sensor Kit**
30-3510-00   **Auxiliary Harness for AEM MAP and IAT Sensors**

The AEM Infinity ECU includes on board control for two UEGO wideband oxygen sensors. These sensors (sold separately, 2 required) plug in directly to the AEM Infinity Coyote Engine Harness Adapter.

30-2001   **Bosch LSU 4.2 Wideband UEGO Replacement Sensor**

The AEM Infinity ECU includes Electronic Throttle Control (ETC) that will control the electronic throttle body included with the above crate engines. A suitable ETC accelerator pedal is required. The base session file for the Ford Coyote application is configured to use the Ford Mustang accelerator pedal (sold separately) and the AEM Infinity Coyote Engine Harness Adapter is designed to plug directly into this accelerator pedal.

Ford P/N BR3Z-95836-D   **Accelerator Pedal**

The base session file provided for the Ford Coyote application was created with the use of the Ford Racing Mustang Boss 302 Alternator Kit. The calibration has Lowside 0 duty and frequency tables setup to charge at ~14.7 volts. See "Alternator Control" section for more information on controlling the charging system. The AEM Infinity Coyote Engine Harness Adapter is designed to plug directly into this alternator.

Ford Racing P/N M-8600-M50BALT   **Mustang Boss 302 Alternator Kit**

The base calibration utilizes the Clutch Position (Neutral Switch) flying lead as an input into the Infinity ECU. Once grounded, the Infinity ECU provides the ground for the Starter Relay control circuit. If the user wishes not to provide a ground to this flying lead, follow the steps provided in the "Clutch Position Switch" section to modify the LS8_Duty [%] table values to allow the starter to be engaged without a clutch signal.

The factory Cylinder Head Temperature sensor and fuel injectors have been fully characterized and their calibrations are utilized in the base calibration.

INFINITY ADAPTER HARNESS

The core of the AEM Infinity Coyote Engine Harness Adapter is the main harness that connects between the Ford engine harness and the AEM Infinity ECU. This harness features a power distribution module that includes fuses and relays to properly power the engine and related accessories. The harness connections for the various power, ground, switches, and sensors are described here. The harness may be broken up into several "branches" as described in the following diagram to simplify installation.
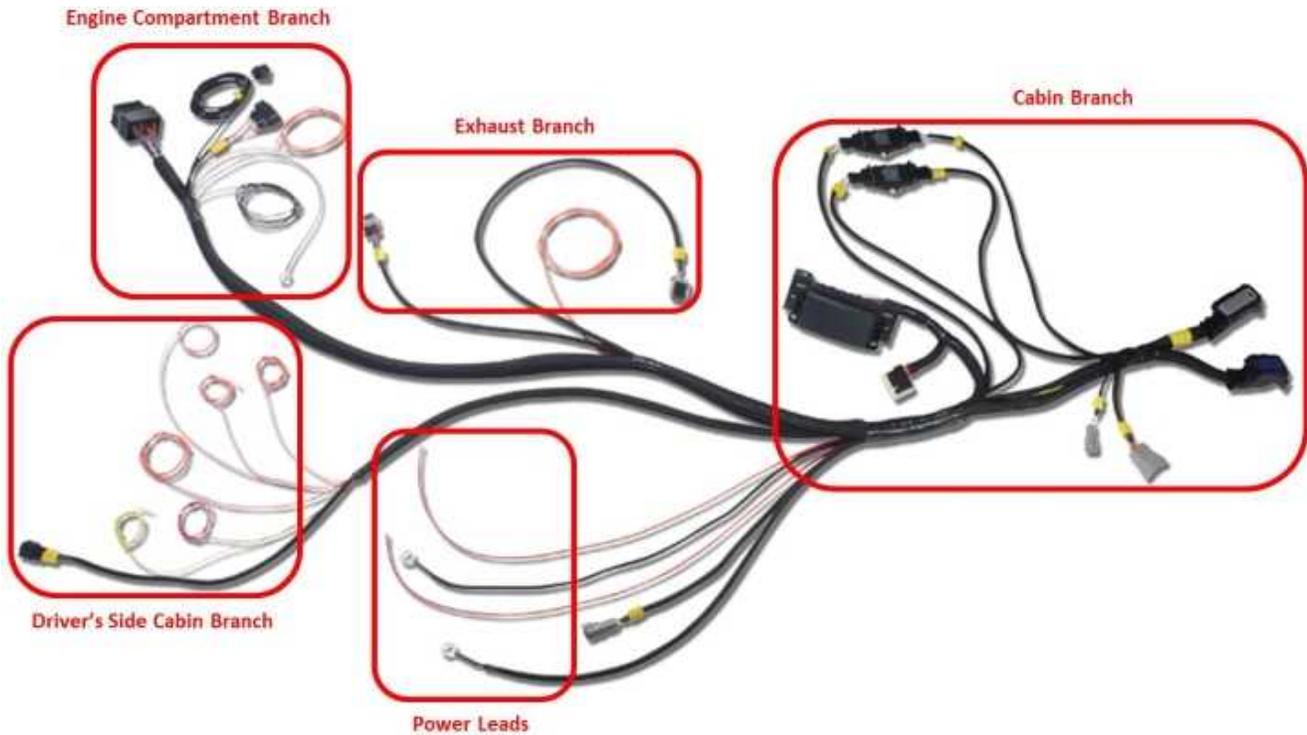
Power Leads

+12V BATT - Two red 10ga main power flying leads should be connected to the battery positive terminal.

Ground - Two ring terminals should be securely attached to chassis ground. Remove paint or plating at the attachment point of these ring terminals. Verify that you have a good reliable ground path from the battery negative post to the location being used for these ring terminals. In general, the the resistance from the battery ground to this chassis location should be less than 0.1 Ohm.

Driver's Side Cabin Branch

IGN SW SOURCE - Red 18ga flying lead should be connected to the "B" or "BATT" battery source terminal of the ignition switch.

IGN SW SIGNAL - Orange 18ga flying lead should be connected to the "IGN" terminal of the ignition switch. This must be a single terminal on the ignition switch that provides 12V when the key is in <u>both</u> the 'Start' (cranking) and 'Run' position.

START SW SIGNAL - Orange 18ga flying lead should be connected to the "START" terminal of the ignition switch. This must be a single terminal on the ignition switch that provides 12V when the key is in the 'Start' (cranking) position only.

FUEL PUMP +12V - Orange 12ga flying lead should connect to fuel pump positive terminal. Separate ground for fuel pump must be provided. This provides for ECU control of the fuel pump- running when Engine RPM > 0 and two second prime at key-on.

CLUTCH POS - Yellow 18ga flying lead should be grounded through a customer-supplied clutch position switch when the clutch pedal is depressed. The starter solenoid safety lockout function may be bypassed via Infinity Tuner software if the user chooses not to use a clutch switch. The lead should be insulated and tied up out of the way if unused. See 'Clutch Position Switch' section for details.

TACHO - Pink 18ga flying lead may be used to drive a standard tachometer with a 12V square wave signal. This is not a mandatory function, the lead should be insulated and tied up out of the way if unused.

