

EZECU® Series Product Catalog

March, 2012

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Professional ECUs for EFI/Carburetor Engines

Original Designed & Manufactured in Taiwan

AEC-Q100 Qualified Automotive Parts

No.1 in Taiwan

IC Leader Technology Corporation (abbrev. IC Leader) specializes in research and development of fuel injection and ignition computers of internal combustion engines for before- and after-markets. IC Leader insists original design, manufacture and test in Taiwan to ensure A+ quality for the own-brand EZECU® in Taiwan and many other countries. The EZECU® product lines are widely suitable from professional sport/racing to general road riding and also the most representative brand in Taiwan ECU market.

No.1 Profession

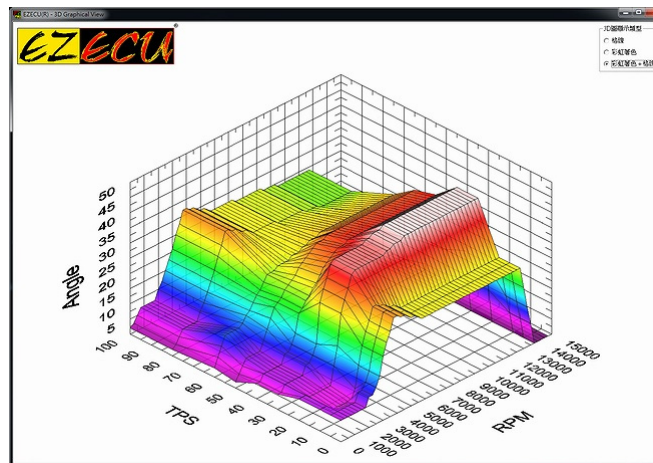
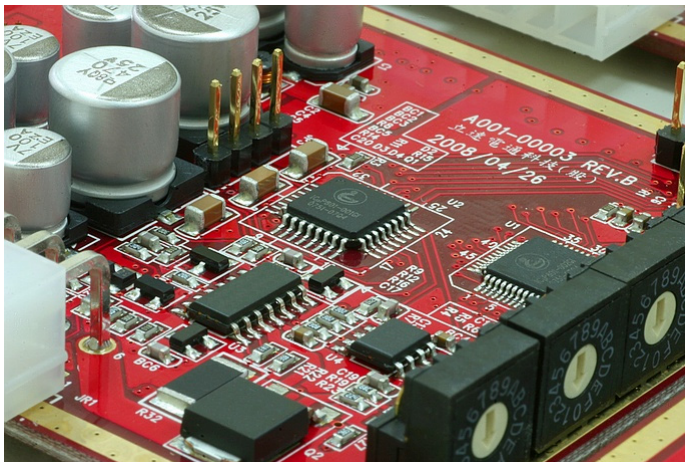
EZECU® series products are first announced in 2008 Motorcycle Taiwan show. All the IC Leader's research members got Master and Ph.D degrees and specialize on microprocessor systems, circuit designs, software engineering, industrial control, EFI/HEV engine controllers, etc. With continuous corporations with ITRI/MSL (Industrial Technology Research Institute / Mechanical and System Research Laboratories) for HEV engine and motor control boards and attending training courses and seminars in ARTC, IC Leader accumulates unique skills and professions by deliberate practices.

No.1 Quality

EZECU® series products awarded an SBIR R&D project granted from the Ministry of Economic Affairs' Department of Industrial Technology in 2009. With AEC-Q100 qualified automotive parts, ISO 16750-2/JASO D014/JASO D001-94/CNS 9585/SAE J1211 testing guidelines, and granted certification from Microsoft WHQL to fully support Windows 2000/XP/Server 2003/Vista/7 32-/64-bit operating systems, EZECU® products achieve No.1 quality and stability and greatly enhance competition power.

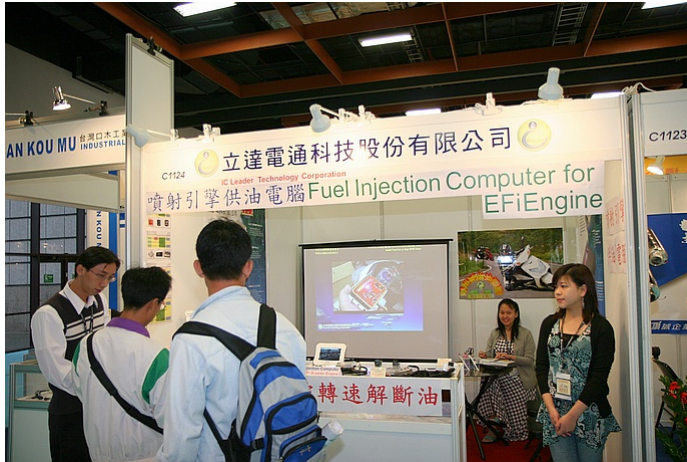
No.1 Market Share

IC Leader's business philosophy is simple – "Excel at what you do." The evolution from conventional carburetors to electronic fuel injection systems is a development trend in global motorcycle markets in recent years. Through investing in researching and understanding market demands, IC Leader steadily develops and improves products that provide greater convenience to users. In addition, the government in Taiwan has initiated a fifth phase of air pollution regulations for vehicles in 2009 that force the full introduction of electronic fuel injection motorcycles. These provide IC Leader with even more resources and development opportunities. Today, IC Leader products have taken a 90% share in the domestic market.



