

MODIS™

MODEL EEMS300E14

BID SPECIFICATION



Model EEMS300E14 MODIS™ System Elite Kit

PRODUCT FEATURES

- 4-channel lab/ignition scope
- Color graphing scan tool
- Domestic and Asian Fast-Track® Troubleshooter software
- Powerful Digital Graphing Multimeter
- Expandable diagnostic platform with 7" color LCD display
- Heavy-duty carrying case

DISPLAY DEVICE

- Color, liquid crystal, full VGA backlit display (LCD) 640x480
- Mouse style, multidirectional thumb pad navigation
- VGA output for remote display or projection interface
- Infrared output for compatible wireless printers
- USB and serial ports for printer, keyboard, gas analyzer, dyno or PC interface
- Compact Flash/Wireless communication port

SCAN TOOL PLUG-IN FUNCTIONS

The legendary Snap-on® Scanner™ vehicle communication and Fast-Track® Troubleshooter software is included in the diagnostic platform for the future. No other scan tool even comes close to putting this much diagnostic power in the palm of your hand. The Snap-on® Scanner™ scan tool graphs live data and displays complete trouble code descriptions for GM, Ford, Chrysler, Jeep and Asian imports. Optional European software provides live data, functional tests and complete trouble code descriptions for BMW, MINI, Mercedes Benz and Volkswagen/Audi. The MODISTM system will interface with 1980 and later Domestic, Asian import and European OBD-I and OBD-II compliant vehicles.

GLOBAL OBD VEHICLE COMMUNICATION SOFTWARE

- Communicates with All 1996 and Newer OBD Compatible Vehicles
- Establishes communication with the appropriate vehicle protocol automatically
- Displays active communication protocol information
- Tests system readiness status
- Mode 1: graphs or displays current data
- Mode 2: retrieves freeze frame data

- Mode 3: monitors diagnostic trouble codes
- Mode 4: clears emissions related data
- Mode 5: oxygen sensor monitoring
- Mode 6: non-continuously monitored systems
- Mode 7: diagnostic trouble codes detected during last drive
- Mode 9: displays important vehicle information

GM VEHICLE COMM SOFTWARE 1980 – '05

- Enhanced OBD-II & Generic OBD-II modes
- Engine & Body Diagnostics, incl. Connector locator, ECM & EGR tests, Body, Airbag, Functional Tests, Crank Pos Relearn
- Bi-Directional Testing, incl. ICB, IAC, EGR
- Delco Moraine-III bleeding, Trans shifting, TCC PWM, Adapt. Memory
- Transmission Diagnostics, incl. 4T80E, 4L60E, 4T60E, 4L80E, Saturn, 2-Speed Automatic Transfer Case '98/'99
- ABS Brake Diagnostics and ABS Brake Bleeding, incl. Bosch, 4WAL, RWAL, ASR, Delco-Moraine & Teves

FORD VEHICLE COMM SOFTWARE 1981 – '05

- Engine & Body Diagnostics, incl. Connector locators, OBD-II, DCI, GEM body, EEC & MCU systems, Super Star II functions, SAE J1930 terms
- Functional Tests, incl. 7.3 Powerstroke Transmission Diagnostics
- ABS Brake Diagnostics and ABS Brake Bleeding, incl. many Bosch, Teves, Kelsey-Hayes

CHRYSLER VEHICLE COMM SOFTWARE 1983 – '05

- Engine & Body Diagnostics, incl. Connector locators, CCD, SBEC, MEC functional tests, PCM VIN Programming
- Bi-Directional system testing, incl. Forced EVAP Monitor Test, Set RPM/IAC Test, Purge Vapors Test, EGR System Test, and ETC Throttle Follower Test. Misfire Counters, Generator Field, Pending Codes
- '98/'00 Cummins Diesel
- ABS coverage, incl. Kelsey Hayes RWAL & 4WAL, Teves MKIV & MK20, Bendix 4, 6 & 10
- Transmission Diagnostics, incl. EMCC reset, "Quick Learn", 42LE, A604, CVI, electronic transfer case

