

FuelTech

FT450

Product

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| Product Name: | FT450 EFI |
| Short Name: | FT450 |
| Release date: | 10/26/2018 |
| Available on: | November 2018 |



| Models | FuelTech code | EAN code |
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| FT450 SFI – ENG | 3010005384 | 7908074001738 |
| FT450 SFI – ENG W/ 10FT Harness | 3010005385 | 7908074001783 |
| CHICOTE FT450 - FT550 10FT A HARNESS | 2001005569 | 7908074001301 |
| CHICOTE FT450 - FT550 20FT A HARNESS | 2001005570 | 7908074001318 |
| FT200-FT250-FT300-FT350 TO FT450 ADAPTER HARNESS | 2002005634 | 7908074001349 |
| FT200-FT250-FT300-FT350 to FT450 WITH WB-O2 NANO ADAPTER HARNESS | 2002005767 | 7908074001974 |
| FT450 CONNECTOR KIT | 2002005719 | 7908074001851 |
| FT450/FT550 QUICK RELEASE BRACKET | 3020005921 | 7908074001929 |
| FT450-FT550 STEERING COLUMN BRACKET | 5013005925 | 7908074001912 |
| FT450 MOUNTING SYSTEM | 2008005854 | 7908074001936 |
| FT450-FT550 DASH PANEL | 5013005924 | 7908074001950 |
| FUELTECH EMBLEM | 1016005776 | 7908074001967 |

Target market

- Customers looking for a quality product with low price;
- Customers with low complexity projects;
- Customers who buy entry level products (FT300, FT350, FT400);
- Customers that need few inputs and outputs;
- Clients that prioritize the quality of the connectors;
- Applications that require protection against water.

Full Description

Inspired by the passion our customers have for each project, FuelTech works hard to offer the best in programmable ECUs, and thus satisfy you, our valuable customer. We want to provide more and more possibilities of dreams and record-breakings with products of extreme reliability and quality. We are delighted to announce **the new FuelTech FT450 and FT550**, which masterfully complete and expand the PowerFT line of ECUs, delivering the powerful features of the FT600 without any software limitation and the right hardware for each project and budget. FuelTech makes available the best in the world of engine management for any project level!

The **FuelTech FT450** is the perfect product for projects that require a great cost-benefit by enjoying all PowerFT line features like sequential injection and ignition, O2 closed loop, active traction control, integrated BoostController, internal datalogger, progressive and PRO-Nitrous controls, odometers, drag racing features and more.

In a sturdy and high-quality waterproof plastic case, 26-pin automotive connector, USB communication and a CAN Bus port, it has 7 inputs and 10 outputs fully configurable. Features the same FT600 dashboard design, including features for street cars such as engine start button, total and trip odometers and uses virtual LEDs for turn signals, headlights and many other functions. The LCD screen makes it possible to tune and setup all the settings without a PC, the perfect integration between between the ECU and the vehicle dashboard!

Features the same FT600 dashboard design, including features like engine start button, new inclinometer gauges and virtual LEDs for arrows, headlights and other functions. The screen allows editing the maps directly on the module, without the need for computer use, seamless integration between the ECU and Vehicle dashboard!

The FT450 ECU uses the same FTManager software of the FT600, with all the exact same features and functionalities, including the newest update that allows the user to update their fuel map by applying the O2 closed loop corrections that took place from a log file. The map files of all the PowerFT ECUs are compatible with each other, meaning that you can upgrade ECUs and keep the same tune you had already.

| Dealer description | |
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| About the product: (website) | <p>ECU electronic injection system in automotive vehicles.</p> <p>The FT450 is a FuelTech engine monitoring and control system: electronic injection, integrated instrument panel, data acquisition and power management.</p> <p>Electrical wiring length: 3m (OPTIONAL: versions with or without wiring)</p> |
| 150 character | The FT450 has been developed to popularize the use of PowerFT computers: electronic fuel injection, dashboard, data acquisition and power management. |
| 50 character | ECU & Dashboard combined in one device |
| 25 character | ECU & Dashboard |
| Slogan | |