2008 ~ 2012 Taiwan Motorcycle Shows! Hope to Meet You Again in April, 2012 at Booth B0835

2008 Motorcycle Show (Booth: C1124)



2009 Motorcycle Show (Booth: D617)



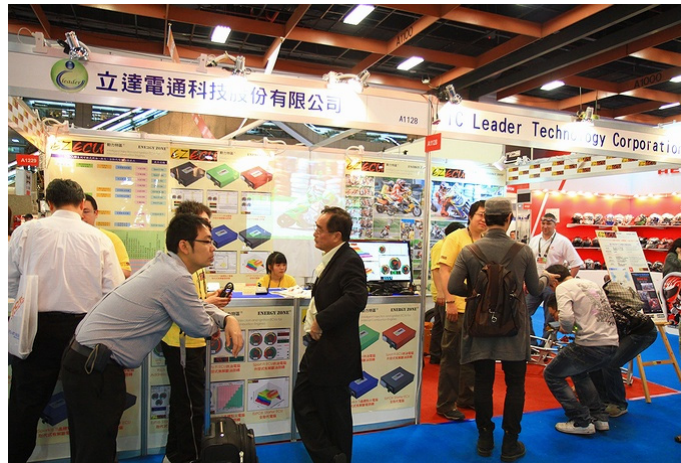
2010 Motorcycle Show (Booth: D415)



2011 Motorcycle Show (Booth: A1128)



2011 Motorcycle Show (Booth: A1128)

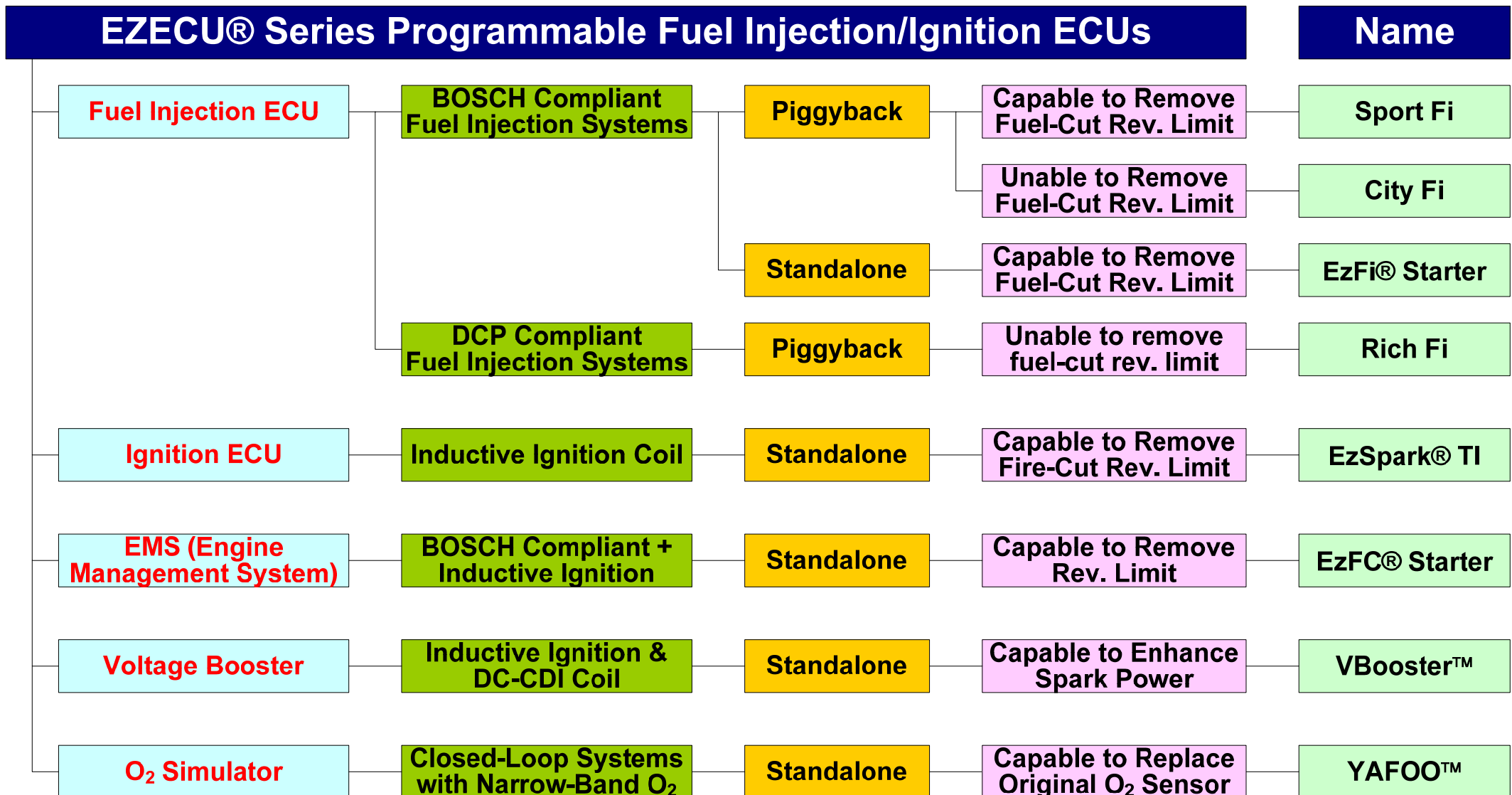


2011 Motorcycle Show (Booth: A1128)



EZECU® in Racing Events





Product Features of Sport Fi ECU

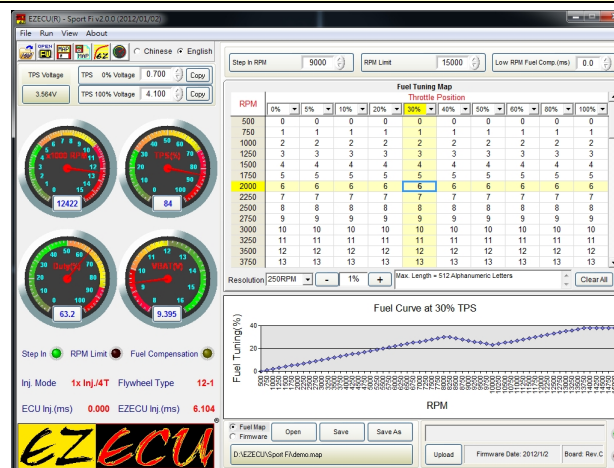
- Piggyback fuel injection ECU dedicated for BOSCH compliant fuel systems
- Remove fuel-cut revolution limit of factory ECUs and support up to 15,000 RPM
- Programmable -100% ~ +100% fuel tuning percentages
- 3D fuel tuning table with 59x10 cells and 250/500/1,000 RPM resolutions
- Programmable 0.0ms ~ 3.0ms fuel compensation when closing throttle
- Up to 10 customizable throttle position voltage levels
- Semi-auto detection for both fully-closed and fully-opened TPS voltages
- Table updating while engine is running
- Dynamic tracking of referenced cell within 3D fuel tuning table
- 2D curve for displaying fuel tuning percentages
- Graphical gauges for real-time engine status monitoring via standard USB interface
- Fast table updating within 1 second
- Free software/driver CD-ROM, 1.8M USB cable and wiring harness
- Languages: Traditional Chinese and English
- Support Microsoft Windows 2000/XP/Server 2003/Vista/7 32-/64-bit operating systems