APP - The Accelerator Pedal Position sensor branch terminates with a connector that plugs directly into a customer-supplied accelerator pedal assembly, **Ford P/N BR3Z-95836-D**.
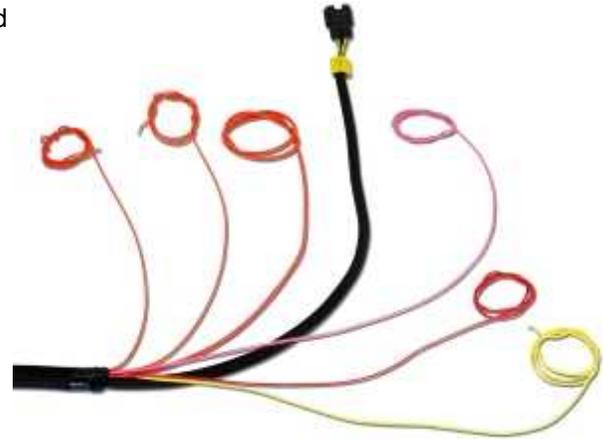
Engine Compartment Branch

PCM 70-WAY - This 70-way terminated connector plugs into the engine wire harness supplied with the Ford Racing crate engine. The engine harness side of this connection includes a white plastic latch that swings over and locks into position when the connection is fully seated.

AUX INLINE to ENGINE - This 16-way terminated connector plugs into the engine wire harness supplied with the Ford Racing crate engine. It is normal for this connector to have only three wires in it. The remainder of the unused positions are sealed with blanking plugs.

ALT - This 3-way terminated connector plugs directly into a customer-supplied alternator, **Ford Racing P/N M-8600-M50BALT**. The AEM Infinity ECU controls the voltage set point of the alternator, see 'Alternator Control' section for details.

FAN +12V - Orange 12ga flying lead should connect to radiator fan positive terminal. This provides for ECU control

of the electric radiator fan, adjustable on/off temperature configurable via Infinity Tuner Setup Wizard.

FAN -GND - Black 12ga flying lead should connect to radiator fan negative terminal. This wire terminates at the adjacent ring terminal.

Ring Terminal - Black 12ga lead provides ground to the electric radiator fan. Remove paint or plating at the attachment point of this ring terminal. Verify that you have a good reliable ground path from the battery negative post to the location being used for this ring terminal. In general, the the resistance from the battery ground to this chassis location should be less than 0.1 Ohm.

Exhaust Branch

UEGO 1 - This 6-way terminated connector plugs directly into a customer-supplied wideband oxygen "UEGO" sensor, **AEM P/N 30-2001**. This sensor should be mounted in the exhaust collector of Bank 1 (cylinders 1-2-3-4), typically passenger side of the vehicle. Proper cylinder sampling is critical for closed loop air fuel ratio control.

UEGO 2 - This 6-way terminated connector plugs directly into a customer-supplied wideband oxygen "UEGO" sensor, **AEM P/N 30-2001**. This sensor should be mounted in the exhaust collector of Bank 2 (cylinders 5-6-7-8), typically driver side of the vehicle. Proper cylinder sampling is critical for closed loop air fuel ratio control.

STARTER SOL - Orange 12ga flying lead should be connected to the starter solenoid. The use of a clutch position switch allows for the use of ECU-controlled starter solenoid safety lockout function. This function may be bypassed via Infinity Tuner software if the user chooses not to use a clutch switch. See 'Clutch Position Switch' section for details.

Cabin Branch

Coil 1 - There is a pair of terminated branches marked 'Coil 1'- one 4-way and one 5-way connector. These connectors should be plugged into opposite ends of the same 4-Channel Ignitor, provided in this kit. See '4-Channel Ignitors' section for mounting requirements.

Coil 2 - There is a pair of terminated branches marked 'Coil 2'- one 4-way and one 5-way connector. These connectors should be plugged into opposite ends of the same 4-Channel Ignitor, provided in this kit. See '4-Channel Ignitors' section for mounting requirements.

Flash - This 2-way connector is used for secondary hardware flashing. This connector is normally protected with a dust cap. The included shunt connector jumps the two wires together when required. Once initially flashed, the EMS is normally upgraded in the software, not requiring this connector.

AUX - This 12-way connector is used to adapt many common ancillary inputs and outputs easily. Included in this kit are a 12-way mating connector, 12 terminals, and a connector wedgelock. These components will need to be terminated by the installer with 16-22ga wire. **For a plug & play installation of the MAP and IAT sensors required to run this engine, use the Auxiliary Harness AEM P/N 30-3510-00 (sold separately).** This will allow the installer to plug in the required sensors with out any custom wiring or termination. Note: the pin numbering is molded into the wire side of the connector. See 'Pinouts' section for details of this connector's pins.

ECU C1 - This 73-way connector should be plugged directly into the AEM Infinity ECU. This ECU is identified by the gray terminal position lock, and mates to the gray connector on the ECU.

ECU C2 - This 56-way connector should be plugged directly into the AEM Infinity ECU. This ECU is identified by the blue terminal position lock, and mates to the blue connector on the ECU.

Power Distribution Module - The PDM contains the fuses and relays required for operation of the engine, fuel pump, starter solenoid, and electric radiator fan. Always replace fuses and relays with components of an identical rating. Refer to the diagram at right for fuse values and component locations.
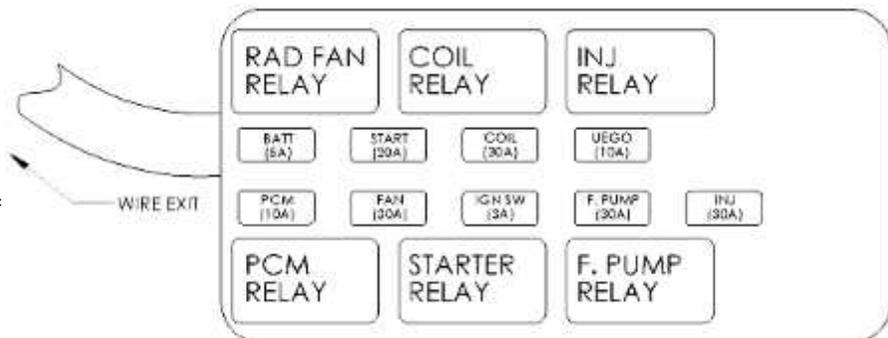
4-Channel Ignitors

It is critical that this driver module be mounted to a flat metallic surface and that the supplied thermally conductive grease is applied between the module and its mounting surface. This is required to allow the heat generated to be conducted away. Failure to mount the driver in this manner will cause a premature failure and will void the warranty.

Alternator Control

The Ford Mustang Boss 302 Alternator is controlled by a fixed frequency and a variable duty cycle that controls the charge voltage set point. The base session sets LS0_Duty to 35 % which correlates to ~14.7v charge. Decreasing the LS0_Duty percentage will increase the battery set point (higher voltage), and increasing the duty percentage will decrease the battery set point (lower voltage).