| Features / Technical Specifications | |
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| Specifications | <ul style="list-style-type: none"> • Otto cycle engine control for 1, 2, 3, 4, 5, 6, 8, 10 and 12 cylinders; • Wankel engine control (rotary) for 2 rotors; • Full sequential ignition control, semi-sequential and multipoint control; • Ignition control through trigger wheel or distributor; • Full sequential ignition or wasted spark; • Closed loop injection through oxygen sensor (wide band lambda sensor)¹; • AMP SUPERSEAL automotive connectors; • Ignition timing and actuator based Idle control (PWM valve); • Real-time adjustable maps on the screen and on the FTManager software (including internet remote tuning). • Waterproof sealed case made from polished ABS |
| Inputs | <ul style="list-style-type: none"> • Differential input for RPM signal • Differential input for cam sync signal (including multi-teeth cam sync triggers); • 9 input channels fully customizable – digital and analog (temperature, pressure, speed and position sensors, TPS, external MAP, buttons, keys, etc.); <ul style="list-style-type: none"> • Adjustable sensor reading scale; • Internal MAP sensor of 7 bar (1 bar vacuum and 6 bar positive pressure); • 1 USB port for computer and FuelTech software connection; • 1 CAN port for FuelTech FTCAN 2.0 <ul style="list-style-type: none"> • FuelTech equipment: WB-O2 Nano, EGT-8 CAN, FTSPARK and SwitchPanel-8; • Third party equipment: Racepak IQ3, VNET, etc); • OEM CAN partial compatibility with: C6 Corvette, C7 Corvette, 5th gen Camaro, 2009 CTS-V Cadillac. |
| Outputs | <ul style="list-style-type: none"> • Total of 10 general-purpose outputs: (all of which can be used for general accessories as fuel pump, thermatic fans, valves or injectors for BoostController, solenoids, etc.) <ul style="list-style-type: none"> • 6 open collector outputs: recommended for high impedance injectors (up to 4 injectors per output) – it is possible to set up to 10 outputs using external FuelTech Peak and Hold driver; • 5 open collector outputs with a 5V current source: recommended for ignition control; |

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| Dashboard | <ul style="list-style-type: none"> • Screen dashboard which displays different sizes and styles to be used with any existing equipment or sensor; • Dashboard can have up to 4 screens with navigation through the screen or an external button; • Virtual LEDs with combined activations for up to 3 conditions • Diagnostic panel with real-time information of all inputs, outputs, CAN, Status Events and engine diagnostics. • Customizable splash screen allows the user to select the image shown on the FT450 start up screen |
| Injection controls | <ul style="list-style-type: none"> • Full sequential injection for up to 10 outputs; • Closed loop fuel control through O2 sensor (wide band sensor) ¹; • 2 injection banks (Bank A and bank B); • Primary map through MAP, TPS or RPM; • Advanced 3D primary map with up to 32x32 cells (completely adjustable map index and size); • Simplified 2D map with up to 1x32 cells by MAP or TPS and RPM compensation of up to 1x32 cells (completely adjustable map index and size); • Injection time resolution of 0,001ms; • Acceleration fuel enrichment and decay adjustment; • Individual cylinder trim setting by MAP or RPM; • Injector compensation through: <ul style="list-style-type: none"> • Engine temperature; • Air temperature; • Battery tension (individual per bank); • TPS or MAP; • Starting engine map with the engine temperature; • Prime pulse table; • Post start enrichment; • Gear based fuel compensation; • Gear shift fuel compensation; • Fuel injection angle table; • Injectors deadtime compensation by battery voltage. <p>¹ An external wide band lambda sensor conditioner is required – FuelTech WB-O2 Nano, Alcohol-O2, WBO2 Datalogger, etc.);</p> |
| Ignition Controls | <ul style="list-style-type: none"> • Sequential ignition for up to 5 cylinders; • Main map by MAP, TPS or RPM; • Advanced 3D primary map with up to 32x32 cells (completely adjustable map index and size); • Simplified 2D map with up to 1x32 cells per MAP or TPS and RPM compensation of up to 1x32 cells (completely adjustable map index and size); • Injection angle resolution of 0,01°; • Individual cylinder injection settings; • Ignition timing compensation by air temperature; • Ignition timing compensation by engine temperature; • Gear based timing compensation; • Gear shift timing compensation. |