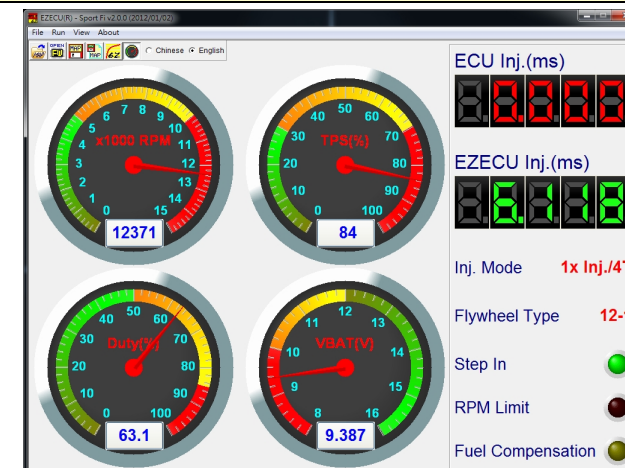
Product Photo of Sport Fi ECU



Software Snapshots of Sport Fi ECU



3D Fuel Tuning Table



Full Screen Engine Status Monitoring

Product Features of City Fi ECU

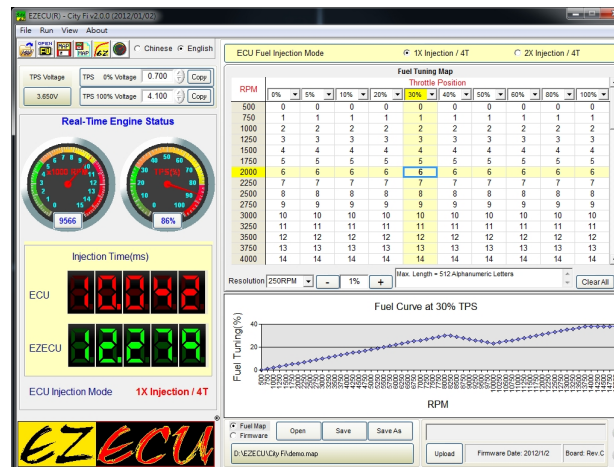
- Piggyback fuel injection ECU dedicated for BOSCH compliant fuel systems
- Support up to 15,000 RPM
- Programmable -100% ~ +100% fuel tuning percentages
- 3D fuel tuning table with 59×10 cells and 250/500/1,000 RPM resolutions
- Up to 10 customizable throttle position voltage levels
- Semi-auto detection for both fully-closed and fully-opened TPS voltages
- Table updating while engine is running
- Dynamic tracking of referenced cell within 3D fuel tuning table
- 2D curve for displaying fuel tuning percentages
- Graphical gauges for real-time engine status monitoring via standard USB interface
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- Free software/driver CD-ROM, 1.8M USB cable and wiring harness
- Languages: Traditional Chinese and English
- Support Microsoft Windows 2000/XP/Server 2003/Vista/7 32-/64-bit operating systems



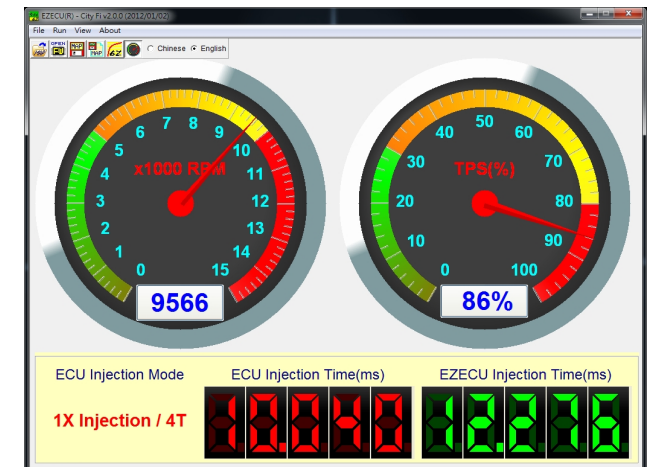
Product Photo of City Fi ECU



Software Snapshots of City Fi ECU



3D Fuel Tuning Table



Full Screen Engine Status Monitoring

Product Features of Rich Fi ECU

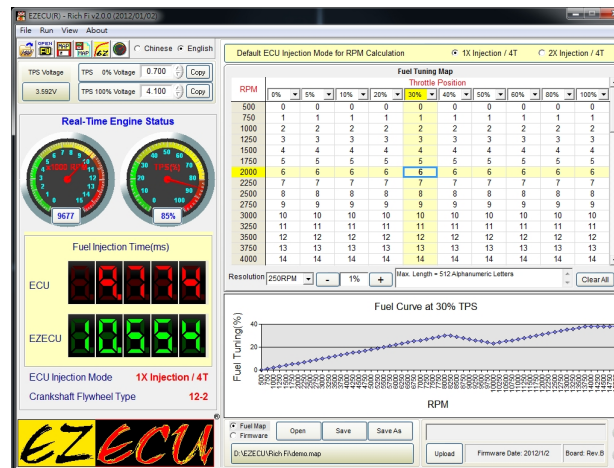
- Piggyback fuel injection ECU dedicated for SUZUKI Address V125/V125G/V125Z/V125S with DCP (Discharge Pump) fuel systems
- Support up to 15,000 RPM
- Programmable 0% ~ +250% fuel tuning percentages
- 3D fuel tuning table with 59×10 cells and 250/500/1,000 RPM resolutions
- Up to 10 customizable throttle position voltage levels
- Semi-auto detection for both fully-closed and fully-opened TPS voltages
- Table updating while engine is running
- Dynamic tracking of referenced cell within 3D fuel tuning table
- 2D curve for displaying fuel tuning percentages
- Graphical gauges for real-time engine status monitoring via standard USB interface
- Fast table updating within 1 second
- Free software/driver CD-ROM, 1.8M USB cable and wiring harness
- Languages: Traditional Chinese and English
- Support Microsoft Windows 2000/XP/Server 2003/Vista/7 32-/64-bit operating systems



