

INNOVATIVE EFI

Solution for cleaner air



SPC56/57 Automotive MCU and L9177A Engine Control IC

India's automotive industry is undergoing a major facelift to meet Bharat Stage VI Emission Standards. The new standards will introduce cutting-edge technology in two-wheelers. The EFI (electronic fuel injection) system is one of the key components.

Accurate control of fuel injection, spark ignition, and exhaust after-treatment systems under different conditions in addition to on-board diagnostics (OBD) will help every two wheeler reduce tailpipe emissions and comply with Bharat Stage VI requirements.

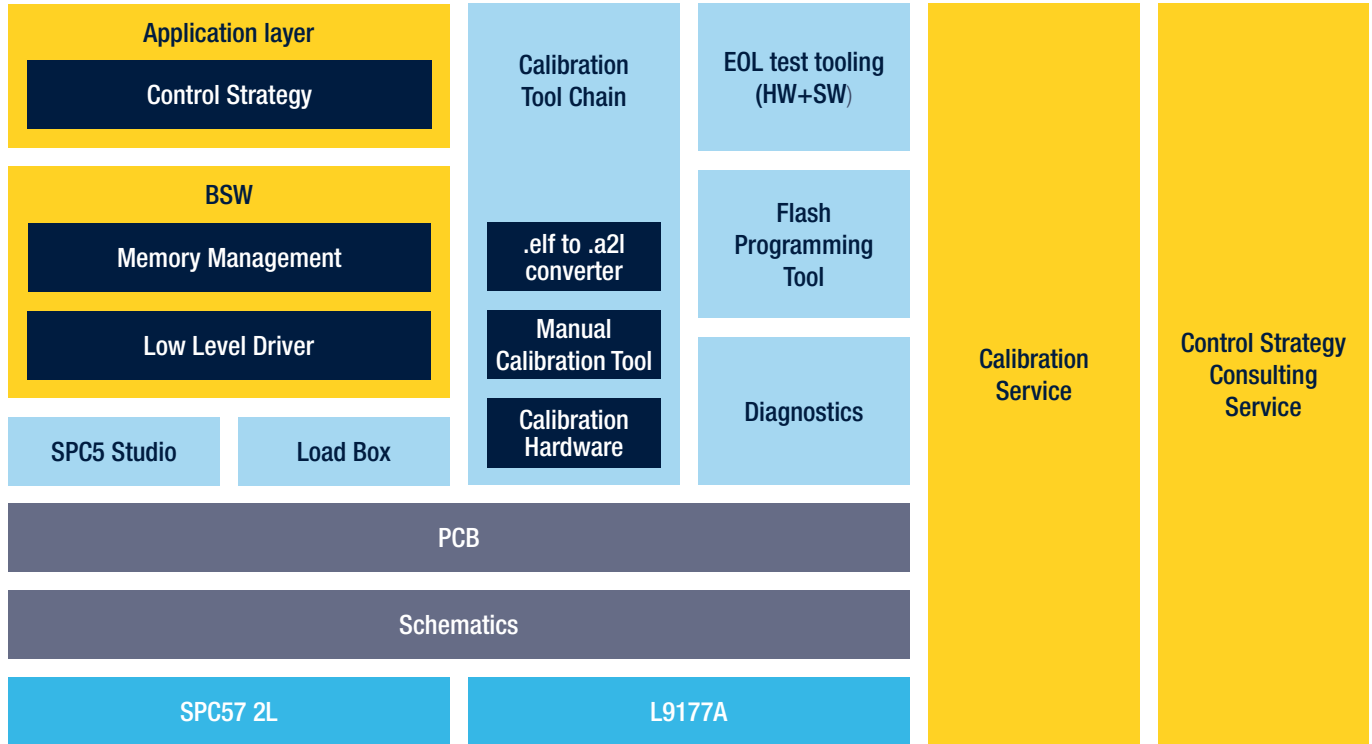
ST offers a high-integration chipset for an optimized ECU form factor and cost. The backbone of our proposal is the SPC56/57 32-bit Power Architecture MCU and the L9177A peripheral-on-chip, which contains all the building blocks for EFI systems from key sensor interfaces and load actuations (solenoids, relays, bulbs, etc.) for diagnostics and networking capabilities.

SPC57 2L Line also offers PWT libraries and SW examples for perfect GTM exploitation

MAJOR APPLICATIONS

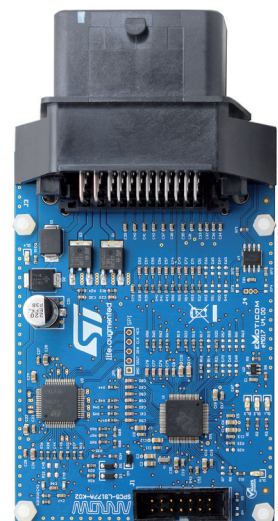
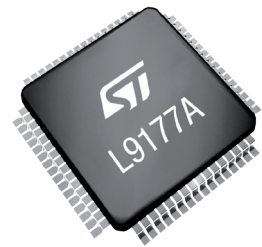
- Motorcycle EFI
- General-purpose internal combustion engines including:
 - Marine engines
 - Snow sweepers
 - Lawn mowers
 - Water pumps
 - Air compressors

ST ECOSYSTEM WITH PARTNERS



PRODUCT LIST

Part Number	Description	Key Parameter		Package
L9177ATR	Engine control IC for 1- or 2-cylinder engines	5 V / ±2% / 300 mA 5 V tracking / 40 mA 5 V standby / 2.5 mA SPI + 6 I/O IN ISO 9141 (K-Line) VRS	3 × Relay LSDs 2 × Injector LSDs 1 × 02 sensor heater LSD 1 × Tach LSD 1 × Lamp LSD 1 × Stepper driver 1 × HSD	TQFP 64
L9942XP	Stepper motor driver	2 x full bridge with maximum 1.3 A Stepping mode programmable (full/half/mini/micro) Slew rate and Decay rate programmable		PowerSS024
SPC560P34L1	32-bit Automotive MCU for general engines	Flash memory: 192 Kbytes RAM: 12 Kbytes	1 × 10-bit, 6-ch ADC 1 × 6-ch eTimer	LQFP 64
SPC560P50L3	32-bit Automotive MCU for calibration	Flash memory: 512 Kbytes RAM: 40 Kbytes	2 × 10-bit, 13-ch ADCs 2 × 6-ch eTimers	LQFP 100
SPC572L64E3	32-bit Automotive MCU for small engines	flash memory: 1.5Mbytes RAM: 64 Kbytes	3x 12bit SAR ADC, 1x16bit sigma-delta ADC GTM	eTQFP100
SPC572L64F2	32-bit Automotive MCU for small engines	flash memory: 512 Kbytes RAM: 40 Kbytes	3x 12bit SAR ADC, 1x16bit sigma-delta ADC GTM	eTQFP80
L9908	Automotive 3-phase gate driver	12V/24V/48V Compliant Ready for ASIL-D systems 6 separate N-channel FET pre-drivers 3 differential low-side CSA with ADC/DAC architecture SPI /IO readable phase voltage comparator output feedback		TQFP48EP



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