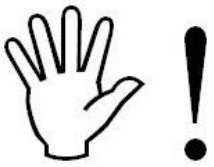
Instruction Manual

P/N 30-3811
2014-2015 Polaris RZR XP 1000
AEM Infinity
Plug and Play Harness



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!

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Instruction Part Number: 10-3811
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OVERVIEW

The 30-3811 AEM Infinity PnP Harness was designed to run the 2014-2015* Polaris RZR XP 1000. This is a true standalone system that eliminates the use of the Polaris ECU. The use of this harness makes the kit “plug and play” so no cutting or splicing wires is necessary. The base configuration files available for the Infinity EMS are starting points only and will need to be modified for every specific application.

* 2015 models have ECU-controlled brake lights that can be controlled by the Infinity ECU, with minor additional wiring required.

The appropriate Infinity ECU part number for this adapter kit is:

- 30-7112 INFINITY-8H, POWERSPORTS

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 Polaris RZR XP 1000 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	35-3811	AEM Infinity PnP Harness	1
B	35-2843	Ignitor, 3-Channel with Thermal Paste	1
C	35-2001	Bosch LSU 4.2 Wideband UEGO Sensor	1
D	35-2130-50	3.5 Bar MAP Sensor	1
E	35-2150	1/8 NPT to -4 Male Adapter	1
F	35-2151	1/8 NPT to 3/16" Barb Adapter	1
G	1062-20-0122	Socket, Aux Connector	12
H	1-3069	Screw, Self-Tapping #8 x 5/8"	6
I	1-3070	Screw, Self-Tapping #8 x 3/4"	2
J	1-117	Zip Tie, 4"	6
K	8-115	Vacuum Hose, 3/16"	72"
L	1-3071	Cushion Clamp, 7/8"	2
	10-3811	Instruction Sheet, 30-3811	1

Important Application Notes

The 30-3811 AEM Infinity PnP Harness allows for a "plug and play" installation of an AEM Infinity-8H Powersports ECU to a 2014-2015* Polaris RZR XP 1000. This kit completely replaces the stock ECU and offers full control of sequential fuel injection, ignition timing advance, and drive by wire (DBW) electronic throttle control. The Infinity ECU also supports the factory Polaris dash display functions, as well as the AWD Hub Control.

* 2015 models have ECU-controlled brake lights that can be controlled by the Infinity ECU, with minor additional wiring required.

Fuel Injectors

The OEM Polaris RZR XP 1000 fuel injectors flow 330 cc/min. These injectors have been characterized by AEM and are available for selection through the Setup Wizard. The Setup Wizard also includes injector data for many popular aftermarket fuel injectors. The Infinity-8H Powersports ECU will drive up to 8 high impedance injectors. Low impedance or "peak and hold" type injectors are not supported. If aftermarket injectors are utilized, they must be of the high impedance or "saturated" type.

Ignition Coils

The OEM Polaris two-wire ignition coils are controlled by the AEM Infinity ECU, but they are not driven directly. This kit includes the AEM 3-Channel Coil Driver required to drive these coils integrated into the PnP harness.

Drive by Wire (DBW) Throttle Control

The base session provided by AEM is configured to work with the OEM Polaris electronic throttle body and accelerator pedal position sensor. When the system is installed for the first time, the DBW Tuning section of the Setup Wizard should be run to "Calibrate Sensor Data Only". This will calibrate the ECU to your specific vehicle's sensors.

Speed Density Fueling

The AEM Infinity ECU will run the engine with a speed density fueling calculation. The OEM Polaris Air Intake Temperature (AIT) sensor is located inside of the Manifold Air Quality Sensor (MAQS). This AIT sensor has been characterized by AEM and is pre-selected in the Setup Wizard of the base session. The AEM 3.5 Bar MAP sensor (included in this kit) needs to be plumbed to a vacuum source that samples from both intake runners. The pressure sensor inside of the MAQS samples from only one runner only and is not suitable for use in the speed density fuel calculation. The factory Coolant Temperature (CLT) sensor has been characterized by AEM and is also pre-selected in the Setup Wizard of the base session.

UEGO Wideband Oxygen Sensor

The AEM Infinity ECU includes on board control for one UEGO wideband oxygen sensor. The Bosch LSU 4.2 sensor (included in this kit) plugs in directly to the AEM Infinity PnP Harness. An oxygen sensor bung (available separately) should be welded into the exhaust system after the merge collector (so that both cylinders are sampled). If an aftermarket turbo kit is installed, the oxygen sensor bung should be installed in to the downpipe, post-turbo. Oxygen sensor bungs and replacement sensors are available from AEM.

