

iSeries Mini PlugIn

R53 Cooper S 2002-2006



iSeries Mini PlugIn Overview

Liberate your Mini, enjoy the Vi-PEC throttle responsiveness. Fit a turbo? Stroke it? The Vi-PEC Premium ECU lets you make the changes your Mini will love.

Application

- R53 BMW Mini with the 1.6L Tritec supercharged engine
- Manual transmission only

Vi-PEC i88 PlugIn ECU Features

- Your Mini runs “straight out of the box”
- Vi-PEC i88 ECU, a fully featured iSeries ECU
- Includes all iSeries options including data logging, knock control, boost control & motorsport features

BMW Mini PlugIn Specific Features

- Direct plug in replacement. Installs in place of OEM ECU on original mounting. No wiring alterations or adapters required
- Uses OEM sensors for ECU operation, replacement of existing sensors not required
- Supplied with a base tune that will allow a stock engine to start and run. All accessory functions are pre-configured. Final tuning is required
- Interfaces to OEM CAN communication bus and communicates with other control units e.g. ABS, Dash, Steering Angle Sensor
- Sequential Fuel Injection and Wasted Spark Ignition as per OEM. Optional Direct Spark Ignition (requires installation of coil per plug and external two channel igniter)
- Suitable for naturally aspirated or forced induction applications

- Supports most OEM systems including Air Conditioning
- Additional expansion connectors. Allows access to additional I/O including CAN, RS232, analog inputs, digital inputs and switching outputs. These can be used for wiring a variety of accessories including after-market displays, CAN accessories (e.g. UEGO sensor), boost control solenoid, dash mounted switches and additional sensors for measurement and logging
- ISO 15765-4 OBD compatibility at OEM OBD port. Allows the use of a cell phone or tablet to display real time ECU information. Note a suitable OBD-Wifi or OBD-Bluetooth adapter is required
- Information available from other control modules includes all four wheel speeds, steering wheel position, handbrake switch, bonnet switch, seatbelt switch, DSC switch & headlight state

Limitations

- This PlugIn ECU has been developed to allow the tuning and optimisation of engine performance in the above vehicle. Some optional, model and / or market specific features may not be supported
- Cruise Control is not supported. Note - The ECU is capable of cruise control with the installation of additional push buttons. It is the specialised communication between the OEM cruise control buttons and ECU that is not supported
- Chrono Pack 1st Gen dash upgrade option is not supported. Support may be added if information becomes available

Key Features - iSeries

- Up to 6D fuel and ignition mapping
- Precision closed loop cam control (four cam, independent control)
- Sequential fuel delivery
- Digital triggering, OEM patterns
- Rotary - fully sequentially staged injection and leading - shared ignition
- OEM idle hardware supported
- 6D boost control with three switchable tables
- Motorsport features - antilag, launch control, gear cut control
- Continuous barometric correction (on board)
- CAN port (optional)
- QuickTune - automated fuel tuning
- Individual cylinder correction
- USB tuning cable included
- Statistics recording into on-board memory
- Gear compensations for spark, boost etc
- Real time selectable dual fuel, ignition and boost maps
- Sync and crank sensors can be a combination of Hall effect, variable reluctance or optical
- Boost control referenced to gear, speed or throttle position for any condition
- Up to 4MB internal logging memory
- Firmware updates available online
- Onboard knock control with Digital Signal Processing (DSP) (if original ECU had knock control)