LS0_Duty [%]

Battery [Volts]	0.0	1000.0	2000.0	3000.0	4000.0	7000.0	10000.0
20.0	35.0	35.0	35.0	35.0	35.0	35.0	35.0
2.5	35.0	35.0	35.0	35.0	35.0	35.0	35.0
2.0	35.0	35.0	35.0	35.0	35.0	35.0	35.0
1.5	35.0	35.0	35.0	35.0	35.0	35.0	35.0
1.0	35.0	35.0	35.0	35.0	35.0	35.0	35.0
0.5	35.0	35.0	35.0	35.0	35.0	35.0	35.0
0.0	35.0	35.0	35.0	35.0	35.0	35.0	35.0

EngineSpeed [RPM]

LS0_Freq [Hz]

125.0	125.0	125.0	125.0
0.0	3000.0	6000.0	10000.0

EngineSpeed [RPM]
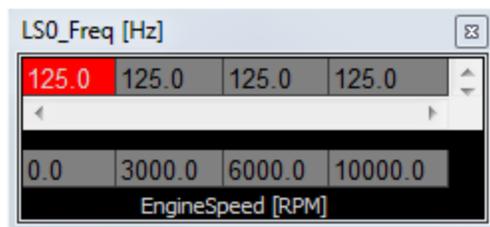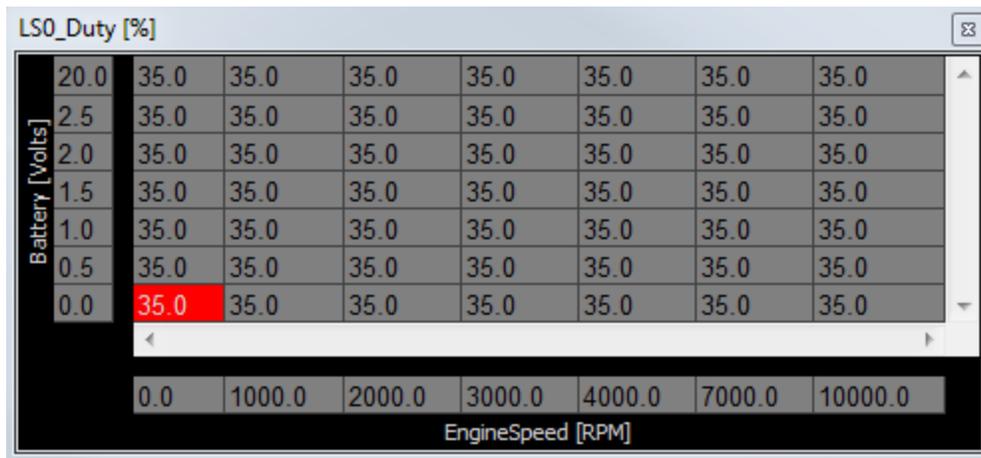
Clutch Position Switch

The base session will not provide a ground for the Starter Solenoid relay unless a ground is provided to the CLUTCH POS flying lead on the Ford Racing wiring harness. This requirement can be modified through setting the LS8_Duty [%] table to 100% at all ClutchSwitch positions. See example below:

The base session sets the input for the 'ClutchSwitch' 1D table channel to Analog20, which is pulled up to 5 volts. When a ground is provided this drops Analog20's voltage from 5 volts to 0 volts, this transition in voltage sets the ClutchSwitch channel to 0 (OFF) or 1 (ON).

Drive By Wire

The base calibration will set most of the Drive-By-Wire (DBW) channels for the stock 5.0L Coyote throttle body. If a different throttle body is used, for example Cobra Jet, then further adjustments to the DBW channels will be required. To complete the DBW setup the Drive By Wire Wizard must be ran.

Select Calibrate sensor data only and follow the DBW Setup steps.
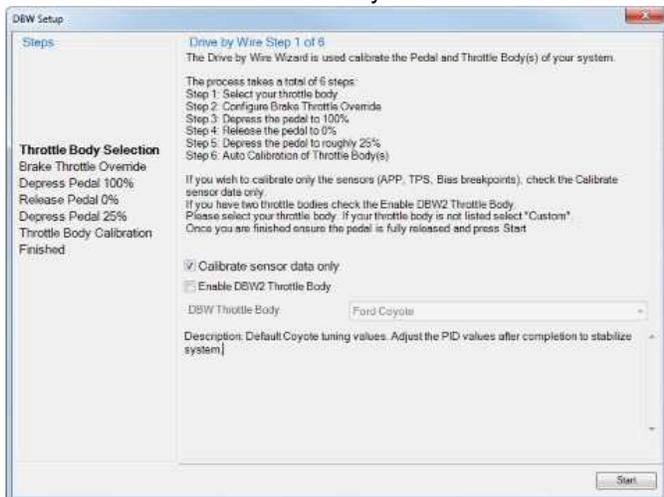
Note: There are a few integrated DBW fail safes incorporated into the Infinity system. For instance, if the accelerator pedal and throttle position sensors do not track each other, or if the maximum DBW current is exceeded, there will be a fatal error which will kill the engine for safety purposes. This error will reset when the ignition key is turned off momentarily, and then turned back on.

Variable Valve Control (VVC)

The AEM Infinity system supports Fords Coyote's Ti-VCT Variable Valve Control. The base calibration is configured with base VVC settings that should work for most stock engines.

To ensure proper Ti-VCT function, the user must sync the cam timing by following the instructions listed in Setup Wizard: Wizards>Setup Wizard>VVC>VVC Cam Sync. Failure to properly sync the cam timing may result in an improperly functioning Ti-VCT system.

PINOUTS

	Dedicated				Dedicated and not reconfigurable
	Assigned				Assigned but reconfigurable
	Available				Available for user setup
	Not Applicable				Not used in this configuration
	Required				Required for proper function
Infinity Pin	Infinity Assignment	Pin Destination	AEM Coyote Engine Harness Adapter Function	Infinity Hardware Specification	Notes
C1-1	LowsideSwitch_4	---	Available	Lowside switch, 4A max, NO internal flyback diode.	'See Setup Wizard Page "LowSide Assignment Tables" for configuration options. See 2D table "LS4_Duty [%]" for activation settings.
C1-2	LowsideSwitch_5	C3-16	Variable Camshaft Timing 21 Solenoid (Driverside Intake)	Lowside switch, 4A max with internal flyback diode. Inductive load should NOT have full time power.	'See Setup Wizard Page "LowSide Assignment Tables" for configuration options. See 2D table "LS5_Duty [%]" for activation settings. See Setup Wizard page 'VVC' for options.
C1-3	LowsideSwitch_6	C3-56	Variable Camshaft Timing 12 Solenoid (Passengerside Exhaust)	Lowside switch, 4A max with internal flyback diode. Inductive load should NOT have full time power.	'See Setup Wizard Page "LowSide Assignment Tables" for configuration options. See 2D table "LS6_Duty [%]" for activation settings. See Setup Wizard page 'VVC' for options.
C1-4	UEGO 1 Heat	C10-4	UEGO 1 Heat	Bosch UEGO controller	Connect to pin 4 of Bosch UEGO sensor. NOTE that pin 3 of the Sensor is heater (+) and must be power by a fused/ switched 12V supply.
C1-5	UEGO 1 IA	C10-2	UEGO 1 IA		Connect to pin 2 of Bosch UEGO sensor
C1-6	UEGO 1 IP	C10-6	UEGO 1 IP		Connect to pin 6 of Bosch UEGO sensor
C1-7	UEGO 1 UN	C10-1	UEGO 1 UN		Connect to pin 1 of Bosch UEGO sensor
C1-8	UEGO 1 VM	C10-5	UEGO 1 VM		Connect to pin 5 of Bosch UEGO sensor.
C1-9	Flash_Enable	C8-2	Flash Enable	10K pulldown	Not usually needed for automatic firmware updates through Infinity Tuner. If connection errors occur during update, connect 12 volts to this pin before proceeding with upgrade. Disconnect the 12 volts signal after the update.
C1-10	+12V_R8C_CPU	P1-9	KAPWR / 12VHAAT Permanent +12V Power	Dedicated power management CPU	Full time battery power. MUST be powered before the ignition switch input is triggered (See C1-65).
C1-11	Coil 4	C4-5	Coil on Plug Assembly 4	25 mA max source current	0-5V Falling edge fire. DO NOT connect directly to coil primary. Must use an ignitor OR CDI that accepts a FALLING edge fire signal.
C1-12	Coil 3	C4-4	Coil on Plug Assembly 3	25 mA max source current	0-5V Falling edge fire. DO NOT connect directly to coil primary. Must use an ignitor OR CDI that accepts a FALLING edge fire signal.
C1-13	Coil 2	C4-2	Coil on Plug Assembly 2	25 mA max source current	0-5V Falling edge fire. DO NOT connect directly to coil primary. Must use an