35-4005	**O2 Sensor Bung, Mild Steel**
35-4008	**O2 Sensor Bung, Tall Stainless Steel**
30-2001	**Bosch LSU 4.2 Wideband UEGO Replacement Sensor**

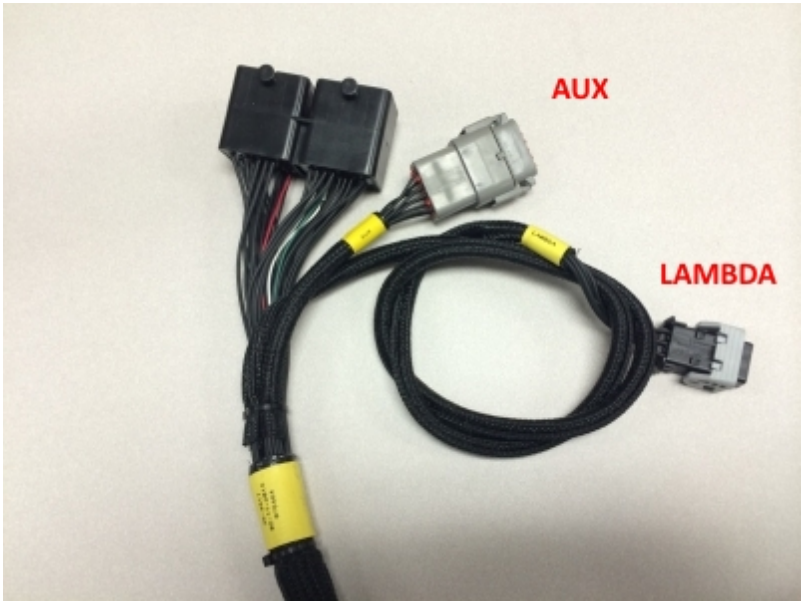
INFINITY ADAPTER HARNESS

The core of the AEM Infinity PnP Harness Kit is the main harness that connects between the Polaris engine harness (replacing the OEM ECU) and the AEM Infinity ECU. The harness connections for the various power, sensors, and auxiliary options are described here.

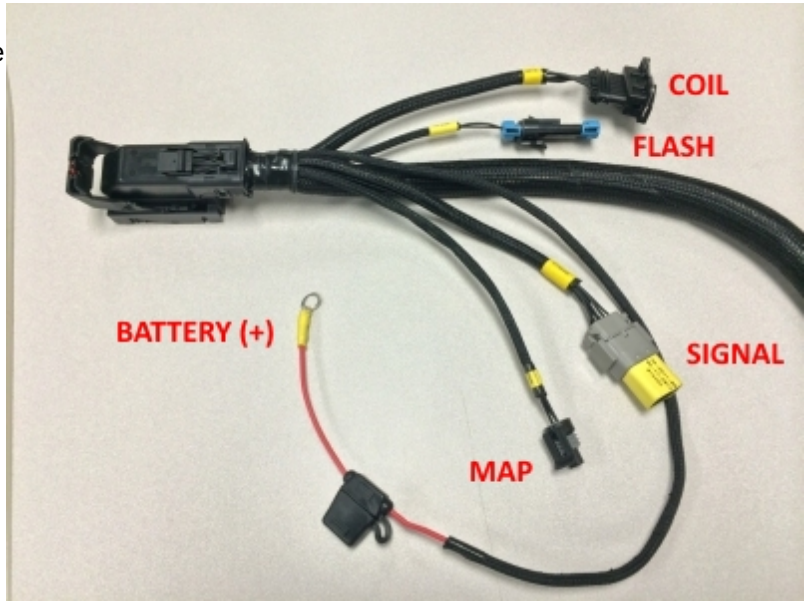
Connections

Lambda - This 6-way terminated connector plugs directly into the included wideband oxygen UEGO sensor, **AEM P/N 30-2001**. Refer to 'UEGO Sensor' section for mounting requirements.

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. Note: the pin numbering is molded into the wire side of the connector. See 'Pinouts' section for details of this connector's pins.



Coil - This connector should be plugged into the 3-Channel Ignitor, provided in this kit. See '3-Channel Coil Driver' 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.

Signal - This is a sealed, self-contained signal conditioner. This plug will come pre-terminated and should be secured out of the way of hot or moving parts.

MAP - This 3-way connector plugs into the 3.5bar MAP sensor, included in this kit. The MAP sensor should be plumbed to a common vacuum source that samples from both intake runners.