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| Internal Datalogger | <ul style="list-style-type: none"> • Multiple session recording (files) logs up to 256 channels; • Simplified mode with sample rate of 25, 50, 100 or 200Hz; • Advanced mode allows individual settings for the sample rate with 1, 5, 25, 50, 100 or 200Hz; • Automatic activation by RPM, through the screen or by external button; • Data storage for up to 2h50min (24 channels at 25Hz); • FTManager Datalogger Software for viewing and comparing logs. |
| Drag Racing Features | <ul style="list-style-type: none"> • Burnout mode, 2-step, 3-step (including Roll Start); • 2-step activation by speed, boost, MAP or clutch position; • Line lock brake output; • Brake pressure control by line lock • Ignition timing map for drag Racing features; • Time based RPM limiter by timing retard or ignition cut; • Time based wheel speed or driveshaft RPM control with timing retard or ignition cut; • Time-based ignition timing compensation; • Time-based fuel compensation; • Pro-Nitrous setting for up to 6 stages, with activation control, fuel enrichment and ignition timing maps; • Gear shift output; • Time based output; • Staging control; • Wheelie Control; |
| Street car package | <ul style="list-style-type: none"> • Total and trip hour meter • Total and trip odometer • High and low beam • Right and left turn signals • Pit Limit / Speed Limit • START/STOP button |
| Secondary features | <ul style="list-style-type: none"> • Integrated BoostController: wastegate valve pressure control; • Idle speed control by timing and/or PWM valve; • Deceleration fuel cutoff; • Control of up to two thermatic fans activated by engine temperature and by the A/C, one of the outputs can drive a solid state using PWM control for soft starting the fans; • Air conditioning control; • Fuel pump control – with 6s prime; • Variable Valve Timing (VTEC) control; • Progressive nitrous control with fuel enrichment and timing retard; • Generic duty cycle – PWM control; • Boost activated output; • RPM activated output; • Different options for gear detection: RPM drop, analogic sensor, pulse, speed and gear ratio or by gear shift output; • Start button. Allows to start and shut down the engine via a relay connected to an output switching the starter; • Cold start with external reservoir; • Active traction control keeps wheel slip on ideal levels for maximum traction, thus adapting the available traction conditions as it seeks to maintain the programmed wheel speed difference by reading traction wheel and reference wheel speed difference. |

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| | <ul style="list-style-type: none"> • Hi-resolution engine power control method for RPM limiter. Controls timing on each cylinder and considerably reduces the turbo spool time in a transbrake/2-step rev limiter, keeps cylinders and spark plugs in conditions of maximum efficiency (they never get wet because they always fire), allow to lower the RPM limiter for launch or to make more boost at the same RPM and smoothens the 2-step limiter operation for less vibration. • <i>Pit Limit / Speed Limit</i> • Generic outputs allow to configure up to 8 outputs by associating an input and setting up the way the output will be activated |
| Default sensores | <ul style="list-style-type: none"> • <i>Default sensors make the configuration easier:</i> <ul style="list-style-type: none"> • <i>Oil pressure</i> • <i>Fuel pressure</i> • <i>External MAP sensor (GM 1 bar, GM 1.05 bar, GM 2 bar, GM 3 bar, GM 3.05 bar)</i> • <i>Nitrous bottle pressure</i> • <i>Clutch pressure</i> • <i>Wastegate pressure</i> • <i>Brake pressure</i> • <i>Back pressure</i> • <i>Pan Vacuum</i> • <i>Transmission pressure</i> • <i>Torque converter pressure</i> • <i>Engine coolant pressure</i> • <i>Air temperature</i> • <i>Engine temperature</i> • <i>Exhaust gas temperature (EGT)</i> • <i>Transmission temperature</i> • <i>Intercooler temperature</i> • <i>Tire temperature</i> • <i>Track temperature</i> • <i>Clutch position</i> • <i>Shock position</i> • <i>Wheel speed</i> • <i>Driveshaft RPM</i> • <i>Input shaft RPM</i> • <i>Ride height sensor</i> • <i>Pitch rate sensor</i> • <i>Flex Fuel sensor</i> |
| Protection and Alerts | <ul style="list-style-type: none"> • <i>RPM limiter by fuel or ignition cut;</i> • <i>Shift light with sound and dashboard alert and/or external shift light;</i> • <i>Configurable safe mode options (RPM limit or engine shutoff):</i> <ul style="list-style-type: none"> • <i>High or low exhaust gas temperature (EGT), O2 closed loop limit, over boost, over rev, engine temperature, duty cycle, oil pressure, fuel pressure and differential fuel pressure.</i> |