ASIAN IMPORT VEHICLE COMM SOFTWARE 1983 – '05

- In-depth Engine, Transmission & ABS coverage for the most popular Asian Import vehicle makes:
- Acura, Daihatsu, Honda, Hyundai, Isuzu, Infiniti, Kia, Lexus, Mazda, Mitsubishi, Nissan, Scion, Subaru, Toyota

BID SPECIFICATION

DOMESTIC / ASIAN IMPORT DRIVEABILITY FAST-TRACK® TROUBLESHOOTER

General Motors, Ford, Chrysler/Jeep, Acura, Daihatsu, Honda, Hyundai, Isuzu, Infiniti, Kia, Lexus, Mazda, Mitsubishi, Nissan, Subaru, Toyota

- Domestic 1980 – '04
- Asian Imports 1983 – '04
- Exclusive Information with Instrumentation developed by technicians for technicians
- Over 30 Thousand VIN-specific Troubleshooter Tips
- Exclusive VIN-Specific troubleshooting and systems repair information covering code specific, no code, no-start, drivability symptoms and frequent component failure analysis
- Symptom-related functional tests
- Enhanced OBD-II Fast-Track® data scan tips reflect manufacturer-specific enhanced DataStream capabilities
- Component locators
- Service procedures and specifications
- Code set specifications
- Fast-Track wiring diagrams, VIN-specific service bulletins and procedures on CD
- Enhanced diesel symptom tips
- Technical service bulletins through 2002 model year
- Enhanced functional test descriptions for all vehicles

DOMESTIC / ASIAN IMPORT TRANSMISSION FAST-TRACK® TROUBLESHOOTER 1981 – 2004

- Domestic 1981 through 2004 model year
- Asian import 1983 – '04
- Electronic Controlled Transmission/transaxle coverage
- Technical service bulletins
- Enhanced Fast-Track® data scan tips
- Transmission functional test insight
- Hundreds of transmission wiring diagrams on CD

DOMESTIC / ASIAN IMPORT ANTI-LOCK BRAKE FAST-TRACK® TROUBLESHOOTER

- Solutions for all ABS-related codes through 2004 models
- Symptom-based tips for 2002 models and earlier
- 24 vehicle makes supported
- Supplementary reference manual and service bulletins on CD

LAB SCOPE PLUG-IN

Four-Trace Scope: Captures and displays "live" signals up to four waveforms on screen in real time

- Displays digital readout along with each waveform to determine voltage at the selected point on the waveform

- Snapshot: Capture data over time saved into a buffer
- Easy Scroll: Streamlines selection of menu and toolbar items
- AC Coupling: Provides the ability to enlarge the alternating current (AC) component of a signal for closer examination
- Invert: Flip waveform to adjust for flexible hookups and easier viewing
- Autofind: Automatically pre-configure the vertical scale
- Load Configuration: Designed to allow the user to select factory preset screens or define a custom setup and retrieve them as needed – diagnostic tasks most frequently performed on specific components would be selected to view the performance of sensors, actuators and circuits on a vehicle
- Peak Detect: User selectable for capturing hi-speed signals

DIGITAL MULTIMETER

- Auto scaling, high-impedance digital graphing multimeter measurement system
- Pinpoint measurement of:
 - DC volts
 - AC Volts RMS
 - Ohms
 - Continuity with audible beep

Scan Tool Plug-in Standard Accessories

- Includes most required cables and adapters covering Domestic and Asian Imports application as early as 1980
- Asian import, GM, Ford, Chrysler and Jeep reference manuals, also new Fast-Track® Troubleshooter reference manuals on CDs

LAB SCOPE/DIGITAL MULTIMETER STANDARD ACCESSORIES

- Includes: 4-lead set, channels one and two are shielded – secondary probe – RPM probe

Capabilities with Optional Probes

- DC current amps – Pressure – Vacuum – Secondary ignition Probe for Coil-on-Plug, Coil-in-Coil, Distributorless Ignition

POWER/WEIGHT/DIMENSIONS

- Line power: 110/12V adapter/battery charger included
- Batteries: NiMH battery pack included
- Fuse: 5A (Buss ATC, Littlefuse ATO, or equivalent incl.)
- Weight: 5lbs. 14oz. with plug-in modules and battery
- Dimensions (ruggedized case): 7-3/4"H x 14" W x 3-3/8" D