BATTERY (+) - The red flying lead ring terminal should be connected to the battery positive terminal. This provides permanent power to the ECU. The fuse holder contains a 5A fuse. Always replace with a fuse of the same rating.

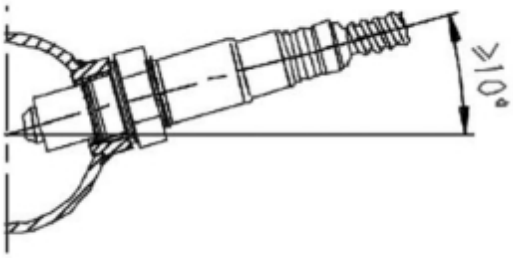
ECU C1 - This 80-way connector should be plugged directly into the AEM Infinity ECU.

INCLUDED HARDWARE

3-Channel Coil Driver

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.

UEGO Sensor



An M18x1.5 oxygen sensor boss needs to be welded into the exhaust system for installation. This sensor should be mounted in the exhaust collector where it will sample from both engine cylinders. On turbocharged engines the UEGO sensor must be installed after the turbocharger, if not, the pressure differential will greatly affect the accuracy of the sensor. To prevent collection of liquids between the sensor housing and sensor element during the cold start phase, the installation angle should be inclined at least 10° from horizontal with the electrical connection upwards, see diagram

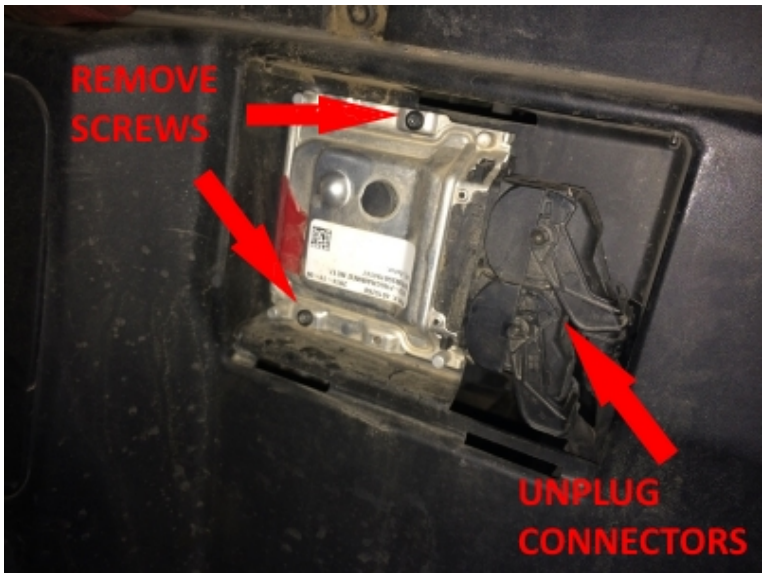
MAP Sensor

Two adapters are included with the 3.5bar MAP sensor- a 3/16" hose barb and a -4 AN male fitting. The desired fitting should be installed to the MAP sensor's 1/8NPT thread with Teflon thread sealing paste. The MAP sensor should be securely mounted with a cushioned clamp and plumbed to a good vacuum source. The vacuum source should pull from a volume common to both engine cylinders, a manifold vacuum reference from a single intake runner is not suitable.

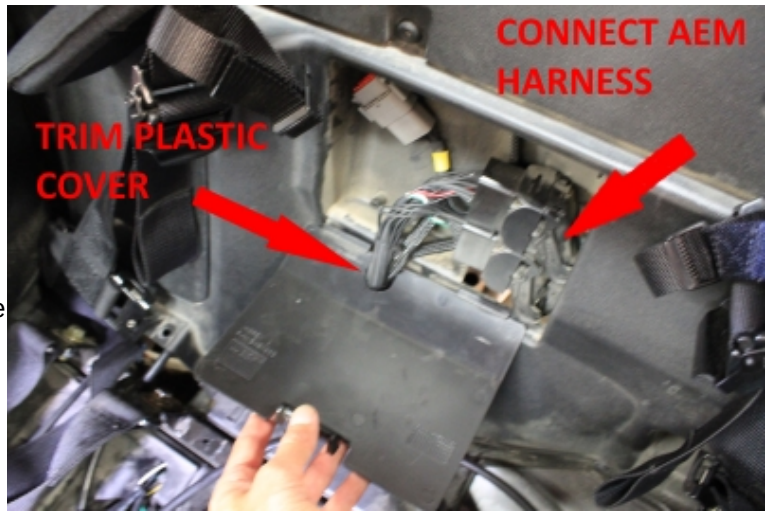
INSTALLATION

1) Remove the driver's side seat (rear seat in "XP 4" four-seater models) to gain access to the ECU compartment. Remove the access cover.