Dedicated					Dedicated and not reconfigurable
Assigned					Assigned but reconfigurable
Available					Available for user setup
Not Applicable					Not used in this configuration
Required					Required for proper function
Infinity Pin	Infinity Assignment	Pin Destination	AEM Coyote Engine Harness Adapter Function	Infinity Hardware Specification	Notes
					ignitor OR CDI that accepts a FALLING edge fire signal.
C1-14	Coil 1	C4-1	Coil on Plug Assembly 1	25 mA max source current	0-5V Falling edge fire. DO NOT connect directly to coil primary. Must use an ignitor OR CDI that accepts a FALLING edge fire signal.
C1-15	Coil 6	C6-2	Coil on Plug Assembly 6	25 mA max source current	0-5V Falling edge fire. DO NOT connect directly to coil primary. Must use an ignitor OR CDI that accepts a FALLING edge fire signal.
C1-16	Coil 5	C6-1	Coil on Plug Assembly 5	25 mA max source current	0-5V Falling edge fire. DO NOT connect directly to coil primary. Must use an ignitor OR CDI that accepts a FALLING edge fire signal.
C1-17	LowsideSwitch_2	P1-14	Radiator Fan Relay Control	Lowside switch, 4A max, NO internal flyback diode.	See Setup Wizard Page "LowSide Assignment Tables" for configuration options. See 2D table "LS5_Duty [%]" for activation settings.
C1-18	LowsideSwitch_3	C3-2	Variable Camshaft Timing 11 Solenoid (Passengerside Intake)	Lowside switch, 4A max with internal flyback diode. Inductive load should NOT have full time power.	'See Setup Wizard Page "LowSide Assignment Tables" for configuration options. See 2D table "LS3_Duty [%]" for activation settings. See Setup Wizard page 'VVC' for options.
C1-19	AGND_1	SP1 (AGND)	APP Sensor Ground	Dedicated analog ground	Analog 0-5V sensor ground
C1-20	AGND_1	SP2 (AGND)	Digital Cams Ground (E-SIGRTN)	Dedicated analog ground	Analog 0-5V sensor ground
C1-21	Crankshaft Position Sensor Hall	---	Crankshaft Position Sensor Hall	10K pullup to 12V. Will work with ground or floating switches.	See Setup Wizard page 'Cam/Crank' for options.
C1-22	Camshaft Position Sensor 1 Hall	C3-41	Camshaft Position Bank 1 (Passenger Intake) (CMP11)	10K pullup to 12V. Will work with ground or floating switches.	See Setup Wizard page 'Cam/Crank' for options.
C1-23	Digital_In_2	C3-42	Camshaft Position Bank 2 (Driverside Intake) (CMP21)	10K pullup to 12V. Will work with ground or floating switches.	See Setup Wizard page 'Cam/Crank' for options.
C1-24	Digital_In_3	---	Turbo Speed Hz	10K pullup to 12V. Will work with ground or floating switches.	See Setup Wizard page 'Turbo Speed' for calibration constant. TurboSpeed [RPM] = Turbo [Hz] * Turbo Speed Calibration.
C1-25	Digital_In_4	---	Vehicle Speed Sensor	10K pullup to 12V. Will work with ground or floating switches.	See Setup Wizard page 'Vehicle Speed' for calibration constant.
C1-26	Digital_In_5	C9-6	Flex Fuel	10K pullup to 12V. Will work with ground or floating switches.	See channel FlexDigitalIn [Hz] for raw frequency input data.

	Dedicated				Dedicated and not reconfigurable
	Assigned				Assigned but reconfigurable
	Available				Available for user setup
	Not Applicable				Not used in this configuration
	Required				Required for proper function
Infinity Pin	Infinity Assignment	Pin Destination	AEM Coyote Engine Harness Adapter Function	Infinity Hardware Specification	Notes
C1-27	Knock Sensor 1	C3-7	Knock Sensor+ [KS1+]	Dedicated knock signal processor	See Setup Wizard page 'Knock Setup' for options.
C1-28	Knock Sensor 2	C3-45	Knock Sensor+ [KS2+]	Dedicated knock signal processor	See Setup Wizard page 'Knock Setup' for options.
C1-29	+12V_Relay_Control	P1-18	PCM Relay control	0.7A max ground sink for external relay control	Will activate at key on and at key off according to the configuration settings.
C1-30	Power Ground	C14-4	Shield Drain	Power Ground	Connect directly to battery ground
C1-31	CANL_Aout	C14-2	AEMNet CANL	Dedicated High Speed CAN Transceiver	Recommend twisted pair (one twist per 2") with terminating resistor. Contact AEM for additional information.
C1-32	CANH_Aout	C14-1	AEMNet CANH	Dedicated High Speed CAN Transceiver	Recommend twisted pair (one twist per 2") with terminating resistor. Contact AEM for additional information.
C1-33	LowsideSwitch_1	C9-7	Boost Control	Lowside switch, 4A max with internal flyback diode. Inductive load should NOT have full time power.	See Setup Wizard Page "LowSide Assignment Tables" for configuration options. See 2D table "LS1_Duty [%]" for activation settings. See Setup Wizard page 'Boost Control' for options. Monitor BoostControl [%] channel for output state.
C1-34	LowsideSwitch_0	C13-2	GENRC	Lowside switch, 4A max, NO internal flyback diode.	See Setup Wizard Page "LowSide Assignment Tables" for output assignment and 2D table "LS0_Duty [%]" for activation.
C1-35	Analog_In_7	C3-39	DBW Negative Slope (TP1)	12 bit A/D, 100K pullup to 5V	0-5V analog signal. Use +5V Out pins as power supply and Sensor Ground pins as the low reference. Do not connect signals referenced to +12V as this can permanently damage the ECU. See the Setup Wizard Set Throttle Range page for automatic min/max calibration. Monitor the Throttle [%] channel. Also DB1_TPSA [%] for DBW applications.
C1-36	Analog_In_8	C9-5	MAP Sensor	12 bit A/D, 100K pullup to 5V	0-5V analog signal. Use +5V Out pins as power supply and Sensor Ground pins as the low reference. Do not connect signals referenced to +12V as this can permanently damage the ECU. See the Setup Wizard Set Manifold Pressure page for setup and calibration. Monitor the MAP [kPa] channel.
C1-37	Analog_In_9	C9-1	Fuel Pressure	12 bit A/D, 100K pullup to 5V	0-5V analog signal. Use +5V Out pins as power supply and Sensor Ground pins as the low reference. Do not connect signals referenced to +12V as this can permanently damage the ECU. See the Setup Wizard Fuel Pressure page for setup and calibration. Monitor the FuelPressure [psig] channel.