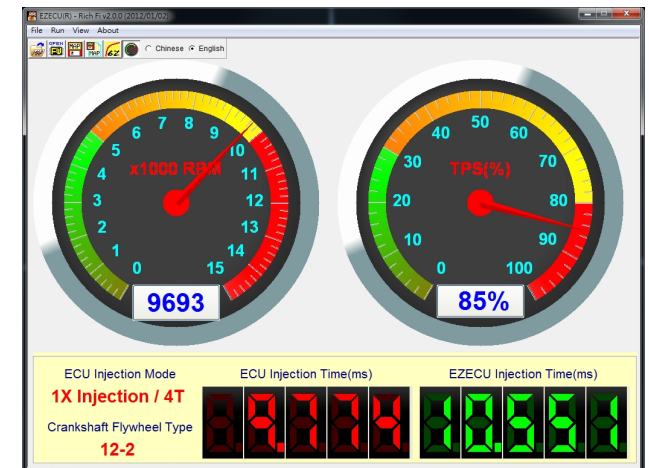
Product Photo of Rich Fi ECU



Software Snapshots of Rich Fi ECU



3D Fuel Tuning Table



Full Screen Engine Status Monitoring

Product Features of EzFi® Starter ECU

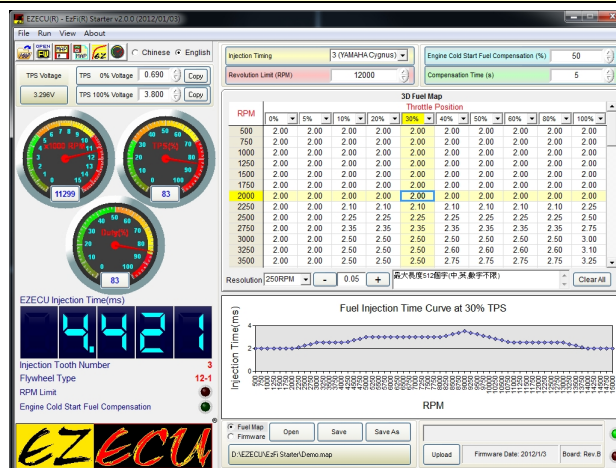
- Standalone fuel injection ECU dedicated for BOSCH compliant fuel systems
- Remove fuel-cut revolution limit of factory ECUs
- Programmable injection timing and support up to 15,000 RPM
- Programmable 0.00ms ~ 12.75ms fuel injection widths
- 3D fuel injection width table with 59×10 cells and 250/500/1,000 RPM resolutions
- Up to 10 customizable throttle position voltage levels
- Semi-auto detection for both fully-closed and fully-opened TPS voltages
- Table updating while engine is running
- Dynamic tracking of referenced cell within 3D fuel injection width table
- 2D curve for displaying fuel injection widths
- Graphical gauges for real-time engine status monitoring via standard USB interface
- Fast table updating within 1 second
- Free software/driver CD-ROM, 1.8M USB cable and wiring harness
- Languages: Traditional Chinese and English
- Support Microsoft Windows 2000/XP/Server 2003/Vista/7 32-/64-bit operating systems



Product Photo of EzFi® Starter ECU



Software Snapshots of EzFi® Starter ECU



3D Fuel Tuning Table



Full Screen Engine Status Monitoring

Product Features of EzSpark® TI ECU

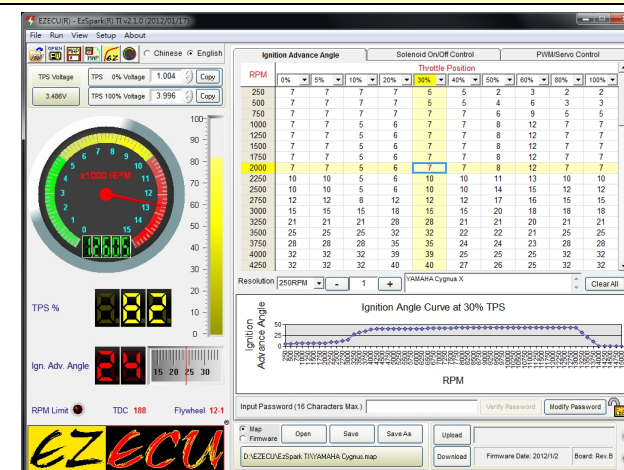
- Standalone ignition ECU dedicated for inductive ignition coils
- Remove fire-cut revolution limit of factory ECUs
- Support 18-1/12-1/24-1/12-2/12-3/24/1/36-2 teeth crankshaft flywheel types
- Support up to 15,000 RPM
- Programmable 0 ~ 60 degree BTDC ignition advance angles
- Programmable 0 ~ 359 degree TDC setting
- 3D ignition advance angle table with 60×10 cells and 250/500/1,000 RPM resolutions
- 3D solenoid on/off table with 60×10 cells for output driving control
- 3D PWM/servo motor table with 60×10 cells for output driving control
- Semi-auto detection for both fully-closed and fully-opened TPS voltages
- Up to 10 customizable throttle position voltage levels
- Table updating while engine is running
- Dynamic tracking of referenced cell within 3D ignition advance angle table
- 2D curve for displaying ignition advance angles
- Graphical gauges for real-time engine status monitoring via standard USB interface
- Fast table updating within 2 second
- Free software/driver CD-ROM, 1.8M USB cable and wiring harness
- Languages: Traditional Chinese and English
- Support Microsoft Windows 2000/XP/Server 2003/Vista/7 32-/64-bit operating systems