2) Remove the two screws securing the ECU to the body panel. Pull the ECU out to gain access to the connectors. Unlatch the connectors and remove the ECU from the vehicle.

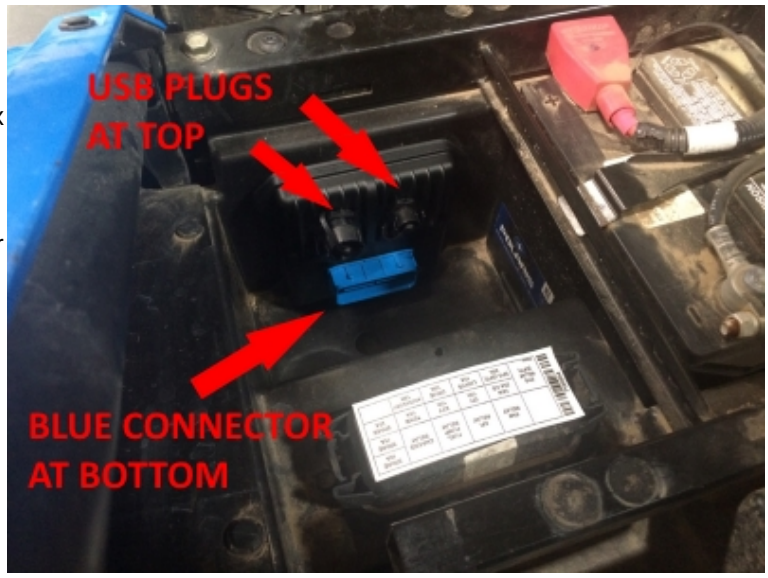


3) Connect the two ECU connectors to the AEM adapter harness inside the ECU compartment. Route the UEGO sensor connector through the hole, along the path of the OEM wire harness. The sensor will need to be installed in an M18x1.5 threaded bung (AEM p/n 30-4008, sold separately). This bung is normally included in the downpipe of an aftermarket turbo kit, but may be welded into the stock exhaust pipe in a naturally aspirated application. Mark and trim the plastic access cover to the pass the AEM harness through the bottom.



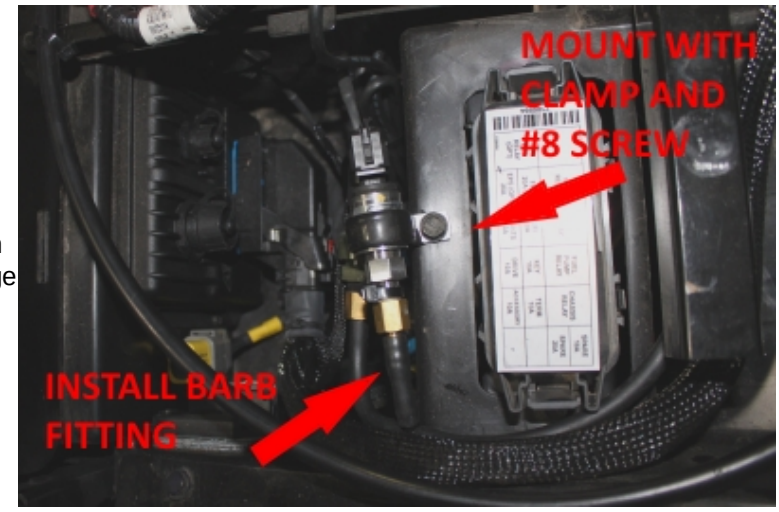
4) Replace the plastic access cover and route the AEM harness down towards the fuse box, below the seat bracket. Secure the harness to the plastic body panel using the supplied cushion clamp and #8 x 5/8" self-tapping screw.

5) Find the storage bin located below the seat. Place the AEM Infinity ECU against the front wall of the compartment (opposite the fuse box) and secure in place with four of the supplied #8 x 5/8" self-tapping screws. Note the orientation of the ECU in the photo- the large blue connector should be toward the bottom of the compartment, with the two USB connectors near the top.



6) Mount the AEM 3-Channel Coil Driver to the driver's side of the same compartment with the two supplied (longer) #8 x 3/4" self-taping screws.

