

THIS SPEC IS OBSOLETE

Spec No: 002-18545

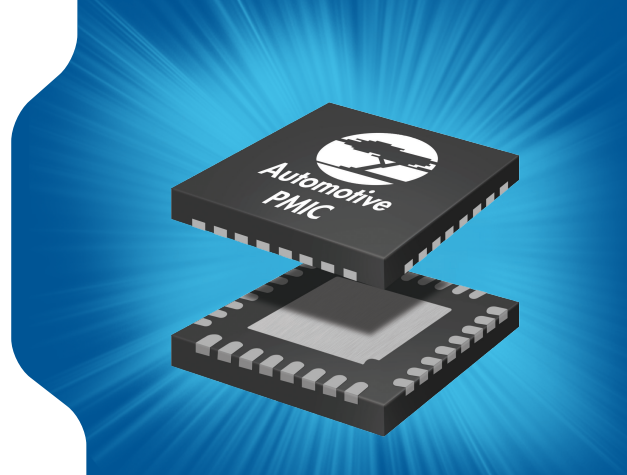
Spec Title: CYPRESS AUTOMOTIVE PMIC PRODUCT
OVERVIEW

Replaced by: NONE

CYPRESS

Automotive PMIC

Highly-Integrated and Robust Power Management ICs
for Instrument Cluster, ADAS, BCM, and Gateway



PRODUCT OVERVIEW

INTRODUCTION

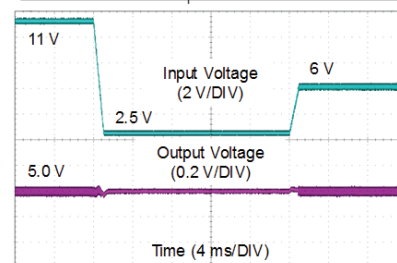
Cypress automotive power management ICs (PMICs) provide highly-integrated and robust power management solutions for automotive applications. The PMICs support comprehensive power supply for the system by a small form factor and complement Cypress's solution with Traveo™ automotive MCU family. Boost function integrated in the PMICs avoids system blackout under extreme battery voltage fluctuations. Low quiescent current of the PMICs reduce standby current of always-on functions. The PMICs comply with AEC-Q100, and rich system safety functions help to comply with modern vehicle ECU requirements.

FEATURES

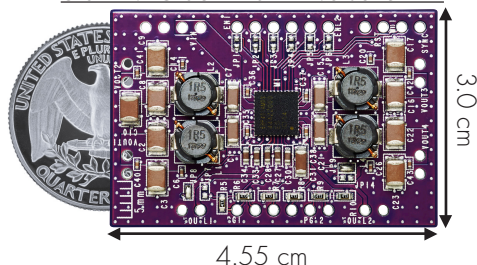
Manage Extreme Battery Voltage Fluctuations

Growing stop-start system causes frequent battery fluctuations due to restarting the engine. Cypress automotive PMICs overcome extreme battery fluctuations by combining buck and boost function. Combination of the functions provides a stable power supply without bulky and unreliable electrolytic capacitors.

S6BP202A Output vs. Line Transient



6-ch PMIC S6BP401A Evaluation Kit

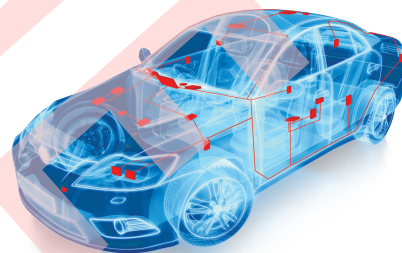


Minimize Physical Size

Power management systems for advanced driver assistance systems (ADAS) need to supply large current for image recognition, and to offer system safety functions in small form factor. Cypress automotive PMICs integrate power supply required for the system in one package. System safety functions such as watchdog timers (WDT) and voltage supervisors are also integrated.

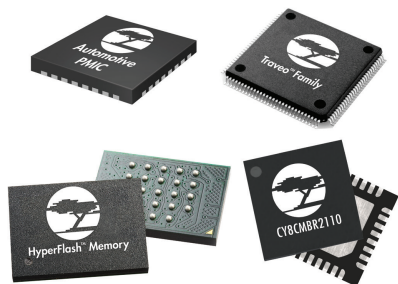
Extend Battery Life

With growing always-on functions that operate when the engine isn't running, lower system standby current is required. Cypress automotive PMICs has minimal quiescent current and help to reduce system standby current.