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OPTIONAL ACCESSORIES

MODIS™ SYSTEM OPTIONAL ACCESSORIES

- PCLink Wireless Connectivity Kit – EESP311A01
- Portable 5-Gas Analyzer – EEEA300A
- Heavy Duty Vehicle Communication Kit – EEMS301A04
- Auxiliary Battery Pak – EEMS301A01
- Auxiliary Battery Pack Charger – EEMS301A02
- Screen Protectors (5 pack) – EAK0253B20A
- Fan Filters (5 pack) – EAK0253B02A

LAB SCOPE/DIGITAL GRAPHING

MULTIMETER MODULE

- Low Amp Current Probe – EETA308A
- Split Lead Adapter – EEMS301A05
- 100 PSI Pressure / Vacuum Transducer w/cable – EEPV302AL
- 500 PSI Pressure Transducers w/cable – EEPV302AT
- 5000 PSI Pressure Transducers w/cable – EEPV302AH
- Transducer Extension Cable – EAX0024B30A

- EETM306A03 COP-1 Ford
- EETM306A04 COP-2 Chrysler
- EETM306A05 CIC-2 Toyota
- EETM306A06 CIC-1 GM
- EETM306A07 COP-3 VW/Audi
- EETM306A08 COP-4 Honda/Isuzu/Nissan
- EETM306A09 COP-5 Volvo/BMW
- EETM306A10 COP-6 Mercedes
- EETM306A11 COP-7 Mercedes DUAL
- EETM306A12 COP-8 BMW
- EETM306A13 COP-9 Lexus
- EETM306A014 - COP-11 Chrysler/Jeep/Toyota/Lexus

SCAN TOOL MODULE OPTIONAL ACCESSORIES

EUROPEAN SOFTWARE TITLES AND ADAPTERS

- Order Part Number: EEMS320C03
- 1986–2005 BMW Vehicle Communication Software
- 1991–2005 VW/Audi Vehicle Communication Software
- 1992–2004 Mercedes-Benz Vehicle Communication Software

CAN (CONTROLLER AREA NETWORK) ADAPTER

- Order Part Number: MT250087
- Required for Global OBD II Software capabilities with vehicles using the CAN protocol
- Some OEMs began utilizing the CAN standard in 2003

Flat Extension Data Cable – MT2500302

OBD-II Extension Cable – MT2500301

MODIS™ SYSTEM SPECIFICATIONS

MODIS™ MULTIMETER

Function	Range	Comments
Channels	1 / 2	Common Ground
Sample Rate	6.0 MSPS	Simultaneous
	1.5 MSPS	Continuous per channel
Bandwidth	DC – 3 MHz	3 db point @ 3 MHz
Input Impedance	10 MΩ @ DC	All channels
	5.8 kΩ @ 3MHz	
V dc (Full Scale)	75 V maximum	
V ac (Full Scale)	50 V maximum	
Peak to Peak Voltage		

MODIS™ DIGITAL METER OHMS AND DIODE CONTINUITY TESTS

Function	Range	Comments
Channels	3 – 4	Inputs between channels 3 (-) and 4 (+)
Input Impedance	10 MΩ	
Glitch capture	Approximately 50 mS	
Ohms	400 Ω – 40 MΩ	Fixed scales or Auto Ranging
Diode Test	2 V Scale	

MODIS™ GRAPHING MULTIMETER

Function	Range	Comments
Input Channels	1 - 2	
Input Impedance	10 Megohm	
Volts (DC)	400 mV thru 400V*	Auto Ranging
Frequency	5 Hz thru 50 KHz	Auto Threshold Setting
Pulse Width	5 ms thru 2 s	Auto Threshold Setting
Inj Pulse Width	5 ms thru 2 s	
MC Dwell (60)	20 - 40 - 60 degrees	Auto Threshold Setting
MC Dwell (90)	30 - 60 - 90 degrees	Auto Threshold Setting
Duty Cycle	20 - 40 - 60 - 80 - 100%	Auto Threshold Setting
Low Amps (20)	1 - 2 - 5 - 10 - 20A	With EETA308A
Low Amps (40)	10 - 20 - 40A	With EETA308A
Vacuum	5 - 10 - 20 in Hg	Sensor specific
100 psi Pressure	10 - 25 - 50 - 100 PSI	Sensor specific
500 psi Pressure	50 - 100 - 250 - 500 PSI	Sensor specific
5000 psi Pressure	500 - 1000 - 2500 - 5000 PSI	Sensor specific

