

GENERAL SPECIFICATIONS	Infinity-12 30-7102	Infinity-10 30-7100	Infinity-8 30-7101
Cylinders	1 to 12	1 to 10	1 to 8
Injectors, Low or High Impedance	12	10	8
Coils-0-5V Falling Edge Fire. Must Use External Igniters.	12	10	8
Internal State Machine- RTOS on CPU	32-Bit floating point w/ math co-processor		
Microprocessor-32-Bit, 200MHz CPU Core Operation	Yes, 400 MIPS		
Auxiliary Power Management MCU	Yes		
Connectors	129 pins (56-pin & 73-pin) fully sealed automotive type		
CAN Channels	2		
Main Relay Control-Intelligent Power Sequencing with Low Power Mode	Yes		
Weather-Resistant Sealed Electronics	Yes, high performance conformal coating		
PC Communications/Data Logging Storage	Fully sealed IP67 connection USB		
Enclosure/Dimensions	Sealed aluminum, 6.030" x 6.030" x .956"		
Weight	24 oz./680.4 grams		
Engine Types	2-stroke, 4-stroke		
Maximum RPM	Timing sensor characteristics dependent. Timing code speeds tested over 100,000 RPM		
FUEL INJECTION	Infinity-12 30-7102	Infinity-10 30-7100	Infinity-8 30-7101
Injectors, Low or High Impedance	12	10	8
Type	Sequential		
Programmable Peak Current	Yes		
Programmable Hold Current	Yes		
User-Definable Battery Compensation	Yes		
User-Definable Pressure Compensation	Yes		
IGNITION	Infinity-12 30-7102	Infinity-10 30-7100	Infinity-8 30-7101
Coils-0-5V Falling Edge Fire. Must Use External Igniters.	12	10	8
OEM Ignition System Compatible	Yes, external igniters or smart coils required		
User-Programmable RPM & Load Points	Yes		
3D Ignition Table RPM x Load	Yes, user selectable load axis		
Individual Cylinder Trims	Yes, RPM based		
Adjustable Coolant & Air Temp Compensation	Yes, 3D tables vs. load		
Knock-Software Digital Processing with Individual Cylinder Windows	2 channels		
Dwell Time Calculation	Yes, RPM, battery voltage and load compensated		
Odd-Fire Engine Capacity	Yes		

Legal in California for racing vehicles which may never be used upon a public highway.

Legal solely for vehicles used in competition which may never be used upon a public road or highway.

Revision Date: December 4th, 2012

**INPUTS** Some features below require Advanced Tuning Package for activation (Available at no additional charge for a limited time)

Analog Voltage Inputs (12 Bit Resolution)	11 standard, 6 optional*
Analog Temp Inputs (12 Bit Resolution, Software Switchable 2.49K Pullup Resistor)	3 standard, 3 optional*
Digital Inputs	7 standard, 1 optional*
VR/Mag Input (Precision Amplifier and Comparator, Adaptive Peak Threshold)	4 standard, 2 optional*

**TRIGGER SENSORS**

Compatible With:	Typical VR and Hall
Digital Signal Processing, With Filters	Yes

**AIR/FUEL RATIO INPUTS**

On-Board Wideband UEGOs-Heater Controlled	2
Sensor Type	Bosch 4.2 LSU
Range In Lambda	0.65λ...∞
Accuracy @ λ = 1	1.016 ± .007

**OUTPUTS** Some features below require Advanced Tuning Package for activation (Available at no additional charge for a limited time)

High Sides (0.7A Max. Over Temperature Shutdown, Over Current Shutdown)	1 standard, 1 optional*
Low Sides (Intelligent Power Switches, 4.5A Max. Over Temperature Shutdown, Over Current Shutdown)	10 standard
4-Wire Stepper Motor Control	1
H-Bridge Channels for DBW or DC Motor Control (Over Current Limited to 5.0A)	2, application dependent, functionality coming soon