Product Photo of EzSpark® TI ECU

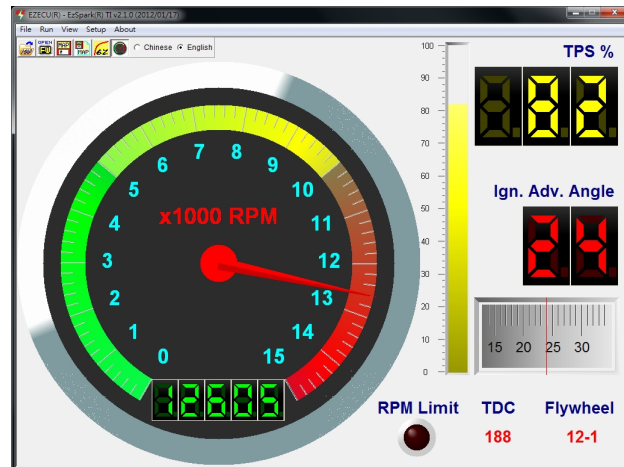


Software Snapshots of EzSpark® TI ECU

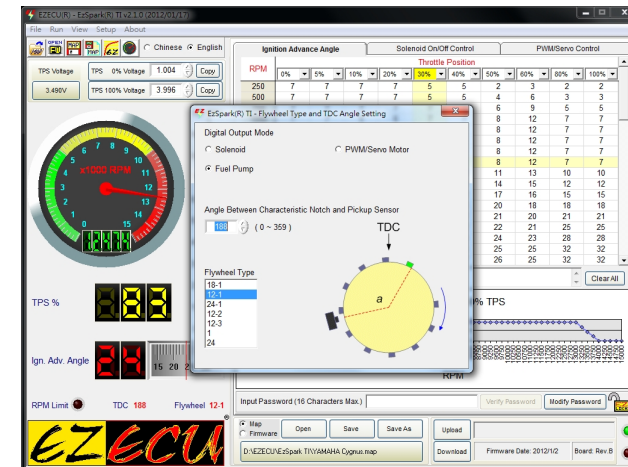


3D Ignition Advance Angle Table

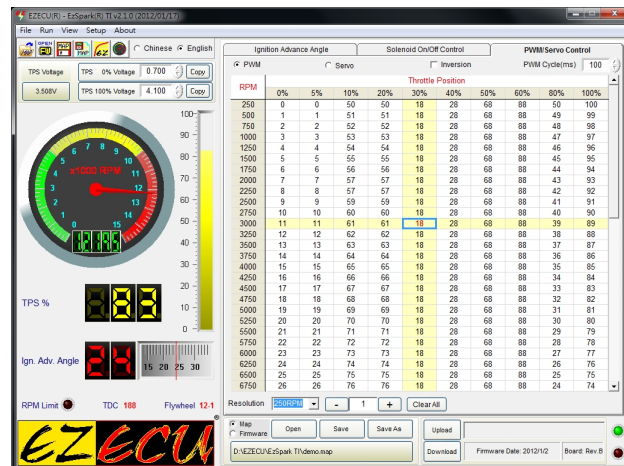
Software Snapshots of EzSpark® TI ECU (Cont'd)



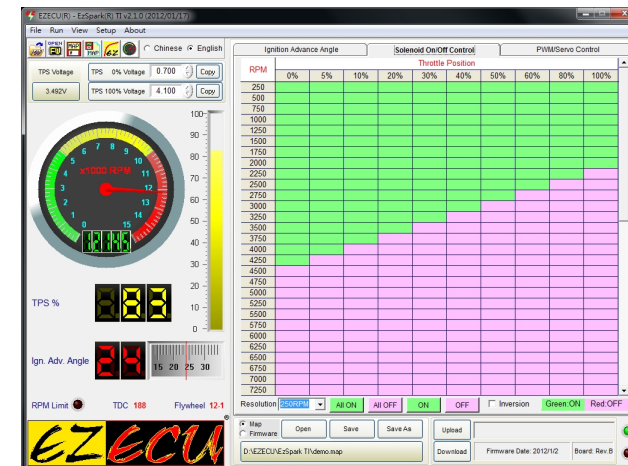
Full Screen Engine Status Monitoring



Crankshaft Flywheel Type and TDC Angle Setting



3D PWM/Servo Motor Output Control Table



3D Solenoid Output Control Table

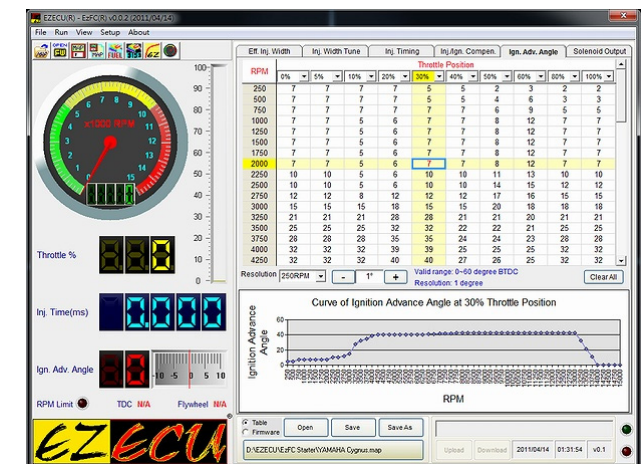
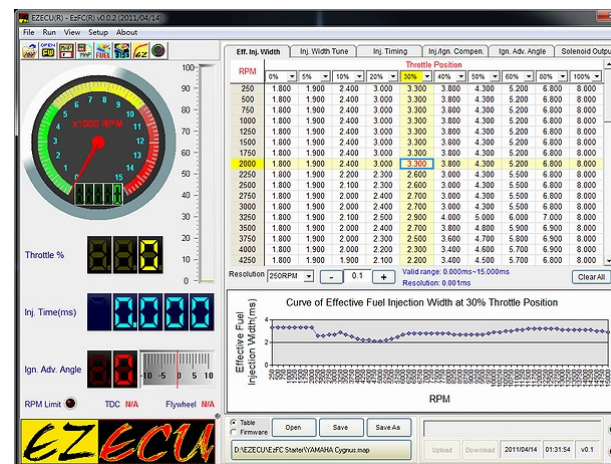
Product Features of EzFC® Starter ECU