Infinity Pin	Infinity Assignment	Pin Destination	AEM Coyote Engine Harness Adapter Function	Infinity Hardware Specification	Notes
Dedicated					Dedicated and not reconfigurable

Infinity Pin	Infinity Assignment	Pin Destination	AEM Coyote Engine Harness Adapter Function	Infinity Hardware Specification	Notes
Dedicated					Dedicated and not reconfigurable
Assigned					Assigned but reconfigurable
Available					Available for user setup
Not Applicable					Not used in this configuration
Required					Required for proper function
C1-38	Analog_In_10	---	Baro Sensor	12 bit A/D, 100K pullup to 5V	0-5V analog signal. Use +5V Out pins as power supply and Sensor Ground pins as the low reference. Do not connect signals referenced to +12V as this can permanently damage the ECU. See the Setup Wizard Barometric Pressure page for setup and calibration. Monitor the BaroPress [kPa] channel.
C1-39	Analog_In_11	---	Shift Switch Input	12 bit A/D, 100K pullup to 5V	0-5V analog signal. Use +5V Out pins as power supply and Sensor Ground pins as the low reference. Do not connect signals referenced to +12V as this can permanently damage the ECU.
C1-40	Analog_In_12	---	Mode Switch	12 bit A/D, 100K pullup to 5V	0-5V analog signal. Use +5V Out pins as power supply and Sensor Ground pins as the low reference. Do not connect signals referenced to +12V as this can permanently damage the ECU.
C1-41	+5V_Out_1	C3-9	Electronic Throttle Control (ETCREF)	Regulated, fused +5V supply for sensor power	Analog sensor power
C1-42	+5V_Out_1	C9-4	+5V Out	Regulated, fused +5V supply for sensor power	Analog sensor power
C1-43	HighsideSwitch_1	C9-9	HS1 (switched 12V)	0.7A max, High Side Solid State Relay	See Setup Wizard page 'HighSide Assigment Tables' for configuration options. See 2D lookup table 'HS1_Table' for activation settings.
C1-44	HighsideSwitch_0	---	Available	0.7A max, High Side Solid State Relay	See Setup Wizard page 'HighSide Assigment Tables' for configuration options. See 2D lookup table 'HS0_Table' for activation settings.
C1-45	Crankshaft Position Sensor VR+	C3-13	Crankshaft Position (CKP+)	Differential Variable Reluctance Zero Cross Detection	See Setup Wizard page 'Cam/Crank' for options.
C1-46	Crankshaft Position Sensor VR-	C3-12	Crankshaft Position Sensor (CKP-)	Differential Variable Reluctance Zero Cross Detection	See Setup Wizard page 'Cam/Crank' for options.
C1-47	Camshaft Position Sensor 1 VR-	C3-29	VR Reluctance Sensor (VRSRTN)	Differential Variable Reluctance Zero Cross Detection	See Setup Wizard page 'Cam/Crank' for options.
C1-48	Camshaft Position Sensor 1 VR+	C3-46	Camshaft Position Bank 1 In (Passengerside Exhaust) (CMP12)	Differential Variable Reluctance Zero Cross Detection	See Setup Wizard page 'Cam/Crank' for options.
C1-49	VR+_In_2	C3-47	Camshaft Position Bank 2 In (Driverside Exhaust) (CMP22)	Differential Variable Reluctance Zero Cross Detection	See Setup Wizard page 'Cam/Crank' for options.
C1-50	VR-_In_2	C3-48	Variable Reluctance Sensor (VRSRTN2)	Differential Variable Reluctance Zero Cross Detection	See Setup Wizard page 'Cam/Crank' for options.

Dedicated					Dedicated and not reconfigurable
Assigned					Assigned but reconfigurable
Available					Available for user setup
Not Applicable					Not used in this configuration
Required					Required for proper function
Infinity Pin	Infinity Assignment	Pin Destination	AEM Coyote Engine Harness Adapter Function	Infinity Hardware Specification	Notes
C1-51	VR-_In_3	---	Driven Left Wheel Speed Sensor -	Differential Variable Reluctance Zero Cross Detection	See 'Driven Wheel Speed Calibration' in the Setup Wizard 'Vehicle Speed' page.
C1-52	VR+_In_3	---	Driven Left Wheel Speed Sensor +		
C1-53	DBW1 Motor -	C3-67	Throttle Actuator Control Motor (TACM-)	5.0A max Throttle Control Hbridge Drive	+12V to close
C1-54	DBW1 Motor +	C3-68	Throttle Actuator Control Motor (TACM+)	5.0A max Throttle Control Hbridge Drive	+12V to open
C1-55	Power Ground	SP3 (PGND)	Crankshaft Position Sensor Shield (SHDRTN)	Power Ground	Connect directly to battery ground
C1-56	Injector 6	C3-64	Fuel Injector Driver 6 (INJ6)	Saturated or peak and hold, 3A max continuous	Injector 6
C1-57	Injector 5	C3-63	Fuel Injector Driver 5 (INJ5)	Saturated or peak and hold, 3A max continuous	Injector 5
C1-58	Injector 4	C3-62	Fuel Injector Driver 4 (INJ4)	Saturated or peak and hold, 3A max continuous	Injector 4
C1-59	Injector 3	C3-55	Fuel Injector Driver 3 (INJ3)	Saturated or peak and hold, 3A max continuous	Injector 3
C1-60	Power Ground	R2	PWR Ground	Power Ground	Connect directly to battery ground
C1-61	+12V	P1-6	Injector and Digital Cam Sensor +12V Power	12 volt power from relay	12 volt power from relay. Relay must be controlled by +12V Relay Control signal, pin C1-29 above.
C1-62	Injector 2	C3-54	Fuel Injector Driver 2 (INJ2)	Saturated or peak and hold, 3A max continuous	Injector 2
C1-63	Injector 1	C3-53	Fuel Injector Driver 1 (INJ1)	Saturated or peak and hold, 3A max continuous	Injector 1
C1-64	+12V	---	+12V In	12 volt power from relay	12 volt power from relay. Relay must be controlled by +12V Relay Control signal pin C1-29 above.
C1-65	+12V_SW	F2	12V Start & Run (ISP-R) Blunt Lead	10K pulldown	Full time battery power must be available at C1-10 before this input is triggered.
C1-66	Analog_In_Temp_1	C3-30	Cylinder Head Temperature (CHT)	12 bit A/D, 2.49K pullup to 5V	See 'Coolant Temperature' Setup Wizard for selection.
C1-67	Analog_In_Temp_2	C9-2	Intake Air Temperature	12 bit A/D, 2.49K pullup to 5V	See 'Air Temperature' Setup Wizard for selection.
C1-68	Analog_In_Temp_3	---	Oil Temperature Sensor	12 bit A/D, 2.49K pullup to 5V	See 'Oil Temperature' Setup Wizard for selection.
C1-69	Stepper_2A	---	Stepper 2A	Automotive, Programmable Stepper Driver, up to 28V and ±1.4A	Be sure that each internal coil of the stepper motor are properly paired with the 1A/1B and 2A/2B ECU outputs. Supports Bi-Polar stepper motors only. See Setup Wizard page 'Idle - Show