7) Install the barbed hose fitting to the AEM 3.5bar MAP sensor. Use Teflon tape or thread sealing paste on the threads. Mount the MAP sensor to the plastic panel adjacent to the fuse box using the supplied cushion clamp and #8 x 5/8" self-tapping screw. Connect the 3/16" vacuum hose on to the barb fitting and secure with a zip tie. NOTE: The second sensor shown in this picture is part of an unrelated boost gauge install, and was tee'd into the MAP sensor's vacuum line. This second sensor is not part of the AEM Infinity installation.



8) Route the vacuum hose around the fuse box and under the seat mounting bracket. Ensure the hose is not able to be pinched when the seat is reinstalled. Pass the hose through the hole in the plastic body panel located beneath the seat bracket. The hose will come out on the outside of the body, adjacent to the OEM voltage regulator. Route the vacuum hose along the wire harness up the clutch cover towards the intake manifold. Secure with supplied zip ties.

9) It is important to connect the vacuum hose to a manifold pressure source located in a plenum that reference BOTH cylinders. A vacuum/boost nipple on a single intake runner after the throttle blade is NOT suitable. This is often located on a custom fabricated plenum included with an aftermarket turbo kit. For naturally aspirated engines, it is acceptable to either leave the sensor open to atmosphere for a barometric pressure reference or install a nipple on the intake tract (after the air filter element) for an airbox pressure reference.

10) Connect the ring terminal of the fused power lead on the AEM Infinity harness to the positive terminal of the battery. Route the ring terminal through the neck of the terminal boot or trim the boot as necessary to ensure it can be placed back in position and protect the positive terminal from shorting to ground.

11) Plug in the harness connectors to the MAP sensor, UEGO sensor, coil driver, and ECU. Refer to the images in the previous section to identify the connectors. The wire-exit end of the Infinity ECU 80-way connector should face toward the outside of the vehicle.

2015 Model Brake Light Control

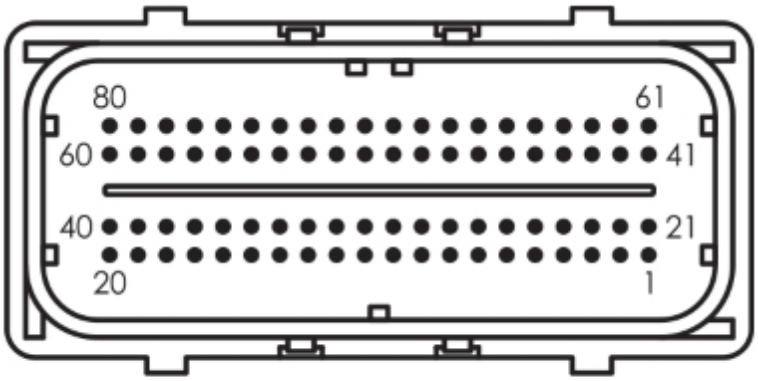
For the 2015 model year, Polaris revised the vehicle's brake light system such that the lights are now controlled directly by the ECU. The AEM Infinity ECU is configured to control the brake lights, but early production of the AEM 30-3811 plug and play adapter harness did not include provisions for this feature. If this harness is installed on a 2015 model year vehicle, the ECU brake light control may be enabled with minor additional wiring. Pin C1-58 (Highside_0) will directly power the brake lights located at positions C2-113 & C2-150. A harness retrofit kit is available from AEM.

