



OVERVIEW

The Infinity ECU (PN 30-7109), when combined with the Plug & Play Adapter Harness for the Porsche 997.1 2005-'08 Carrera/Targa/GT3 Naturally Aspirated and 2007-'09 Turbo (PN 30-3905), completely replaces the factory Porsche ECU and does not require any additional accessories, sensors or modules for proper operation. Installation can be completed in about an hour when using all of the factory sensors. The manual transmission Porsche 997.1 M/T Plug & Play includes several unique features that incorporate the Porsche's factory CAN bus system (see "Features" tab). **This harness does not support C4 models.**

A Complete Stand Alone ECU for the Porsche 997.1

The Infinity ECU combines with the Plug & Play harness to replace the Porsche 997.1 factory ECU. It controls all of the engine functions including the VarioCam Plus, Wastegate-less turbos and Drive by Wire (DBW) system.

Plug & Play Harness with Expansion Port

AEM's sealed, weatherproof Plug & Play harness (PN 30-3905, sold separately) includes an AEMnet port for communication with other AEMnet enabled devices and CAN integration of the factory inputs for brake switch, clutch switches, cruise buttons, wheel speed sensors, sport button, coolant fans, and A/C. The factory dash remains functional on all Porsche 997.1 models (coolant temp, oil temp, oil pressure, tachometer, dash lights/notifications, boost pressure readout on Turbo models, etc.).

An expansion port with a High-Performance DTM-Style 12P connector is included in the Plug & Play Adapter Harness for adding common aftermarket sensors including fuel pressure, air inlet temperature, MAP, boost control solenoid (on Turbo models) and ethanol content. The expansion port also includes a sensor ground, 5v reference, power from a relay and high side output for activating a solenoid, and switched inputs for boost target, no-lift shift, etc.

Infinity ECU Features for Porsche 997.1 Turbo and N/A Models:

- Base calibrations included for naturally aspirated and Turbo models
- Supports all factory sensors including MAF sensors
- Retains full functionality of factory gauges
- Variocam Plus control
- Multiple boost control strategies (Turbo models)
- Map switching enabled through factory cruise control buttons
- Three-step rev limiter enabled through factory cruise buttons
- Traction control enabled through factory wheel speed sensors
- Enhanced vehicle security (startup) capability
- Airflow model based (VE) tuning
- Dual internal Lambda controllers use factory wideband O2 sensors
- Dual knock sensing circuits
- Flex fuel compatible
- Data logging up to 64GB, logging rate up to 1KHz/channel
- Outputs to 3rd party dashes and data loggers

- Industry leading data transfer speed (up to 480Mb/sec)
- Integrated engine protection strategies
- Sealed enclosure and IP67 rated comms ports

Full Drive-by-Wire and VarioCam Control

The Infinity ECU for Porsche 997.1 models provides two Drive-by-Wire profiles and complete control of the engines' VarioCam Plus variable valve timing system for optimizing mid-range torque. The factory Sport button can be used to change DBW throttle curves. **This harness does not support C4 models.**

Full Engine Support for Mass Airflow Sensors, Wastegate-less Turbos and More

AEM's Porsche 997.1 Infinity ECU supports stock mass airflow (MAF) sensors and does not require the addition of a MAP sensor for operation. The factory wastegate-less variable turbine geometry turbos used in the 997 Turbo and GT2 are also supported, as are the factory electronic bypass valves.

The Infinity ECU also provides full support for:

- Stock charge pressure sensor (Turbo models)
- Engine compartment temp sensor
- Engine blower fan
- Electronic water pump (Turbo models)
- Dual stock fuel pumps
- Dual stock EGT sensors (Turbo models)
- Dual stock wideband air/fuel sensors

Racing Enabled Functions via Configurable Cruise Control Buttons

The Infinity programmable ECU delivers the ability to enable racing functions through the Cruise Control buttons on all Porsche 997.1 models. Using InfinityTuner software, users can now select from 8 modes for fuel maps, timing maps, Lambda target and more, and select maps on the fly using the factory cruise UP (+) and DOWN (-) buttons, eliminating the need to wire in and mount an ancillary position switch.

Users can configure the CRUISE CANCEL as a temporary three step limiter switch through the InfinityTuner software (vehicle speed or time after launch dependent), and can set rev limits at specific rpm by points or set a flat limiter and use it as an RPM hold for launches.

Launch anti lag, traction control slip target and rolling launch can also be programmed.

Traction Control

The Infinity is able to use the factory wheel speed/ABS sensors for traction control via fuel cut, spark cut, spark retard or retracting DBW throttle response on all 997 models. This eliminates the need to install additional sensors for traction control.

The CRUISE SET/HOLD can be configured as a traction control enable or disable button through the InfinityTuner software. Users can define a specific slip target for traction control in the software and turn it on or off using this button, or set two slip targets and use it for a mild and aggressive traction control strategy.

User Definable DBW Throttle Response

Using the Sport button, users can define throttle curves in the InfinityTuner DBW software and take full control of throttle response. This allows users to change throttle response rate on the fly and is ideal for setting rain mode throttle curves.

Fits In Factory ECU Location

AEM's engineers have designed the Infinity ECU and harness to fit in the factory ECU location under the shelf to maintain overall weather resistance of the electronics.

Enhanced Security

Users can configure a number of analog, digital or CAN inputs to enable starting when using the Porsche 997.1 Infinity ECU and Plug & Play Harness. The supplied base calibration is configured to allow factory like starting with the clutch switch, or by pressing the cruise control enable button to effectively bypass the clutch switch. For added security, users can install a hidden switch to enable starting, and can fully disable the 2D Start Enable table and password protect it, preventing starting until the table is unlocked and re-enabled through password input.

200MHz Processor and Real Time Operating System

Late model vehicle ECU's all run on faster processors. The Infinity ECU is built around a latest-generation 32 bit floating point 200MHz automotive processor and Real Time Operating System (RTOS), which is capable of processing 400 MIPS (millions of instructions per second). By comparison, common competitive systems typically use 20MHz to 50MHz processors. To our knowledge, the Infinity ECU currently has the fastest processing speed of any aftermarket Motorsports ECU available. This allows the Infinity to do more, faster, in a more stable programming environment.

- The Infinity's 200MHz processor and RTOS makes the Infinity more responsive, for a better driving experience
- The Infinity's 200MHz processor and RTOS allows for more accurate ignition timing, which enables an engine to create more power
- The Infinity's faster processor allows it to perform more computational features with no sacrifice in processing performance
- The Infinity's RTOS ensures strategic processing with optimized load balancing. This means that tuning one feature will not affect the performance of another feature

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