- Standalone EMS (Engine Management Systems) for BOSCH-compliant fuel injection systems and inductive ignition coils
- Remove both fuel-cut and fire-cut revolution limit of factory ECUs
- Support 12-1/18-1/24-1/12-2/18-2/24-2/12-3/18-3/24-3 teeth crankshaft flywheels types
- Support up to 15,000 RPM
- Programmable 0.00ms ~ 15.00ms effective fuel injection widths
- Programmable 0 ~ 60 degree BTDC ignition advance angles
- Programmable 0 ~ 359 degree TDC setting
- Programmable fuel compensation by inlet air temperature, engine temperature, air pressure, engine startup, acceleration and battery voltage
- Programmable ignition compensation by inlet air temperature and battery voltage
- 3D effective fuel injection width table with 60x10 cells and 250/500/1,000 RPM resolutions
- 3D ignition advance angle table with 60x10 cells and 250/500/1,000 RPM resolutions
- 3D on/off table with 60x10 cells for digital output driving control
- Support idle air stepper motor driving output
- Up to 10 customizable throttle position voltage levels Semi-auto detection for both fully-closed and fully-opened TPS voltages
- Table updating while engine is running
- Dynamic tracking of referenced cell within 3D tables
- 2D curves for displaying effective fuel injection widths and ignition advance angles
- 3D graphs for displaying effective fuel injection widths and ignition advance angles
- Graphical gauges for real-time engine status monitoring via standard USB interface
- Fast table updating within 2 second
- Free software/driver CD-ROM, 1.8M USB cable and wiring harness
- Languages: Traditional Chinese and English
- Support Microsoft Windows 2000/XP/Server 2003/Vista/7 32-/64-bit operating systems

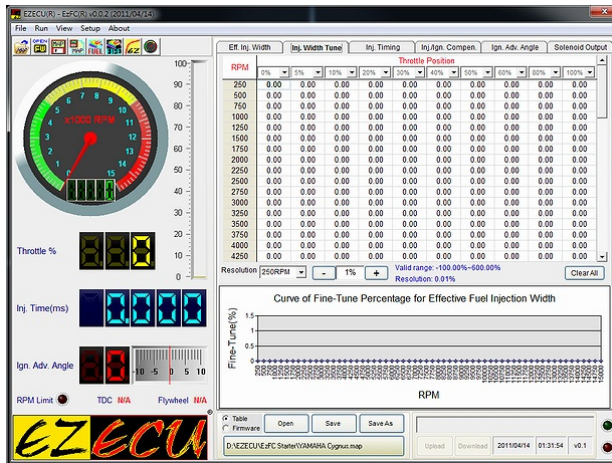
Product Photo of EzFC® Starter ECU



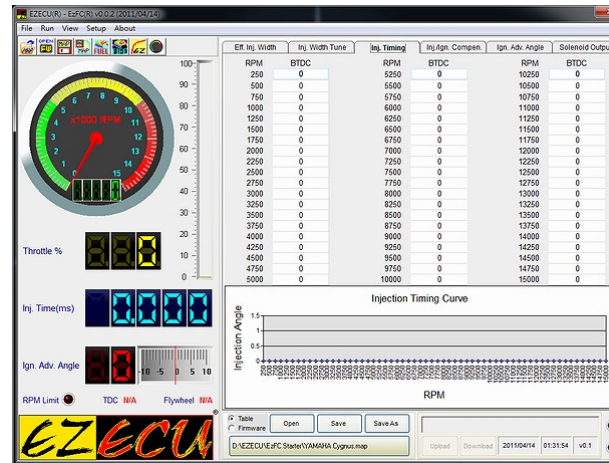
Software Snapshots of EzFC® Starter ECU



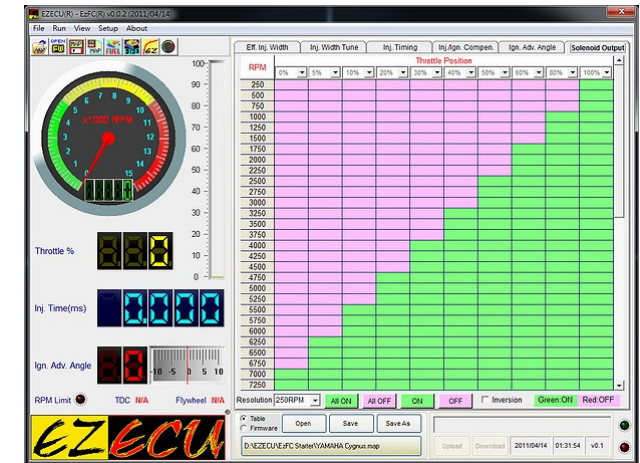
Software Snapshots of EzFC® Starter ECU (Cont'd)