PINOUTS

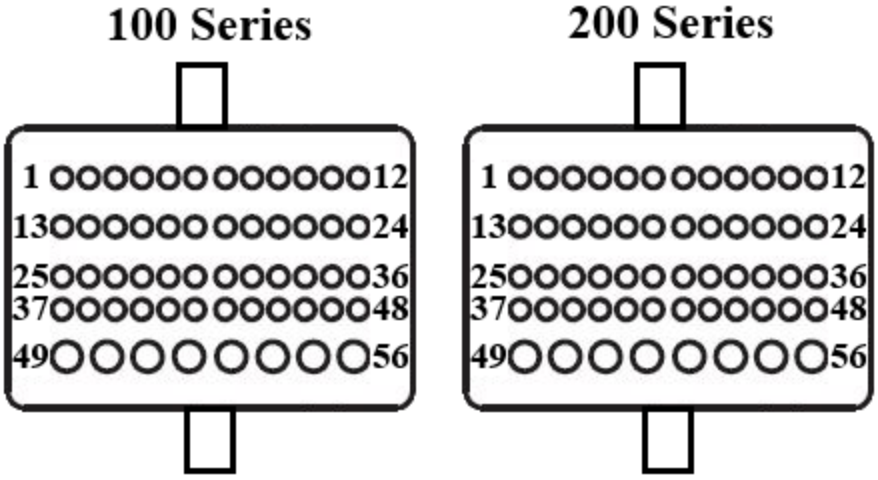
Infinity-8H Powersports, P/N 30-7112					
Infinity Pin	**Hardware Reference**	**Polaris RZR XP Function**	**Polaris RZR XP Pin Destination**	**Hardware Specification**	**Notes**
C1-1	LowsideSwitch_4	AWD Hub Control	C2-246	Lowside switch, 1.7A max, NO internal flyback diode. 12v pullup.	Configured in Base Session for AWD Hub control. Not user adjustable.
C1-2	LowsideSwitch_5	Chassis Relay Control	C2-140	Lowside switch, 6A max with internal flyback diode. Inductive load should NOT have full time power. 12v pullup.	Configured in Base Session for chassis relay control. Not user adjustable.
C1-3	Injector 7	---	---	For use with high impedance (10-15ohms) injectors only, 1.7A max.	Available.
C1-4	Injector 8	---	---	For use with high impedance (10-15ohms) injectors only, 1.7A max.	Available.
C1-5	UEGO 1 Heat	UEGO 1 Heat	C5-4	Bosch UEGO controller	Terminated at 6-pin “Lambda” connector for connecting a UEGO wideband Bosch LSU4.2 sensor (AEM 30-2001).
C1-6	UEGO 1 IA	UEGO 1 IA	C5-6		
C1-7	UEGO 1 IP	UEGO 1 IP	C5-1		
C1-8	UEGO 1 UN	UEGO 1 UN	C5-2		
C1-9	UEGO 1 VM	UEGO 1 VM	C5-5		
C1-10	Batt Perm Power	Permanent Power	Flying Lead	Dedicated power management CPU	Full time battery power. MUST be powered before the ignition switch input is triggered.
C1-11	Coil 4	---	---	25 mA max source current	Not used.
C1-12	Coil 3	---	---	25 mA max source current	Not used.
C1-13	Coil 2	Coil 2	C4-5	25 mA max source current	0-5V Falling edge fire. DO NOT connect directly to coil primary. Connects to included AEM 3-Channel Ignitior.
C1-14	Coil 1	Coil 1	C4-7	25 mA max source current	0-5V Falling edge fire. DO NOT connect directly to coil primary. Connects to included AEM 3-Channel Ignitior.
C1-15	Coil 6	---	---	25 mA max source current	Not used
C1-16	Coil 5	---	---	25 mA max source current	Not used
C1-17	Crank Position Sensor VR+	Crank Position Sensor VR+	C2-213	Differential Variable Reluctance Zero Cross Detection	See Setup Wizard page 'Cam/Crank' for options.
C1-18	Crank Position Sensor VR-	Crank Position Sensor VR-	C2-201		
C1-19	Cam Position Sensor 1 VR-	---	---	Differential Variable Reluctance Zero Cross Detection	Not used.
C1-20	Cam Position Sensor 1 VR+	---	---		
C1-21	LowsideSwitch_2	Cooling Fan Relay	C2-141	Lowside switch, 1.7A max, NO internal flyback diode. No pullup.	May be adjusted under Coolant Fan 1 options in Setup Wizard.
C1-22	LowsideSwitch_3	SYNC Signal	C1-26	Lowside switch, 6A max with internal flyback diode. Inductive load should NOT have full time power. No pullup.	ECU-generated SYNC signal. See "Sequential" section of Setup Wizard for details.
C1-23	AGND	Sensor Ground	C3-A, C2-104, C2-105, C2-106	Dedicated analog ground	Sensor ground for 0-5v analog inputs.
C1-24	AGND	Sensor Ground	C2-103, C2-204, C7-11	Dedicated analog ground	Sensor ground for 0-5v analog inputs.
C1-25	Crank Position Sensor 1 Hall	---	---	10K pullup to 12V. Will work with ground or floating switches. Frequency input only.	Not used.

