

FuelTech

FT550

Product

Product Name:	FT550 EFI
Short Name:	FT550
Release date:	10/26/2018
Available on:	November 2018



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Models	FuelTech code	EAN code
FT550 SFI – ENG	3010005496	7908074001790
FT550 SFI – ENG W/ 10FT Harness	3010005497	7908074001806
CHICOTE FT450 - FT550 10FT A HARNESS	2001005569	7908074001301
CHICOTE FT450 - FT550 20FT A HARNESS	2001005570	7908074001318
CHICOTE FT550 10FT B HARNESS	2001005571	7908074001325
CHICOTE FT550 20FT B HARNESS	2001005572	7908074001332
FT400 TO FT550 ADAPTER HARNESS	2002005635	7908074001356
FT500 TO FT550 ADAPTER HARNESS	2002005636	7908074001363
FT550 CONNECTOR KIT	2002005720	7908074001868
FT450/FT550 QUICK RELEASE BRACKET	3020005921	7908074001929
FT450-FT550 STEERING COLUMN BRACKET	5013005925	7908074001912
FT550 MOUNTING SYSTEM	2008005855	7908074001943
FT450-FT550 DASH PANEL	5013005924	7908074001950
FUELTECH EMBLEM	1016005776	7908074001967

Target market

- Customers looking for a quality product with a more affordable price than the FT600;
- Customers with projects of medium complexity;
- Clients who buy the intermediate product;
- Customers that need more inputs and outputs (in relation to the FT500);
- Clients that prioritize the quality of the connectors;
- Applications that use GearController (in which the product becomes financially attractive when compared to the FT550 + External GearController);
- Applications in which the use of accelerometer helps tuning the vehicle;
- 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 FT550 is the best ECU for projects that require more features, including GearController (power-shifts), built-in accelerometer (G-meter) and gyroscope; In addition to all PowerFT ECU line features such as sequential injection and ignition, O2 closed loop, active traction control, integrated BoostController, internal datalogger, progressive and PRO-Nitrous controls, odometers, electronic throttle control, inclinometer, drag racing features and more. It also features a sturdy and high-quality waterproof plastic case, automotive connectors with 52 pins, USB communication and two CAN Bus ports, 14 inputs and 24 outputs that are fully configurable.

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 FT550 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	
About the product: (website)	<p>ECU electronic injection system in automotive vehicles.</p> <p>The FT550 is an engine fuel control and monitoring system from FuelTech: electronic fuel injection, integrated dashboard, data acquisition and power management.</p> <p>Electrical wiring length: 3m (OPTIONAL: versions with or without wiring)</p>
150 character	The FT550 is perfect for projects that need more resources. It has GearController, G force sensor and all the functions of the PowerFT line of ECUs.
50 character	ECU & Dashboard combined in one device
25 character	ECU & Dashboard
Slogan	

Features / Technical Specifications	
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, 3 and 4 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; • Electronic throttle body Control (Drive-By-Wire); • Ignition timing and actuator based Idle control (electronic throttle body, step motor, or 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); • 16 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"> • 2 inputs with a high gain preamplifier usually used with a strain gage sensor; • Adjustable sensor reading scale; • Built-in accelerometer and gyroscope; • Internal MAP sensor of 7 bar (1 bar vacuum and 6 bar positive pressure); • 1 USB port for computer and FuelTech software connection; • 2 CAN ports for FuelTech FTCAN 2.0 or FTCAN 1.0 <ul style="list-style-type: none"> • FuelTech equipment: WB-O2 Nano, EGT-8 CAN, FTSPARK and SwitchPanel-8; • Third party equipment: Racepak IQ3, VNET, AiM, 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 24 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"> • 12 open collector outputs: recommended for high impedance injectors (up to 4 injectors per output) – it is possible to set up to 24 outputs using external FuelTech Peak and Hold driver; • 8 open collector outputs with a 5V current source: recommended for ignition control; • 8 PUSH-PULL or HALF BRIDGE outputs: suitable for ignition, step motor control, electronic throttle body and to activate loads by 12V instead of ground.
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 FT550 start up screen
Injection controls	<ul style="list-style-type: none"> • Full sequential injection for up to 20 outputs; • Closed loop fuel control through O2 sensor (wide band sensor) ¹; • 2 injection banks (Bank A and bank B); • Primary map though 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 12 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.
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; • Time based max throttle position.
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 GearController : ignition cut for clutchless gear shiftings using a strain gage sensor on the shifter; • Integrated BoostController: wastegate valve pressure control; • Idle speed control by timing, step motor, PWM valve or electronic throttle body; • 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;

	<ul style="list-style-type: none"> • <i>Variable Valve Timing (VTEC) control;</i> • <i>Progressive nitrous control with fuel enrichment and timing retard;</i> • <i>Generic duty cycle – PWM control;</i> • <i>Boost activated output;</i> • <i>RPM activated output;</i> • <i>Different options for gear detection: RPM drop, analogic sensor, pulse, speed and gear ratio, by gear shift output or GearController;</i> • <i>Start button. Allows to start and shut down the engine via a relay connected to an output switching the starter;</i> • <i>Cold start with external reservoir;</i> • <i>Differential control for Yamaha YXZ1000 UTV.</i> • 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. • 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"> • RPM limiter by fuel or ignition cut; • Shift light with sound and dashboard alert and/or external shift light; • Configurable safe mode options (RPM limit or engine shutoff): <ul style="list-style-type: none"> • 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.
Softwares	<ul style="list-style-type: none"> • FTManager has several tools and features: <ul style="list-style-type: none"> • 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 <ul style="list-style-type: none"> • 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: <ul style="list-style-type: none"> • 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

	<ul style="list-style-type: none"> • FuelTech Datalog App: <ul style="list-style-type: none"> • Open your log files on your phone's screen (up to 4 channels at the same time) - (Android and iOS)
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 FT550 EFI: 5.75 x 3.62 x 2.13 in • FT550 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 FT550 EFI: 11 oz • Product Weight "FT550 10 ft harness": 40.4 oz
Contents of packaging	<ul style="list-style-type: none"> • 1 FT550 EFI; • 1 10ft electrical harness (A+B) for installation (optional); • 1 operation and installation guide; • 1 mounting system; • 1 protection cover for the FT550 ECU; • 1 FuelTech emblem; • 1 USB flash drive (containing the FTManager softwares and guides); • 1 mini USB cable; • 1 promotional kit.
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>