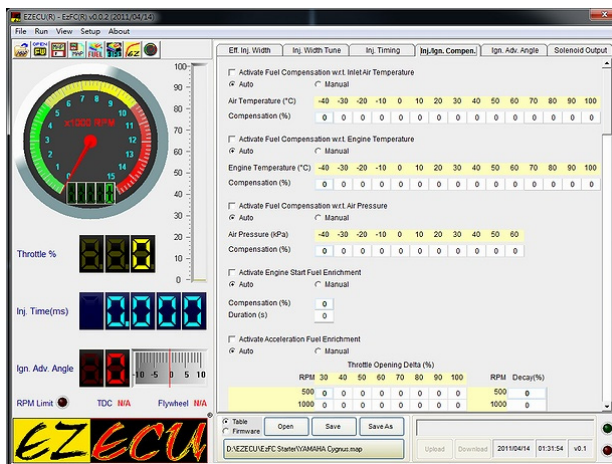
3D Effective Injection Width Fine-Tune



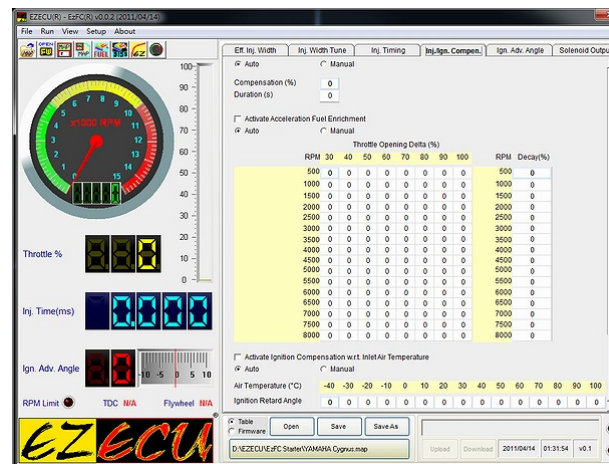
Injection Timing



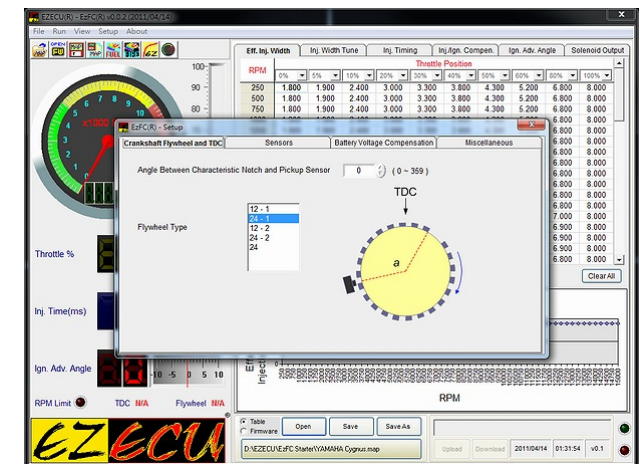
3D Solenoid Output Control Table



Injection and Ignition Compensation (1)

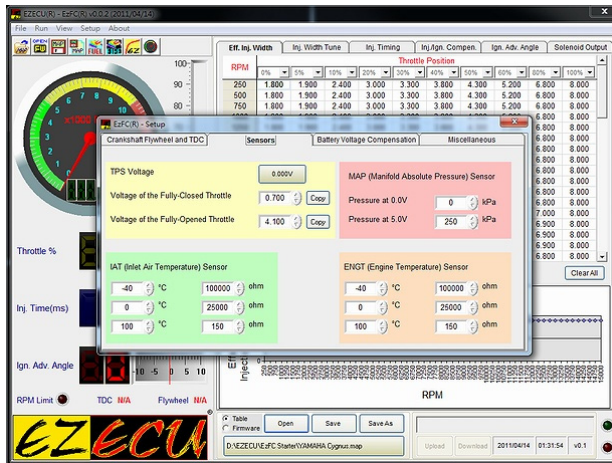


Injection and Ignition Compensation (2)

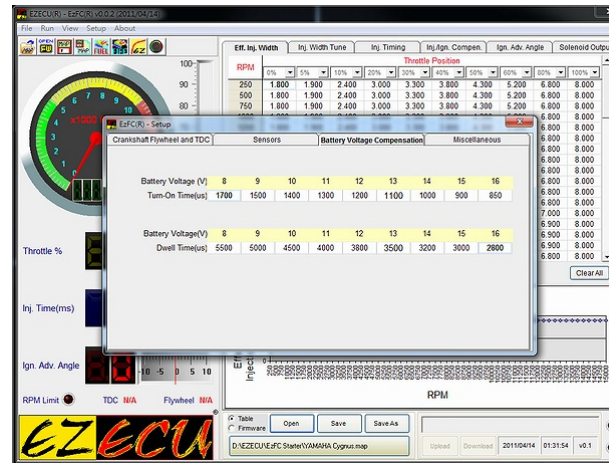


Crankshaft Flywheel Type and TDC Setting

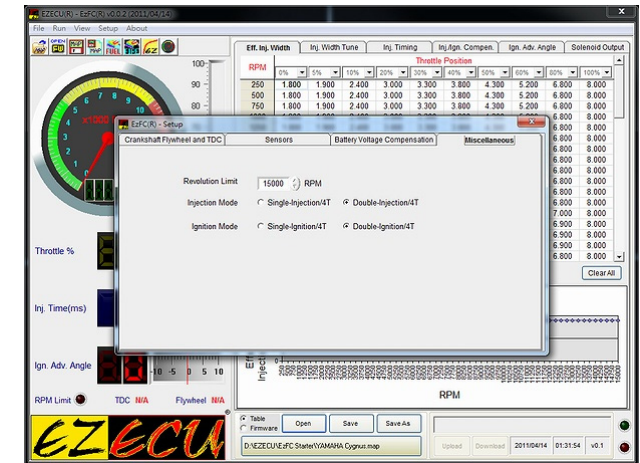
Software Snapshots of EzFC® Starter ECU (Cont'd)