| Dedicated					Dedicated and not reconfigurable
Assigned					Assigned but reconfigurable
Available					Available for user setup
Not Applicable					Not used in this configuration
Required					Required for proper function
Infinity Pin	Infinity Assignment	Pin Destination	AEM Coyote Engine Harness Adapter Function	Infinity Hardware Specification	Notes
					Advanced Setup' for options.
C1-70	Stepper_1A	---	Stepper 1A	Automotive, Programmable Stepper Driver, up to 28V and ±1.4A	Be sure that each internal coil of the stepper motor are properly paired with the 1A/1B and 2A/2B ECU outputs. Supports Bi-Polar stepper motors only. See Setup Wizard page 'Idle - Show Advanced Setup' for options.
C1-71	Stepper_2B	---	Stepper 2B	Automotive, Programmable Stepper Driver, up to 28V and ±1.4A	Be sure that each internal coil of the stepper motor are properly paired with the 1A/1B and 2A/2B ECU outputs. Supports Bi-Polar stepper motors only. See Setup Wizard page 'Idle - Show Advanced Setup' for options.
C1-72	Stepper_1B	---	Stepper 1B	Automotive, Programmable Stepper Driver, up to 28V and ±1.4A	Be sure that each internal coil of the stepper motor are properly paired with the 1A/1B and 2A/2B ECU outputs. Supports Bi-Polar stepper motors only. See Setup Wizard page 'Idle - Show Advanced Setup' for options.
C1-73	Power Ground	R2	PWR Ground	Power Ground	Connect directly to battery ground
C2-1	DBW2 Motor +	---	DBW Motor Control Open	5.0A max Throttle Control Hbridge Drive	+12V to open
C2-2	DBW2 Motor -	---	DBW Motor Control Close	5.0A max Throttle Control Hbridge Drive	+12V to close
C2-3	Power Ground	R2	Ground	Power Ground	Connect directly to battery ground
C2-4	Injector 7	C3-65	Fuel Injector Driver 7 (INJ7)	Saturated or peak and hold, 3A max continuous	Injector 7
C2-5	Injector 8	C3-66	Fuel Injector Driver 8 (INJ8)	Saturated or peak and hold, 3A max continuous	Injector 8
C2-6	Injector 9	---	Injector 9	Saturated or peak and hold, 3A max continuous	Injector 9
C2-7	Injector 10	---	Injector 10	Saturated or peak and hold, 3A max continuous	Injector 10
C2-8	Power Ground	---	Available	Power Ground	Connect directly to battery ground
C2-9	+12V	P1-19	VPWR	12 volt power from relay	12 volt power from relay. Relay must be controlled by +12V Relay Control signal, pin C1-29 above.
C2-10	Injector 11	---	Injector 11	Saturated or peak and hold, 3A max continuous	Not used
C2-11	Injector 12	---	Injector 12	Saturated or peak and hold, 3A max continuous	Not used
C2-12	Analog_In_17	C9-10	Mode Switch Input	12 bit A/D, 100K pullup to 5V	0-5V analog signal. Use +5V Out pins as power supply and Sensor Ground pins as the low reference. Do not connect signals referenced to +12V as this can

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Not Applicable					Not used in this configuration
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Infinity Pin	Infinity Assignment	Pin Destination	AEM Coyote Engine Harness Adapter Function	Infinity Hardware Specification	Notes
					permanently damage the ECU. See Setup Wizard 'Input Functions' page for input selection.
C2-13	Analog_In_18	C12-2	DBW_APP1 [%]	12 bit A/D, 100K pullup to 5V	0-5V analog signal. Use +5V Out pins as power supply and Sensor Ground pins as the low reference. Do not connect signals referenced to +12V as this can permanently damage the ECU.
C2-14	Analog_In_19	C12-5	DBW_APP2 [%]	12 bit A/D, 100K pullup to 5V	0-5V analog signal. Use +5V Out pins as power supply and Sensor Ground pins as the low reference. Do not connect signals referenced to +12V as this can permanently damage the ECU.
C2-15	Analog_In_Temp_4	---	Charge Out Temperature	12 bit A/D, 2.49K pullup to 5V	See ChargeOutTemp [C] table for calibration data and ChargeOutTemp [C] for channel data.
C2-16	Analog_In_Temp_5	---	Airbox Temperature	12 bit A/D, 2.49K pullup to 5V	See AirboxTemp [C] table for calibration data and AirboxTemp [C] for channel data.
C2-17	Analog_In_Temp_6	---	Fuel Temperature	12 bit A/D, 2.49K pullup to 5V	See FuelTemp [C] table for calibration data and FuelTemp [C] for channel data.
C2-18	Analog_In_13	C9-11	Oil Pressure	12 bit A/D, 100K pullup to 5V	0-5V analog signal. Use +5V Out pins as power supply and Sensor Ground pins as the low reference. Do not connect signals referenced to +12V as this can permanently damage the ECU. See Setup Wizard 'Oil Pressure' page for setup options. See OilPressure [psig] for channel data.
C2-19	Analog_In_14	C9-12	Traction Control Mode / Sensitivity	12 bit A/D, 100K pullup to 5V	0-5V analog signal. Use +5V Out pins as power supply and Sensor Ground pins as the low reference. Do not connect signals referenced to +12V as this can permanently damage the ECU. See the TC_SlipTrgtTrim [MPH] 1-axis table.
C2-20	Analog_In_15	---	Exhaust Back Pressure	12 bit A/D, 100K pullup to 5V	0-5V analog signal. Use +5V Out pins as power supply and Sensor Ground pins as the low reference. Do not connect signals referenced to +12V as this can permanently damage the ECU. See Setup Wizard 'Exhaust Pressure' page for setup options. See EBPress [kPa] for channel data.
C2-21	Analog_In_16	C3-10	Throttle Position # Positive Slope (TP2)	12 bit A/D, 100K pullup to 5V	0-5V analog signal. Use +5V Out pins as power supply and Sensor Ground pins as the low reference. Do not connect signals referenced to +12V as this can permanently damage the ECU.

