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Cypress delivers high-performance, high-quality solutions at the heart of today's most advanced embedded systems, from automotive, industrial and networking platforms to highly interactive consumer and mobile devices. With a broad, differentiated product portfolio that includes NOR flash memories, F-RAM and SRAM, Traveo™ microcontrollers, the industry's only PSoC® programmable system-on-chip solutions, analog and PMIC Power Management ICs, CapSense® capacitive touch-sensing controllers, and Wireless BLE Bluetooth® Low-Energy and USB connectivity solutions, Cypress is committed to providing its customers worldwide with consistent innovation, best-in-class support and exceptional system value.

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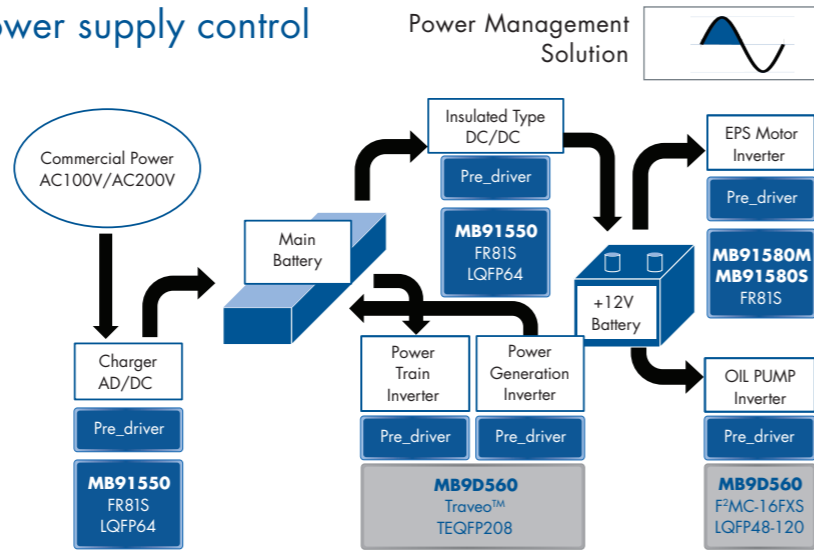


Cypress Power-Supply-Control MCUs

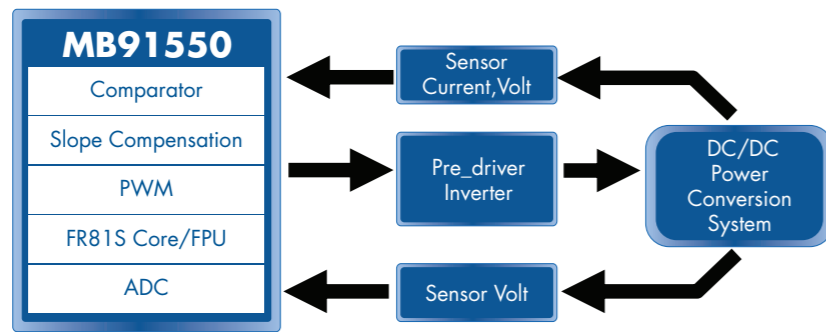
Cypress FR Family – MB91550 Series

Single-chip solution for HEV/EV power supply control

The MB91550 family employs Cypress's proprietary FR81S CPU core. This series is the optimal solution for switching converter control for a variety of products including AC commercial power supplies, high-voltage batteries and secondary power supplies. A member of Cypress's original core MCU lineup, the MB91550 MCU features current-mode-control and is now available for advanced vehicle digital power control.



This MCU includes a PWM module, three units of comparator, two units of 12bit ADC and a slope compensation circuit. This PWM module defines 200MHz resolution PWM signals. Output of comparators can control PWM output directly. Switching the power supply (e.g., a DC/DC converter) can be controlled by a current-mode control using the MB91550 MCU.