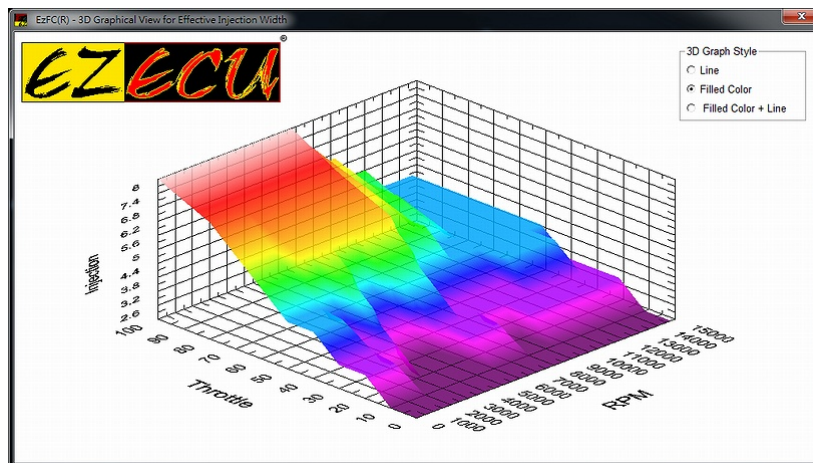
Analog Input Sensors Setting



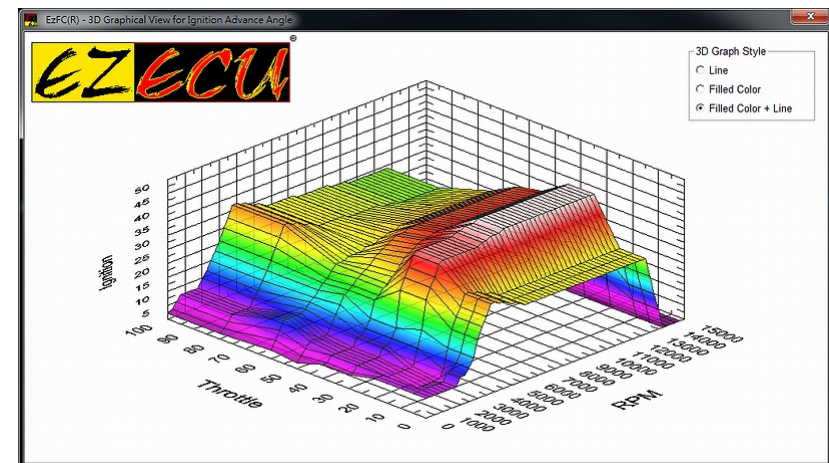
Battery Voltage Compensation for Injector
Turn-On Time and Ignition Coil Dwell Time



Revolution Limit and Injection/Ignition Mode
Setting



3D Graphical View for Effective Injection Width

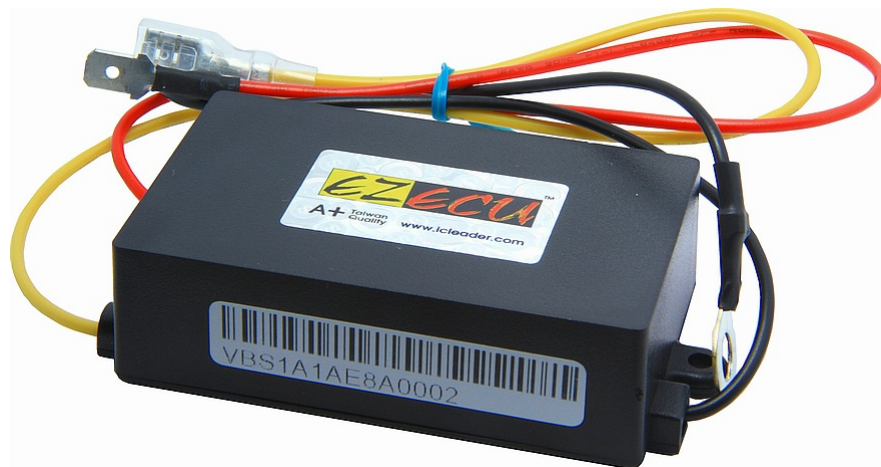


3D Graphical View for Ignition Advance Angle

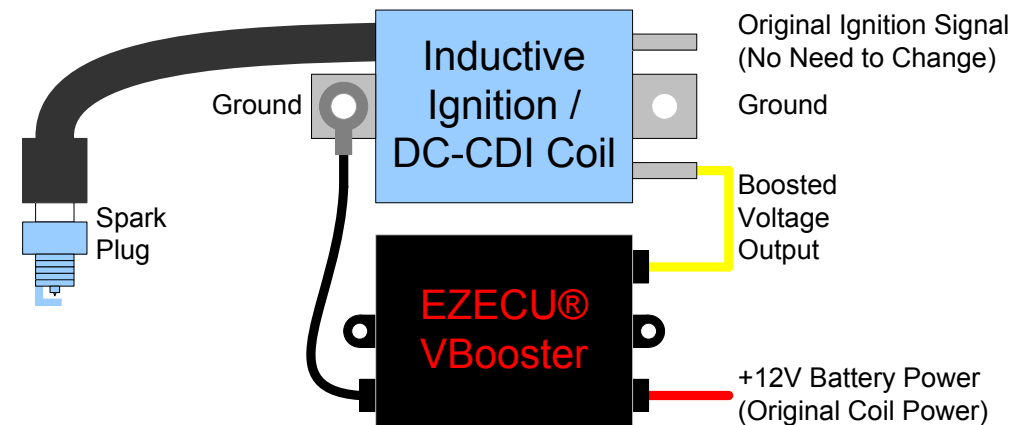
Product Features of VBooster™

- | | |
|--|--|
| <ul style="list-style-type: none"> ➤ Suitable for transistorized/inductive ignition and DC-CDI (Capacitor Discharge Ignition) coils ➤ Stabilize and boost voltage supplied to ignition coil ➤ Effectively enhanced sparks to reduce carbon deposits and get more horsepower | <ul style="list-style-type: none"> ➤ Adopt high-efficiency switching DC-DC chip with automotive working temperature range of $-40^{\circ}\text{C} \sim +125^{\circ}\text{C}$ ➤ Stable body temperature while operating for long time ➤ Simple wiring for DIY |
|--|--|

Product Photo of VBooster



Wiring Diagram of VBooster



Product Features of YAFOO™ (Yet Another Frozen O₂)

- | | |
|--|--|
| <ul style="list-style-type: none"> ➤ Remove the closed-loop fuel-tuning limitation of the factory ECU ➤ Provide a stable O₂ feedback signal to the factory ECU ➤ Enable fuel enrichment from idle to high RPM range ➤ Adopt high-definition O₂ signal emulation chip to prevent the factory ECU from tuning on the error light of the O₂ sensor | <ul style="list-style-type: none"> ➤ Adopt automotive-grade chips with -40°C through +125°C working temperature range ➤ PCB is filled by epoxy inside the metal case to provide longer operation life ➤ Plug-and-play installation suitable for DIY ➤ Suitable brands: AEON/HARTFORD/KYMCO/PGO/SYM/SUZUKI/YAMAHA |
|--|--|

Product Photo of YAFOO™ (Yet Another Frozen O₂)



Installation Guide of YAFOO™ (Yet Another Frozen O₂)

- Step 1 Unplug the connector of the factory narrow-band O₂ sensor and tie firmly
- Step 2 Plug the YAFOO™ to the wiring harness connector

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