Dedicated	Dedicated and not reconfigurable
Assigned	Assigned but reconfigurable
Available	Available for user setup
Not Applicable	Not used in this configuration
Required	Required for proper function

Infinity Pin	Infinity Assignment	Pin Destination	AEM Coyote Engine Harness Adapter Function	Infinity Hardware Specification	Notes
C2-22	+5V_Out_2	C12-1	APPVREF (1)	Regulated, fused +5V supply for sensor power	Analog sensor power
C2-23	+5V_Out_2	C12-6	APPVREF (2)	Regulated, fused +5V supply for sensor power	Analog sensor power
C2-24	+5V_Out_2	---	+5V Out	Regulated, fused +5V supply for sensor power	Analog sensor power
C2-25	VR+_In_5	---	Driven Right Wheel Speed Sensor +	Differential Variable Reluctance Zero Cross Detection	See Driven Wheel Speed Calibration in the Setup Wizard 'Vehicle Speed' page.
C2-26	VR-_In_5	---	Driven Right Wheel Speed Sensor -		
C2-27	VR-_In_4	---	Non Driven Right Wheel Speed Sensor -	Differential Variable Reluctance Zero Cross Detection	See Non Driven Wheel Speed Calibration in the Setup Wizard 'Vehicle Speed' page.
C2-28	V R+_In_4	---	Non Driven Right Wheel Speed Sensor +		
C2-29	LowsideSwitch_9	F8	Tacho (CTO) Blunt Lead	Lowside switch, 4A max with internal flyback diode, 2.2K 12V pullup. Inductive load should NOT have full time power.	See Setup Wizard page 'Tacho' for configuration options.
C2-30	AGND_2	C3-32	DBW Ground (ETCRTN)	Dedicated analog ground	Analog 0-5V sensor ground
C2-31	AGND_2	C9-3	Knock Sensor 1 & 2 Ground [KS1 - & KS2 -]	Dedicated analog ground	Analog 0-5V sensor ground
C2-32	AGND_2	C3-8	APP Sensor 1 & 2 Ground APPRTN (1) & (2)	Dedicated analog ground	Analog 0-5V sensor ground
C2-33	Analog_In_20	F9	Clutch Position (Neutral Switch) Blunt Lead	12 bit A/D, 100K pullup to 5V	0-5V analog signal. Use +5V Out pins as power supply and Sensor Ground pins as the low reference. Do not connect signals referenced to +12V as this can permanently damage the ECU. 'See ClutchSwitch 1-axis table for setup options.
C2-34	Analog_In_21	---	3 Step Enable Switch / TPS2A	12 bit A/D, 100K pullup to 5V	0-5V analog signal. Use +5V Out pins as power supply and Sensor Ground pins as the low reference. Do not connect signals referenced to +12V as this can permanently damage the ECU. See 3StepSwitch 1-axis table for setup.
C2-35	Analog_In_22	---	USB Logging Activate	12 bit A/D, 100K pullup to 5V	0-5V analog signal. Use +5V Out pins as power supply and Sensor Ground pins as the low reference. Do not connect signals referenced to +12V as this can permanently damage the ECU. See USBLoggingRequestIn channel for input state. See Setup Wizard page 'USB Logging' for configuration options.
C2-36	Analog_In_23	---	Charge Out Pressure /	12 bit A/D, 100K pullup to	0-5V analog signal. Use +5V Out pins as

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Available					Available for user setup
Not Applicable					Not used in this configuration
Required					Required for proper function
Infinity Pin	Infinity Assignment	Pin Destination	AEM Coyote Engine Harness Adapter Function	Infinity Hardware Specification	Notes
			TPS2B	5V	power supply and Sensor Ground pins as the low reference. Do not connect signals referenced to +12V as this can permanently damage the ECU. See ChargeOutPress [kPa] channel for input state. See Setup Wizard page 'Charge Out Pressure' for calibration options.
C2-37	Digital_In_6	---	Spare Digital Input	No pullup. Will work with TTL signals.	Input can be assigned to different pins. See Setup Wizard page Input Function Assignments for input mapping options.
C2-38	Digital_In_7	---	Brake Switch	No pullup. Will work with TTL signals.	See BrakeSwitch 1-axis table for setup options. Input can be assigned to different pins. See Setup Wizard page 'Input Function Assignments' for input mapping options.
C2-39	Power Ground	---	Ground	Power Ground	Connect directly to battery ground
C2-40	Power Ground	---	Ground	Power Ground	Connect directly to battery ground
C2-41	CanH_Bout	---	CANH	Dedicated High Speed CAN Transceiver	Ford EPAS
C2-42	CanL_Bout	---	CANL	Dedicated High Speed CAN Transceiver	
C2-43	LowsideSwitch_8	P1-36	Starter Motor Control (SMC)	Lowside switch, 4A max with internal flyback diode. Inductive load should NOT have full time power.	See Setup Wizard Page "LowSide Assignment Tables" for configuration options. See 2D table "LS8_Duty [%]" for activation settings.
C2-44	LowsideSwitch_7	C3-57	Variable Camshaft Timing 22 Solenoid (Driverside Exhaust)	Lowside switch, 4A max with internal flyback diode. Inductive load should NOT have full time power.	'See Setup Wizard Page "LowSide Assignment Tables" for configuration options. See 2D table "LS7_Duty [%]" for activation settings. See Setup Wizard page 'VVC' for options.
C2-45	UEGO 2 VM	C11-5	UEGO 2 VM	Bosch UEGO Controller	Connect to pin 5 of Bosch UEGO sensor.
C2-46	UEGO 2 UN	C11-1	UEGO 2 UN		Connect to pin 1 of Bosch UEGO sensor
C2-47	UEGO 2 IP	C11-6	UEGO 2 IP		Connect to pin 6 of Bosch UEGO sensor
C2-48	UEGO 2 IA	C11-2	UEGO 2 IA		Connect to pin 2 of Bosch UEGO sensor
C2-49	UEGO 2 HEAT	C11-4	UEGO 2 HEAT		Connect to pin 4 of Bosch UEGO sensor. NOTE that pin 3 of the Sensor is heater (+) and must be power by a fused/ switched 12V supply.
C2-50	+12V_R8C_CPU	P1-9	Battery Perm Power	Dedicated power management CPU	Optional full time battery power. MUST be powered before the ignition switch input is triggered (See C1-65).
C2-51	Coil 7	C6-4	Coil on Plug Assembly 7 (COP7G)	25 mA max source current	0-5V Falling edge fire. DO NOT connect directly to coil primary. Must use an ignitor OR CDI that accepts a FALLING

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	Dedicated				Dedicated and not reconfigurable
	Assigned				Assigned but reconfigurable
	Available				Available for user setup
	Not Applicable				Not used in this configuration
	Required				Required for proper function
Infinity Pin	Infinity Assignment	Pin Destination	AEM Coyote Engine Harness Adapter Function	Infinity Hardware Specification	Notes
					edge fire signal.
C2-52	Coil 8	C6-5	Coil on Plug Assembly 8 (COP8D)	25 mA max source current	0-5V Falling edge fire. DO NOT connect directly to coil primary. Must use an ignitor OR CDI that accepts a FALLING edge fire signal.
C2-53	Coil 9	---	Coil 9	25 mA max source current	0-5V Falling edge fire. DO NOT connect directly to coil primary. Must use an ignitor OR CDI that accepts a FALLING edge fire signal.
C2-54	Coil 10	---	Coil 10	25 mA max source current	0-5V Falling edge fire. DO NOT connect directly to coil primary. Must use an ignitor OR CDI that accepts a FALLING edge fire signal.
C2-55	HighsideSwitch_2	P1-41	Fuel Pump	Multi-function pin depending on hardware configuration	See Setup Wizard page 'HighSide Assigment Tables' for configuration options. See 2D lookup table 'HS1_Table' for activation settings. See Setup Wizard page 'User GPOs' for default activation criteria.
C2-56	Not used	---	Not used	Not used	Not used

