



COMPARISON CHART

		POWER FT ECU I				VISION FT		
		FT450	FT550 Lite	FT550	FT600	FT470	FT700	FT700PLUS
SPECIFICATIONS	Piston Engine Control (Cylinders)	1 ~ 8	1 ~ 12			1 ~ 16		
	Rotary Engine Control (Rotors)	2	2, 3 and 4			2, 3 and 4	2, 3, 4, 5 and 6	
	Electric Motor Control	1				1 (more with custom functions)		
FUNCTIONS	Dashboard	Up to 4 dashboards	✗	Up to 4 dashboards		Up to 4 dashboards (FuelTech Vision app)	Up to 4 dashboards, multiple screens	
	Dashboard Design	Predefined	✗	Predefined		Fully customizable		
	Built-in Touchscreen Display	✓	✗	✓		✗	✓	
	LEDs for Progressive Shift Light	✗			10	✗	12	
	Configurable LEDs for Alerts	4 virtual	✗	4 virtual	4 physical	✗	8	
	O2 Closed Loop correction	O2 correction				O2 correction and optional VE learning		
	Port Injection Stages	Up to 2 stages				Up to 3 stages		
	High-pressure fuel pump (GDI) control	✗				2 pump outputs		
	Fuel Model	Injector time based				Injector time based or Volumetric Efficiency (VE)		
	Idle control	Ignition timing, PWM valve	Ignition timing, stepper motor, electronic throttle, PWM valve			Ignition timing, stepper motor, electronic throttle, PWM valve		
	Knock monitoring	✗				Live knock level, 1 sensor	Live knock level, 2 sensors [§]	
	Variable Camshaft control	Up to 2 camshafts	Up to 4 camshafts			Up to 4 camshafts		
	Electronic Throttle control	✗	✓			✓		
	Boost Controller	✓				✓		
	Mechanical Fuel Injection control (MFI)	✓				✓		
	Flat shift / Shift cut (strain gauge)	✗	✓			✓		
	Active Traction Control	✓				✓		
	Automatic transmission control	✓				✓		
	Automatic transmission control with advanced adaptive mode	✗				✓		
	Electronic Wastegate Control	✗	✓			✓		
	Oscilloscope (RPM and CAM triggers)	✓				✓		
	Advanced oscilloscope (Triggers and inputs)	✗				✓		
	Oscilloscope channels	2 channels				4 channels		
	Compression Test	✓	✗	✓		✗	✓	
	User-defined CAN protocol	FuelTech devices + predefined OEM profiles				Custom frames, DBC import/export		
	Build your own custom function	✗				38 block types		
	GPS lap timer and track analysis	✗				External FT GPS CAN module (sold separately)	Built-in GPS, 104 tracks	
	Engine protection alerts	28 types				46 types, 3 actions, 4 safe modes		

Legend

Letters in the cells refer to the notes below. In the output rows, a number marked b, c or e counts outputs of that color.

a - Possible using an external FuelTech Peak and Hold module (external injector driver).

b - Blue outputs: recommended for high impedance injectors without the need for an external driver (up to 4 injectors per output). On the FT470: 3 A continuous, 10 A peak.

c - Gray outputs: recommended for ignition (open collector outputs with 5 V current source). On the FT470: 2 A continuous, 4.5 A peak.

d - Blue output 6 can be used as the 5th ignition output.

e - Yellow outputs: recommended for driving stepper motors, electronic throttles and loads activated by 12 V for ignition. On the FT470: 2.5 A continuous, 10 A peak.

f - Recording time measured with 24 channels at 25 Hz.

§ - Knock monitoring is coming to the FT700 and FT700PLUS in a future firmware update.

