Motorsport Electronics ME360 ECU Specifications

Tuning Software (MEITE)

- Intuitive, developed with real-world feedback from 100's of tuners
- Everything real-time adjustable
- Diagnostics and analysis functionality
- Custom layouts, tabs and functions
- In-built firmware update tool for ease-of-use
- Custom "part calibration" import – use settings from other maps in a current map
- Offline Editing of calibrations
- Real-time tracing
- Data-logging of all variables and Auto-Tune

Fuelling Control

- Configurable Load/RPM BINS 16×16, 32 bit floating point Tables
- Multiple Fuel Tables
- Injection Angle
- Priming Pulse Settings and Crank Pulse Settings
- Cranking Enrichment
- After-Start Enrichment and ASE Time Decay
- Warm-Up Enrichment
- Acceleration Enrichement TPS/MAP based with Coolant Modifier
- IAT Correction Table
- Idle Trims
- 16×16 AFR Target Table factored into VE Equation
- Speed-Density/Alpha-N with optional Blending
- Injector Voltage Offset Table
- Overrun Fuel Cut
- Closed Loop Narrow-band/Wide-band Lambda control with Bosch LSU4.9 Controller On-Board
- Flex-Fuel secondary tables

Ignition Control

- 16×16 32bit Table
- Closed Loop DSP Windowed Knock Control On-board
- Battery Voltage Dwell Correction 16×16 Table
- Individual Cylinder Trimming
- IAT and Coolant Trim
- Spark-Scatter Ignition Idle Control
- Flex-Fuel Control
- Switchable Ignition Tables

Crank/Cam Triggering

- VR/Hall/Opto Inputs as required
- Auto-scaling, Parametric Noise Rejection

- Range of OEM Patterns Supported

Idle Control

- PWM based Closed/Open/Manual Diagnostic Modes
- 4-wire Stepper based idle control
- Cranking/Return to idle Settings reference Open-Loop table for wide-control
- DBW Idle Control **where DBW is used*
- AC/Fan Auto-Idle Up Settings
- PID Based for Accuracy
- Fuel Modifiers
- Ignition Spark Scatter
- Jacked-Throttle Miss-Bang Idle Mode (Group-N ALS)

Knock Control

- DSP Angular Windowed Knock Control
- Settable Gains, Offset and Window Duration
- Step Retard and Fail-Safe

Boost Control

- Closed/Open Loop Boost Control by 16×16 RPM and Throttle table
- Boost-by-Gear
- Switchable Boost Tables
- Over-Boost Protection
- Pre-Start Duties
- Anti-Lag Group-N

Variable Valve Timing

- Fully Closed Loop PWM (Throttle X RPM table)
- Dual Cam Support
- Locked Angle or Locked Duty testing modes
- Basic On/Off Mode (Honda V-Tec)
- Supported patterns
- PID Tuning with Oil Temperature triggering & safeties
- Programmable Rest State & Offset compensation

General Purpose Tables

- 6x General Purpose Tables
- Custom Variables and Outputs
- Modify Fuel, Ignition, Boost and Idle strategies from the GPTs
- 3D and 2D tables with ability to "chain" tables together for create complex functions

Communications

- Industry Preferred RS232 for ECU mapping/communication (USB Adaptor available)
- CAN-Bus on some models
- USB on some models

Drive-by-Wire

- 6.5A Half bridge
- Closed loop, dual redundant DBW
- DBW Idle Control functions
- Software and Hardware fail-safes

Processing Power

- 120Mhz 32-bit RISC Processor
- Ignition Accuracy to 0.01 degrees, Fuelling to 0.001mS
- 32-bit maths and tables (Table entries can have 8 decimal places for very high resolution)
- ADCs/Analogue data reported to 16-bit accuracy
- 20,000+ RPM

Analogue/Digital Inputs

- Configurable "HRT"s for every analogue channel – use any sensor. Basemaps pre-set for factory sensors.
- **Wide-band O2 LSU4.9 Controller Built In**
- TPS, IAT, CLT, MAP, Lambda standard inputs
- Selectable feature for digital/analogue inputs
- Spare/unused analogue lines can be used for general purpose tables or digital switches

Environmental & Physical

- Automotive -20 – 85*C
- Voltage 5.5-28V
- Operating Current Approx 120mA @ 13v
- Electrically isolated and protected inputs/outputs
- 90 Way Automotive Connector
- IP67 Sealed Alloy Casing

Data Logging

- 4Gb On-board Data logging – over 2,000 Hours of all variables
- Unlimited PC based logging via MEITE
- User settable Triggers and markers