* See Safety Warnings

MODIS™ LAB SCOPE

Function	Range	Comments
Channels	1 - 4	Common grounds
Bandwidth	DC - 3 Mhz	3 db point @ 3 MHz
Input Impedance	10 MΩ @ DC	All channels
	5.8 kΩ @ 3MHz	
	400 Volts	
	200 Volts	
	100 Volts	
	50 Volts	
	20 Volts	
	10 Volts	
	5 Volt	
	2 Volt	
Vdc (Full Scale) and Vac (Full Scale) Peak to Peak Voltage	1 Volt	
	500 millivolt	
	200 millivolt	
	100 millivolt	
RPM Measurement	0 – 10000 RPM	
Secondary Ignition	1 – 50 KV	Channels 1 and 2

MODIS™ LAB SCOPE SPECIFICATIONS BY SWEEP RATE

Sweep ¹	Channels	Data points per screen	Buffer storage/Ch	Max # Screens	Total time ²	Sample rate ³	Peak Detect ⁴
50 μs	Ch 1 only	300	524,288	1747	87.3 ms	6.0 MHz	N
100 μs	Ch 1,2 only	300	261,120	870	87.0 ms	3.0 MHz	N
200 μs	Ch 1,2,3,4	300	131,040	436	87.2 ms	1.5 MHz	N
500 μs	Ch 1,2,3,4	500	131,070	262	131 ms	1.0 MHz	N
1 ms	Ch 1,2,3,4	500	131,040	262	262 ms	500 KHz	Y
2 ms	Ch 1,2,3,4	500	131,040	262	524 ms	250 KHz	Y
5 ms	Ch 1,2,3,4	500	131,040	262	1.3 S	100 KHz	Y
10 ms	Ch 1,2,3,4	500	131,040	262	2.6 S	50 KHz	Y
20 ms	Ch 1,2,3,4	500	131,070	262	5.2 S	25 KHz	Y
50 ms	Ch 1,2,3,4	500	131,070	262	13.1 S	10 KHz	Y
100 ms	Ch 1,2,3,4	500	131,070	262	26.2 S	5 KHz	Y
200 ms	Ch 1,2,3,4	500	131,070	262	52.4 S	2.5 KHz	Y
500 ms	Ch 1,2,3,4	500	131,070	262	2.2 M	1.0 KHz	Y
1 s	Ch 1,2,3,4	500	131,070	262	4.3 M	500 Hz	Y
2 s	Ch 1,2,3,4	500	131,070	262	8.7 M	250 Hz	Y
5 s	Ch 1,2,3,4	500	131,070	262	21.8 M	100 Hz	Y
10 s	Ch 1,2,3,4	500	131,070	262	43.7 M	50 Hz	Y
20 s	Ch 1,2,3,4	500	131,070	262	87.3 M	25 Hz	Y

¹ 50 and 100 μs sweeps are only available in Bundle 5.4 and later software.

² Total time is equal to the sweep times the number of frames.

³ Actual sample rate for sweeps 50-200 μs. Effective sample rate for sweeps 500 μs and longer. The effective sample rate is based on the number of sample points stored to the data buffer memory over the selected time sweep. On all sweeps 500 μs and longer, the ADC samples at 1.5 MHz per channel regardless of sweep. The number of sample points is greater than the number of points needed to complete a screen. Only enough points to complete a screen are selected to be stored to the data buffer. This results in the effective sample rate being lower than the actual sample rate of 1.5MHz.

⁴ When Peak Detect is On, all samples are evaluated. The points stored to the buffer are intelligently selected to capture fast events that might be missed at slower effective sample rates. Peak Detect will capture fast changes at an effective sample rate of 1.5MHz.