Cypress MCU Lineup for Motor Control

Products	Freq. MHz	Pow.V	FLASH KB (max)	RAM KB (max)	Package	Note
ARM® Cortex® – R5F (Dual CPU AMP) – MB9D560 Series						
MB9D560M	200	5.0/1.2	1152 x 2 + 64 x 2	128 x 2	TEQFP208	RDC (Resolver/Digital Converter) 2unit, motor vector accelerator 2unit, 12bit ADC 4ch-sample & hold 4ch.x2unit, 12bit ADC 32ch.x1unit, Waveform Gen. 6ch.x4unit (max), CAN (64msg) 3ch., FlexRay (option), Multi-Function Serial 5ch. (max), DMAC 16ch., other timers
MN90560L					TEQFP176	
Cypress FR81S – MB91580 Series						
MB91580L	128	5.0	1088+64	96	LQFP144	RDC (option), 12bit ADC 8ch.x3unit (max), 10bit DAC (option), Waveform Gen. 6ch.x2unit (max), CAN (64msg) 3ch. (max), PPG 24ch. (max), FlexRay (option), Multi-Function Serial 5ch. (max), DMAC 8ch., other timers
MB91580M	128	5.0	576+64	48	LQFP100	
MB91580S	128	5.0	576+64	48	LQFP64	

Cypress MCU Lineup for Power Supply Control

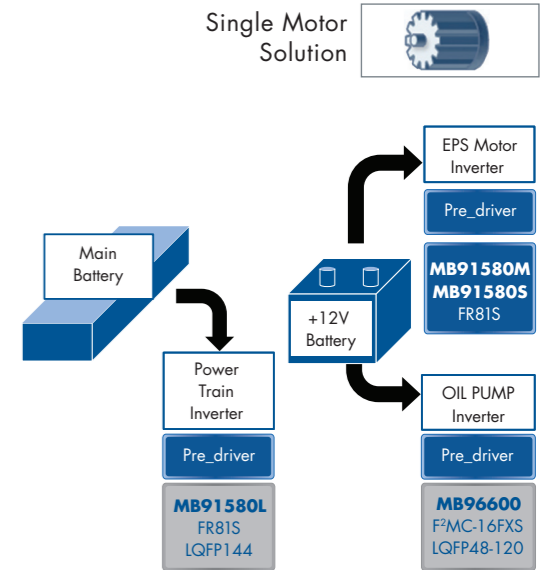
Products	Freq. MHz	Pow.V	FLASH KB	RAM KB	Package	Note
Cypress FR81S – MB91550 Series						
MB91F552	80	5.0	128+64	24	LQFP64	PWM 200MHz 6ch.x1unit, comparator 50MHz 3ch., Slope compensation 1unit, 12bit ADC 4ch-sample & hold 4ch.x1unit, 12bit ADC 8ch.x1unit, PWC 2ch., CAN(64msg) 1ch., Multi-Function Serial 3ch., DMAC 8ch., other timers

Cypress Motor-Control MCUs

Cypress FR Family – MB91580 Series

Single-chip solution for HEV/EV single motor control

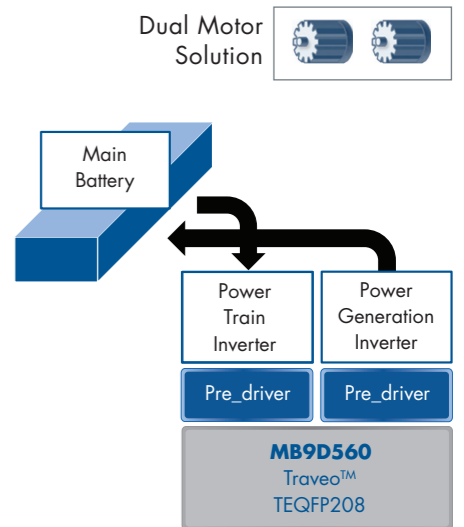
The MB91580 family, which employs Cypress's proprietary FR81S CPU core, is optimized for digital power supply control and motor control for HEV/EV. The series embeds three units of 12-bit ADC and offers simultaneous three-phase motor current transformation. The MB91580M/S embeds a PWM waveform generator operating at 128MHz for more precise motor control. The MB91580L has a Resolver Digital converter (RDC), which the signal from a motor rotation angle sensor can process, built-in.



Cypress Traveo Family MB9D560 Series

Single-chip solution for HEV/EV dual motor control

The Traveo MB9D560 family features dual ARM® Cortex®-R5 cores and operates at 200MHz. The dual-core/dual motor control structure on a single-chip allows the simultaneous control of two motors (e.g. the motor and the generator of an electrical engine system). Both motor control modules have their own embedded interface circuits for resolver sensors and include unique hardware IP to speed up motor control operations. The dual core approach and several built-in diagnosis functions support the required level of functional safety.



The MB9D560 series embeds two units of 12-bit ADC and offers simultaneous three-phase motor current transformation. It also embeds a PWM waveform generator operating at 100MHz.