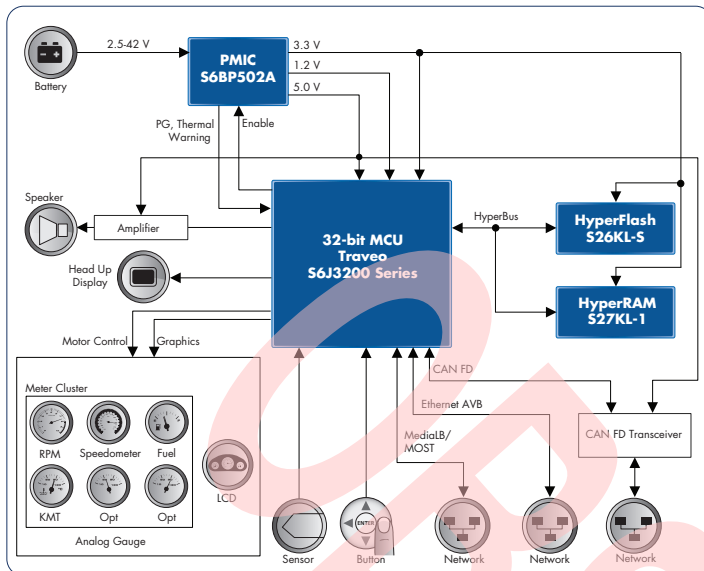
Provide Comprehensive Solution

Cypress automotive PMICs provide comprehensive solution for instrument cluster, ADAS, BCM, and gateway with Traveo™ automotive MCU, PSoC® programmable System-on-Chip, TrueTouch® touch screen controller, CapSense® touch sensing controller, and HyperFlash™ and HyperRAM™ memories. Cypress's solution simplifies connectivity across MCUs, memories, and PMICs without having to worry about complex and expensive system designs.

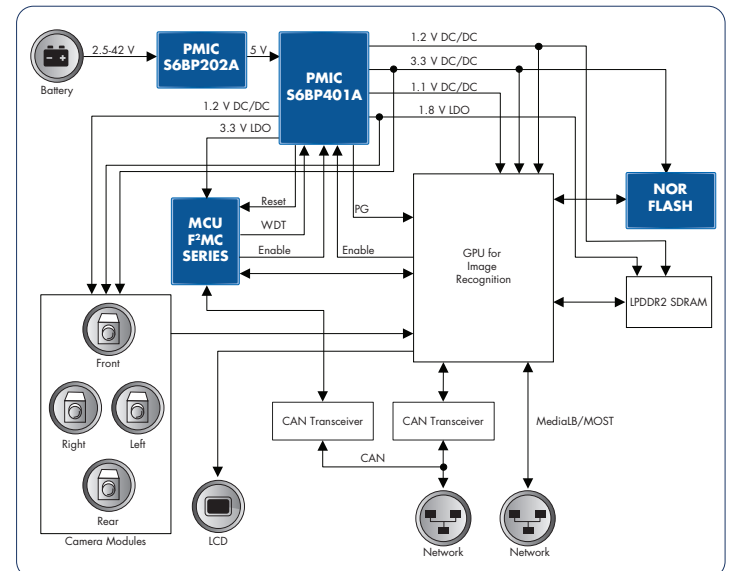


SOLUTION EXAMPLES

Instrument Cluster System



Advanced Driver Assistance System (ADAS)



PRODUCT LINEUP

S6BP20x Series: 1-ch Buck-Boost DC/DC Converter

Part Number	Input Voltage	Output Voltage / Current Capability	Switching Frequency	Package	Note
S6BP201A	2.5 – 42 V	5.0 – 5.2 V / 1.0A	200kHz – 2.1MHz	16 – TSSOP	Synchronous buck-boost converter Quiescent Current: 20µA (201A, 202A), 50µA (203A) Built-in switching transistors Voltage supervisor with independent power good (PG) pins
S6BP202A	2.5 – 42 V	5.0 – 5.2 V / 2.4A	200kHz – 2.1MHz	16 – TSSOP	
S6BP203A	2.5 – 42 V	3.3 V / 2.4A	200kHz – 2.1MHz	16 – TSSOP	

S6BP50x Series: 3-ch Power Management IC

Part Number	Input Voltage	Output Voltage / Current Capability			Switching Frequency	Package	Note
		DD1V	DD3V	DD5V			
S6BP501A	2.5 – 42 V	1.0 – 1.3 V / 1.4A	3.2 – 3.4 V / 1.6A	5.0 – 5.2 V / 1.3A	1.8MHz – 2.1MHz (DD1V, DD5V) 360kHz – 420kHz (DD3V)	32 – QFN	Buck controller (DD3V), boost converter (DD5V), buck converter (DD1V) Quiescent Current: 15µA Built-in spread-spectrum clock generator Voltage supervisor with independent PG pins Wettable package
S6BP502A	2.5 – 42 V	1.0 – 1.3 V / 2.0A	3.2 – 3.4 V / 1.9A	5.0 – 5.2 V / 1.3A	1.8MHz – 2.1MHz (DD1V, DD5V) 360kHz – 420kHz (DD3V)	32 – QFN	

S6BP401A: 6-ch Power Management IC with Windowed Watchdog Timer

Part Number	Input Voltage	Output Voltage / Current Capability						Switching Frequency	Package	Note
		DD1	DD2	DD3	DD4	LD1	LD2			
S6BP401A	4.5 – 5.5V	1.2 – 1.5 V / 2.0A	1.0 – 1.2 V / 3.0A	1.2 – 2.5 V / 2.0A	3.3 – 3.4 V / 1.0A	3.3 – 3.4 V / 0.2A	1.2 – 2.8 V / 0.5A	1.8MHz – 2.4MHz	40 – QFN	4-ch buck converters, 2-ch LDOs Built-in switching transistors, LDO output transistors Voltage supervisor with independent PG pins Windowed watchdog timer

GET STARTED NOW

For more information on Cypress's automotive PMICs, please visit www.cypress.com/automotive-pmic.

To request evaluation kits and samples, please contact local sales or resellers.

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