		POWER FT ECU I				VISION FT		
		FT450	FT550 Lite	FT550	FT600	FT470	FT700	FT700PLUS
INPUTS & OUTPUTS	Configurable Inputs	7	14		20	7 (up to 27 using outputs as inputs)	36	
	SENT Communication Channels	1				7	11	
	CAN Communication Bus	1	2			2 (CAN FD)	3 (2 CAN FD + 1 CAN)	
	Internal Wideband O2 Conditioner	0				1	2	
	Generic VR inputs	0				0	4	
	Total Output Channels	10	24		32	20	50	
	Injection Outputs	up to 10 ^a (6 ^b)	up to 24 ^a (12 ^b)		up to 32 ^a (16 ^b)	up to 20 ^a (8 ^b)	up to 32 ^a (16 ^b)	
	Ignition Outputs	up to 5 (4 ^c +1 ^d)	up to 12 (8 ^c +4 ^a)		up to 16 (8 ^c +8 ^a)	up to 12 (8 ^c +4 ^a)	up to 34	
	Auxiliary Outputs	up to 10 (6 ^b +4 ^a)	up to 24 (4 ^a +12 ^b +8 ^c)		up to 32	up to 20 (8 ^b +8 ^c +4 ^a)	up to 50	
	Half-bridge outputs	0	4		8	4	22	
	Maximum Current on the Auxiliary Outputs	5 A (blue outputs)	5 A			Blue 3 A, yellow 2.5 A, gray 2 A; 15 A combined	5 A	
DATALOGGER	Datalogger Capacity	16 MB (2h50min) ^f				256 MB (45h20min) ^f	64 GB	
	Sampling Rate	1 ~ 200 Hz				1 ~ 100 Hz	1 ~ 1000 Hz	
	Configurable Sampling Rate per Channel	✔				✔		
MULTIMEDIA	Onboard Speaker	✗				✗	✔	
	Output for External Speaker	✗				✗	2	
	Microphone Input	✗				✗	2	
	Video camera dedicated inputs	✗				✗	2	
SOFTWARE AND INTERFACE	Tuning software platforms	Windows				Windows, macOS, Android, iOS		
	Software and interface languages	3				9		
	All features unlocked (no feature licenses)	✔				✔		
	Free software updates	✔				✔		
CONNECTIVITY	USB Ports	1 USB-B mini				1 USB-C	2 USB-C	
	Wi-Fi	✗				✔		
HARDWARE	Case	Plastic	Aluminum - Front / Plastic - Back	Plastic	Aluminum	Plastic	Metal Alloy & Fiber Reinforced Plastic	
	GPS	✗				External FT GPS CAN module (sold separately), via CAN	Built-in	
	Accelerometer and Built-in Gyroscope	✗	✔			✔		
	AMP SUPERSEAL 1.0 Automotive Connectors	✔				✔		
	Display	TFT 4.3" Color	✗	TFT 4.3" Color		FuelTech Vision app on your phone, tablet, Android head unit or computer	TFT 7" Color	TFT 12.3" Color
	Weight	9.5 oz / 270 g	11.6 oz / 330 g	10.9 oz / 309 g	20.7 oz / 588 g	10.6 oz / 300 g	49.4 oz / 1400 g	68.8 oz / 1950 g
	Dimensions	5.75 x 3.62 x 2.13 in	5.75 x 3.62 x 1.54 in	5.75 x 3.62 x 2.13 in	5.86 x 3.7 x 2.42 in	5.87 x 5.66 x 1.78 in	8.62 x 5.43 x 3.11 in	14.4 x 7.09 x 3.48 in

Terms

Generic VR inputs: inputs for variable reluctance (magnetic) sensors, with frequency reading, usable as a signal source for other functions.

Half-bridge outputs: outputs that drive electronic throttles, stepper motors and push-pull loads.

Strain gauge: load cell on the shifter, used for the flat shift / shift out.

Custom functions: your own logic, built from visual blocks.

VE learning: optional long-term learning of the mixture correction, in VE mode only; off by default.

Knock monitoring: live knock level reading (detection and measurement).

GPS lap timer and track analysis: lap times with 1 ms resolution, finish line and 104 tracks, lap time recorded in the datalog for track log analysis in FuelTech Vision. On the FT470 it needs the external FT GPS CAN module, sold separately.

Advanced adaptive mode: adaptation of shift hold and kissing point; results depend on the application.

CAN FD: CAN with Flexible Data-rate, an extension of the CAN bus standard that carries more data per message.

DBC: industry-standard file format that describes the frames and signals of a CAN network; used here to import and export the user-defined CAN protocol.

SENT: Single Edge Nibble Transmission (SAE J2716), a digital single-wire sensor protocol.

Virtual LEDs: alert LEDs drawn on the built-in display (FT450, FT550); the FT600 has 4 physical alert LEDs.

High-pressure fuel pump (GDI) control: number of high-pressure pump outputs.