**USER INTERFACE SOFTWARE**

User Interface	Custom full floating dockable window controls
Set-Up Wizard	Yes
Sensor Calibrations	Standard sensors in Wizard, programmable calibration for custom sensors
User Configurable Layout	Yes
User Configurable Color Blend & Display Preferences	Yes, configurable by channel
User configurable Channel Units	Yes, selectable by control
PC Requirements	Windows XP SP3 or higher, 32 bit color
PC Graphical Hardware Optimization	Yes
Help File	Yes
Data Logging Analysis	Real time and playback modes with map animation
Multiple Graph Overlays	Yes
X-Y Plots	Yes, scatter plot
Maths Functions	Yes, user definable virtual channels
Hot Keys	Yes, user definable and linkable to custom math channels
Digital Instrument Display	Yes, 3D models with camera angle selection feature
Engine Simulator	Yes

\*The Infinity EMS's Advanced Tuning Package is sold separately. For a limited time, the Infinity EMS Advanced tuning package is available at no additional charge.

<b>AIR/FUEL CALIBRATION</b>	
Type	Airflow based
Injector PW resolution	0.1 microsecond (0.0000001 seconds)
User-Programmable RPM & Load Points	Yes
3D VE Table RPM x Load	Yes, user selectable load axis
3D Injector Phasing RPM x Load Points	Yes
Individual Cylinder Trims	Yes, RPM based
Automatic Secondary Injector Flow Calculation	Yes, based on flow, fuel type and split ratio
Coolant & Air Temp Compensation	Automatic with charge temp blend
Lambda Target, Multi-fuel Capable	Yes
Decel Compensation	Yes
Transient Compensation	Yes
Lambda Cranking Target	Yes
Frequency MAF Compatible	Yes
0-5V MAF Compatible	Yes
<b>BOOST CONTROL</b>	
3D Main PW Table RPM x Boost Target	Yes
Switched Target, 12 Settings Max	Yes
Time Based Target	Yes
<b>ENGINE PROTECTION</b>	
Lean Protection	Yes, warning output
Cold Engine Rev Limit	Yes
Oil Pressure Protection	Yes, warning output
Overboost Fuel Cut	Yes
Fuel Pressure Variations	Yes
<b>IDLE CONTROL</b>	
Control Type	Closed loop PID
Compatible with Stepper and PWM	Yes
Dashpot Function	Yes
A/C Load Offset	Yes
After Start Offset	Yes
<b>STANDARD FUNCTIONS</b>	
Variable Cam Control	Up to 4 channel
Traction Control (2-Wheel Speed Based )	Yes
2-Step Launch Control	Yes
Wideband UEGO Control	2 channel internal
Soft/Hard Cut Rev Limiters	Fuel or ignition, closed loop PID
Boost Anti-Lag	Yes
Alarms	Yes
Gear Detection	Yes
Nitrous Control	Single stage wet or dry coming soon, 3-stage with Advanced Tuning Package coming soon

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<b>DIAGNOSTICS</b>	
Sensors	Open and short circuit detection
MIL Output	Yes
Fuel Injectors	Saturation and overflow detection
Spark Timing Overflow	Yes
<b>DATA LOGGING</b>	
PC Log All Layout Channels	Yes, log synchronized with controls
Memory Size-External FAT/FAT 32 Storage Device	4GB standard, tested up to 64GB. Contact AEM for details.
Logging Performance (FAT File System)	Up to 10 channels at 1KHz, Up to 20 channels at 500Hz, Up to 100 channels at 200Hz
Logging Performance (Raw File System)	Up to 100 channels @ 1KHz
Tuning Software Interpretation	Graphical analysis with log playback and controls sync feature
Advanced Data Analysis	AEMdata license included
<b>ADVANCED TUNING PACKAGE (Available at no additional charge for a limited time)</b>	
Drive by Wire (2-Channel)	Application dependent, coming soon*
Traction Control (4-Wheel Speed Based)	Yes*
3-Step Launch Control	Yes*
No-Lift Shift	Yes*
4-Stage Nitrous Control	Coming soon*
Analog Voltage Inputs (12 Bit Resolution)	6*
Analog Temp Inputs (12 Bit Resolution, Software Switchable 2.49K Pull-up Resistor)	3*
Digital Inputs	1*
High Sides (0.7A max, Over Temperature Shutdown, Over Current Shutdown)	1*
VR/Mag Differential Pair Inputs	2*

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