C1-26	Cam Position Sensor 1 Hall	SYNC Input	C1-22	10K pullup to 12V. Will work with ground or floating switches. Frequency input only.	See Setup Wizard Cam/Crank page for options.
C1-27	Digital_In_2	AWD Request Signal	C2-120	10K pullup to 12V. Will work with ground or floating switches. Frequency input only.	Configured in Base Session for AWD Request Signal. Not user adjustable.
C1-28	Digital_In_3	Spare Frequency Input	C7-4	10K pullup to 12V. Will work with ground or floating switches. Frequency input only.	Available frequency input. Can be used for Flex Fuel, Turbo Speed, or other. See Setup Wizard to configure input.
C1-29	Digital_In_4	Vehicle Speed Input	C2-232	10K pullup to 12V. Will work with ground or floating switches. Frequency input only.	Configured in Base Session for vehicle speed.May be adjusted under Vehicle Speed Input options in Setup Wizard.
C1-30	Digital_In_5	Brake Switch	C2-135	10K pullup to 12V. Will work with ground or floating switches. Switch input only.	Configured in base session for Brake Switch input.
C1-31	Coil 7	---	---	25 mA max source current	Not used.
C1-32	Coil 8	---	---	25 mA max source current	Not used.
C1-33	Power Ground	Ground	C2-247	Power ground	Power ground.
C1-34	CAN A-	AEMNet CAN-	---	Dedicated high speed CAN transceiver	Four pin DTM connector in AEM adapter harness. Contact AEM for additional information.
C1-35	CAN A+	AEMNet CAN +	---	Dedicated high speed CAN transceiver	Four pin DTM connector in AEM adapter harness. Contact AEM for additional information.
C1-36	CAN B-	Chassis CAN-	C2-144	Dedicated high speed CAN transceiver	Configured for OEM dash display. Not user adjustable.
C1-37	CAN B+	Chassis CAN+	C2-132	Dedicated high speed CAN transceiver	Configured for OEM dash display. Not user adjustable.
C1-38	Temp 1	Coolant Temp Sensor	C2-215	2.49k pullup to 5v	See Setup Wizard Coolant Temperature page for options.
C1-39	Temp 2	Air Temp Sensor	C2-227	2.49k pullup to 5v	See Setup Wizard Air Temperature page for options.
C1-40	Temp 3	Spare Temp Input	C7-6	2.49k pullup to 5v	Available temperature input. Can be used for Oil Temperature input or other. See Setup Wizard Input Function Assignments.
C1-41	LowsideSwitch_0	Fuel Pump	C2-142	Lowside switch, 4A max, NO internal flyback diode. No pullup.	Switched ground. Will prime for 2 seconds at key on and activate if RPM > 0.
C1-42	LowsideSwitch_1	Spare Lowside Output	C7-1	Lowside switch, 4A max with internal flyback diode. Inductive load should NOT have full time power. No pullup.	Base session configured to drive boost control solenoid. May be reassigned in Setup Wizard Output Function Assignments.
C1-43	Power Ground	Ground	C2-154	Power ground	Power ground.
C1-44	Knock Sensor 1	---	---	Dedicated knock signal processor	Available. See Setup Wizard Knock Setup page for options.
C1-45	Knock Sensor 2	---	---	Dedicated knock signal processor	Available. See Setup Wizard Knock Setup page for options.
C1-46	Power Ground	Ground	C2-153, C7-12	Power ground	Power ground.
C1-47	Main Relay Control	Ground out to main relay	C2-115	0.7A max ground sink for external relay control	Will activate at key on and at key off according to the configuration settings.
C1-48	Ign Switch	Ignition Switch	C2-116	10k pulldown	Full time battery power must be available at C1-10 before this input is triggered.
C1-49	+5V_Out	+5V Sensor Power	C2-125, C2-137	Regulated, fused +5V supply for sensor power	Analog sensor power.
C1-50	+5V_Out	+5V Sensor Power	C3-B, C7-9, C2-210, C2-223	Regulated, fused +5V supply for sensor power	Analog sensor power.
C1-51	Analog_In_7	Throttle Position A	C2-203	12 bit A/D, 100K pullup to 5V	Configured for TPS1A input from OEM throttle body.
C1-52	Analog_In_8	MAP Sensor	C3-C	12 bit A/D, 100K pullup to 5V	See Setup Wizard Basic Sensors page for options.
C1-53	Analog_In_9	Fuel Sender Signal	C2-112	12 bit A/D, 100K pullup to 5V	Configured for OEM fuel level. Not user adjustable.