C3 - ENGINE
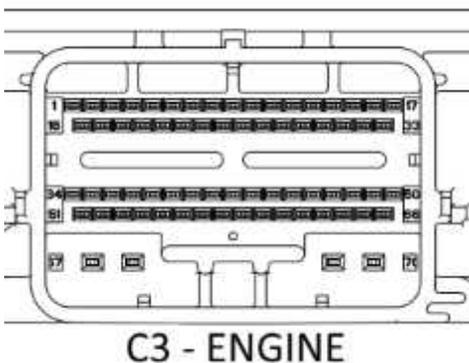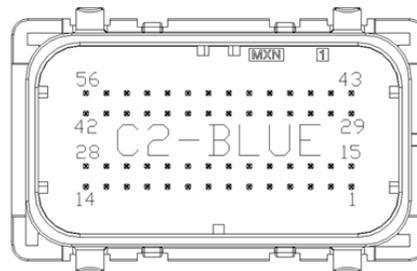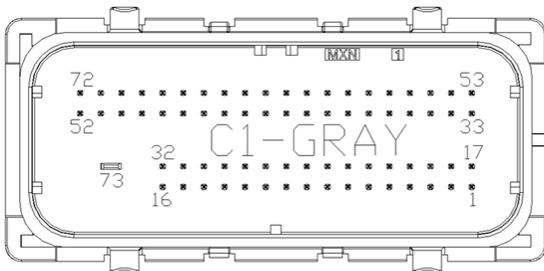
C4	COIL1 - 5P	
Pin	Dest. Pin	Default Pin Function
1	C1-14	Coil 1
2	C1-13	Coil 2
3	Ring Term.	Ground
4	C1-12	Coil 3
5	C1-11	Coil 4

C5	COIL1 - 4P	
Pin	Dest. Pin	Default Pin Function
1	C3-50	Coil 4
2	C3-18	Coil 3
3	C3-52	Coil 2
4	C3-70	Coil 1

C6	COIL2 - 5P	
Pin	Dest. Pin	Default Pin Function
1	C1-16	Coil 5
2	C1-15	Coil 6
3	Ring Term.	Ground
4	C1-51	Coil 7
5	C1-52	Coil 8

C7	COIL2 - 4P	
Pin	Dest. Pin	Default Pin Function
1	C3-51	Coil 8
2	C3-33	Coil 7
3	C3-69	Coil 6
4	C3-34	Coil 5

C8	FLASH	
Pin	Dest. Pin	Default Pin Function
1	P1-9	+12V Perm
2	C1-9	Flash Enable

C9	AUX	
Pin	Dest. Pin	Default Pin Function
1	C1-37	Analog9 - Fuel Press
2	C1-67	AnalogTemp2 - Intake Air Temp
3	C2-31	Sensor Ground
4	C1-42	+5V
5	C1-36	Analog8 - MAP
6	C1-26	Digital5 - FlexFuel
7	C1-33	LowsideSwitch1 - Boost Control
8	P1-20	+12V
9	C1-43	HighsideSwitch1 - Available
10	C2-12	Analog17 - ModeSw
11	C2-18	Analog13 - Oil Press
12	C2-19	Analog14 - Mode Switch

C10	UEGO1	
Pin	Dest. Pin	Default Pin Function
1	C1-7	UEGO Control
2	C1-5	UEGO Control
3	P1-45	+12V
4	C1-4	UEGO Control
5	C1-8	UEGO Control
6	C1-6	UEGO Control

C11	UEGO2	
Pin	Dest. Pin	Default Pin Function
1	C2-46	UEGO Control
2	C2-48	UEGO Control
3	P1-45	+12V
4	C2-49	UEGO Control
5	C2-45	UEGO Control
6	C2-47	UEGO Control

C12	APP	
Pin	Dest. Pin	Default Pin Function
1	C2-22	+5V
2	C2-13	Analog18 - APP1
3	SP1	Sensor Ground
4	SP1	Sensor Ground
5	C2-14	Analog19 - APP2
6	C2-23	+5V

C13	ALT	
Pin	Dest. Pin	Default Pin Function
1	---	---
2	C1-34	LowsideSwicth0 - GENRC
3	---	---

C14	AEMnet	
Pin	Dest. Pin	Default Pin Function
1	C1-32	CAN A Hi (+)
2	C1-31	CAN A Lo (-)
3	P1-20	+12V
4	C1-30	Ground

C15	AUX INLINE	
Pin	Dest. Pin	Default Pin Function
1	P1-20	+12V (COIL)
2	---	---
3	---	---
4	---	---
5	---	---
6	---	---
7	---	---
8	---	---
9	P1-38	+12V (INJ)
10	---	---
11	---	---
12	---	---
13	---	---
14	---	---
15	---	---
16	P1-6	+12V (PCM)

FLYING LEADS		
	Dest. Pin	Default Function
F1	P1-34	Ignition Switch Source
F2	C1-65	Ignition Switch Signal
F3	P1-23	Starter Switch Signal
F4	P1-24	Starter Solenoid
F5	P1-2	Fan +12V
F6	P1-42	Fuel Pump +12V
F7	R3	Fan Ground
F8	C2-29	Tacho Signal
F9	C2-33	Clutch Position
F10	Splice (+12V)	+12V BATT
F11	Splice (+12V)	+12V BATT

12 MONTH LIMITED WARRANTY

Advanced Engine Management Inc. warrants to the consumer that all AEM High Performance products will be free from defects in material and workmanship for a period of twelve (12) months from date of the original purchase. Products that fail within this 12-month warranty period will be repaired or replaced at AEM's option, when determined by AEM that the product failed due to defects in material or workmanship. This warranty is limited to the repair or replacement of the AEM part. In no event shall this warranty exceed the original purchase price of the AEM part nor shall AEM be responsible for special, incidental or consequential damages or cost incurred due to the failure of this product. Warranty claims to AEM must be transportation prepaid and accompanied with dated proof of purchase. This warranty applies only to the original purchaser of product and is non-transferable. All implied warranties shall be limited in duration to the said 12-month warranty period. Improper use or installation, accident, abuse, unauthorized repairs or alterations voids this warranty. AEM disclaims any liability for consequential damages due to breach of any written or implied warranty on all products manufactured by AEM. Warranty returns will only be accepted by AEM when accompanied by a valid Return Merchandise Authorization (RMA) number. Product must be received by AEM within 30 days of the date the RMA is issued.

UEGO oxygen sensors are considered wear items and are not covered under warranty.

Please note that before AEM can issue an RMA for any electronic product, it is first necessary for the installer or end user to contact the EMS tech line at 1-800-423-0046 to discuss the problem. Most issues can be resolved over the phone. Under no circumstances should a system be returned or a RMA requested before the above process transpires.

AEM will not be responsible for electronic products that are installed incorrectly, installed in a non-approved application, misused, or tampered with.

Any AEM electronics product can be returned for repair if it is out of the warranty period. There is a minimum charge of $50.00 for inspection and diagnosis of AEM electronic parts. Parts used in the repair of AEM electronic components will be extra. AEM will provide an estimate of repairs and receive written or electronic authorization before repairs are made to the product.