Softwares

- **FTManager** has several tools and features:
 - Real-time map edition
 - Edition of the indexes of map tables
 - Save and read saved maps on the PC
 - Open maps from log files
 - Display fuel maps in ms, %VE, %DC and lb/h
 - Easy edition of time-based controls, organizing all in one screen and making it possible to use a log file as reference
 - ProNitrous edition aided by the stage chart
 - Allows converting maps of previous ECUs (FT200, FT250, FT300, FT350 and FT400)
 - Allows importing of some specific tables from other maps
 - ECU software upgrades
 - Splash screen customization
 - Engine operation in real time analysis through gauges and graphics with full screen option
 - Check alert and status messages
 - Test time-based features
 - Edit channels of the internal datalogger and their individual logging rates
 - Switch between basic (2D) or advanced (3D) maps
 - Edit the odometer and hourmeter
 - Reset the ECU to factory default
 - Recalibrate the touchscreen
 - View all devices connected to the CAN network
 - Receive warnings about new updates
 - Internet Remote Tuning allows connecting to another FTManager over the internet, for giving or receiving remote support
- **FTDatalogger**
 - Download and analyze log files from PowerFT ECUs
 - Log files comparison
 - Mathematical channels
 - Data export to CSV file
 - Overlay functions easily show which cell the engine was running on for better data analysis:
 - Fuel tables overlay
 - Ignition tables overlay
 - Closed loop corrections: analyses all closed-loop compensations and suggests a correction for the fuel map
 - Select between light or dark background for better data visualization
 - Select if you want to show channels names and values on the chart or only in the preview panel
 - Full timeline visualization
 - Set log zero time (tell the log time where the car launched)
 - Erase your ECU datalogger memory
 - Trim feature for log files – make them smaller and have only the information you need
- **FuelTech Datalog App:**
 - Open your log files on your phone's screen (up to 4 channels at the same time) - (Android and iOS)

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| General Features | <ul style="list-style-type: none"> • Display brightness adjustment; • LED lights brightness adjustment; • Night and day mode selection by external switch and through the menu; • Buzzer intensity adjustment for the interface and sound alerts; • Memory for saving up to 5 different maps (possibility of map selection by external button); • ECU and Map protection password, with individual full ECU or map password only, including map lock-up function that allows the current map to be saved and run exclusively on the actual ECU (ensured by serial code). Maintenance password protects the edition of the total hour meter and total odometer. • PC communication through mini USB cable; • Operation temperature: from -4 F to +158 F. • Maximum power supply voltage: 20V |
| Dimensions | <ul style="list-style-type: none"> • Product FT450 EFI: 5.75 x 3.62 x 2.13 in • FT450 packaging: 12.2 x 8.86 x 3.33 in • Shipping box: 13 x 9.45 x 5.9 in |
| Weight | <ul style="list-style-type: none"> • Product FT450 EFI: 9.5 oz • Product Weight "FT450 10 ft harness": 23.4 oz |
| Contents of packaging | <ul style="list-style-type: none"> • 1 FT450 EFI; • 1 10ft electrical harness (A) for installation (optional); • 1 operation and installation guide; • 1 mounting system; • 1 mini USB cable; • 1 Sticker pack. |
| Warranty | <ul style="list-style-type: none"> • Worldwide: 1 year |
| Contact | <p>FuelTech USA</p> <p>www.fueltech.net</p> <p>+1 (678) 493-3835</p> <p>sales@fueltechems.com</p> |