C1-54	VR+_In_2	---	---	Differential Variable Reluctance Zero Cross Detection	Not used.
C1-55	VR-_In_2	---	---		
C1-56	VR-_In_3	---	---	Differential Variable Reluctance Zero Cross Detection	Not used.
C1-57	VR+_In_3	---	---		
C1-58	HighsideSwitch_0	Brake Lights	C2-113, C2-150 See Notes	2.6A max, High Side Solid State Relay	Brake light control, additional wiring required.
C1-59	Stepper_1B	---	---	Automotive, Programmable Stepper Driver, up to 28V and ±1.4A	Not used.
C1-60	Stepper_2B	---	---	Automotive, Programmable Stepper Driver, up to 28V and ±1.4A	Not used.
C1-61	DBW1 Motor-	DBW (-)	C2-252	5.0A max Throttle Control Hbridge Drive	Configured for OEM DBW thottle body motor.
C1-62	DBW1 Motor+	DBW (+)	C2-251	5.0A max Throttle Control Hbridge Drive	Configured for OEM DBW thottle body motor.
C1-63	+12v	+12v	C2-155, C7-10	12v power from main relay	12v power from main relay.
C1-64	Injector 6	---	---	For use with high impedance (10-15ohms) injectors only, 1.7A max.	Not used.
C1-65	Injector 5	---	---	For use with high impedance (10-15ohms) injectors only, 1.7A max.	Not used.
C1-66	Injector 4	---	---	For use with high impedance (10-15ohms) injectors only, 1.7A max.	Not used.
C1-67	Power Ground	---	---	Power ground	Power ground.
C1-68	+12v	+12v	C2-156, C5-3	12v power from main relay	12v power from main relay.
C1-69	Analog_In_19	APP2 Signal	C2-111	12 bit A/D, 100K pullup to 5V	Configured for OEM DBW accelerator pedal position (APP) sensor.
C1-70	Analog_In_18	APP1 Signal	C2-121	12 bit A/D, 100K pullup to 5V	Configured for OEM DBW accelerator pedal position (APP) sensor.
C1-71	Analog_In_16	Throttle Position B	C2-220	12 bit A/D, 100K pullup to 5V	Configured for TPS1B input from OEM throttle body.
C1-72	Flash Enable	Flash Enable	Flash Enable Connector	10k pulldown	Two pin connector in AEM adapter harness. Use only to force EMS into flash mode if normal firmware update procedure does not work.
C1-73	Analog_In_13	Spare Analog Input	C7-8	12 bit A/D, 100K pullup to 5V	Can be used as Oil Pressure, Mode Switch, 3-Step or other analog input. See Input Function Assignments in Setup Wizard.
C1-74	Analog_In_11	Cam Gen Signal	C2-219	12 bit A/D, 100K pullup to 5V	Analog input for ECU-generated SYNC signal. See "Sequential" section of Setup Wizard for details.
C1-75	Analog_In_10	Trans Position Signal	C1-75	12 bit A/D, 100K pullup to 5V	Configured for OEM transmission position. Not user adjustable.
C1-76	Injector 3	---	---	For use with high impedance (10-15ohms) injectors only, 1.7A max.	Not used.
C1-77	Injector 2	Injector 2	C2-244	For use with high impedance (10-15ohms) injectors only, 1.7A max.	Injector 2.
C1-78	Injector 1	Injector 1	C2-243	For use with high impedance (10-15ohms) injectors only, 1.7A max.	Injector 1.
C1-79	Stepper_2A	---	---	Automotive, Programmable Stepper Driver, up to 28V and ±1.4A	Not used.
C1-80	Stepper_1A	---	---	Automotive, Programmable Stepper Driver, up to 28V and ±1.4A	Not used.



INFINITY "C1" 80 PIN



ECU-side of header connector view.

C3	MAP	
Pin	Dest. Pin	Default Pin Function
1	C1-52	MAP Signal
2	C1-50	+5V
3	C1-23	Sensor Ground

C4	COIL	
Pin	Dest. Pin	Default Pin Function
1	---	---
2	---	---
3	C2-256	Harness Coil 2
4	C2-250	Power Ground
5	C1-13	ECU Coil 2
6	C2-254	Harness Coil 1
7	C1-14	ECU Coil 1

C5	LAMBDA	
Pin	Dest. Pin	Default Pin Function
1	C1-8	UEGO Control
2	C1-6	
3	C1-68, C2-156	+12V
4	C1-5	UEGO Control
5	C1-9	
6	C1-7	

C6	FLASH	
Pin	Dest. Pin	Default Pin Function
A	C1-10, F1-1	+12V Perm Power
B	C1-72	Flash Enable

C7	AUX	
Pin	Dest. Pin	Default Pin Function
1	C1-42	Lowside 1
2	---	---
3	C1-25	Digital 0
4	C1-28	Digital 3
5	---	---
6	C1-40	AnalogTemperature3
7	---	---
8	C1-73	Analog 13
9	C1-50	+5V Ref
10	C1-63	+12V
11	C1-24	Sensor Ground
12	C1-46	Power Ground

F1	BATTERY (+)	
Pin	Dest. Pin	Default Pin Function
1	C1-10	+12V Perm Power

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.