



# SPSB100

## Automotive power management IC for highly integrated processors



**Three buck converters, a boost controller and two LDOs, the SPSB100 offers low power modes, high current capability, and advanced fail-safe functions**

A fully integrated power management system IC, the **SPSB100** is designed for highly-integrated automotive application processors including our Arm-based Stellar integration MCUs. A highly flexible solution, the device is able to supply the system microcontroller, external peripheral loads and sensors in several and adjustable voltage and current ranges.

In addition to a programmable system wake-up feature and an input pin for static and dynamic error signal reporting, the SPSB100 embeds ST's standard serial peripheral interface with a 4-bit CRC to ensure valid data.

### KEY FEATURES AND BENEFITS

- A flexible solution with programmable buck converters, boost controller, LDOs, and power-up/down sequences is ideal for platforms that require different power rails and peripherals
- A very low quiescent current in deep sleep mode
- Embeds many features for applications that need to fulfill functional safety requirements as per ISO 26262 up to ASIL D

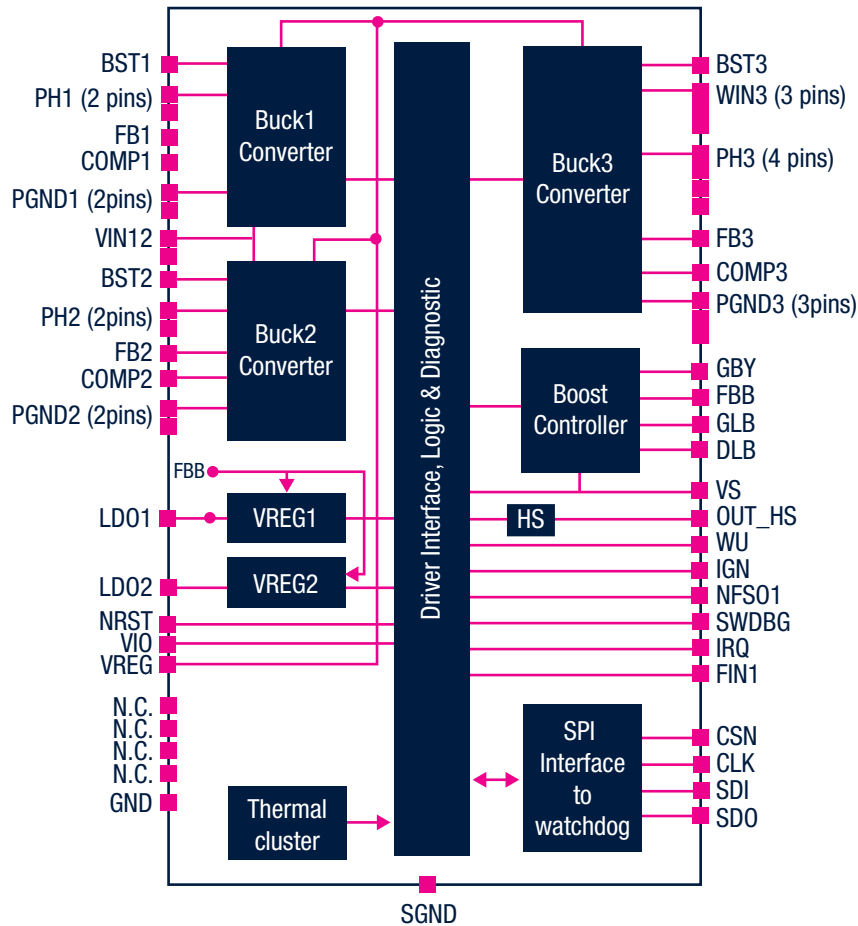
### KEY APPLICATIONS

- Zonal control unit (ZCU)
- Automotive gateway
- Vehicle control platform (VCP)
- Body control module (BCM)

With three configurable buck converters and a configurable low dropout voltage tracker, the SPSB100 offers a very high level of flexibility for a wide range of applications. Thanks to its programmable NVM, the device can be used in different ways according to customer requirements. In addition, the device includes a host of diagnostics and protection features ensuring robust designs.

Developers can quickly optimize their designs for performance and power efficiency using our online Power Supply Design Tool, a part of our [eDesignSuite](#) power management design center - a free, comprehensive online software tool that helps you quickly find the best solution for your specific application.

### SPSB100 Block Diagram



### Devices Summary

Product name	Package	Extended operative input voltage (V)	Regulated Output voltage (V)	NVM configuration	Typ. Quiescent current (µA)
SPSB100BTR	QFN56L+4L (8x8 mm)	3 to 29	Buck1 = 3.3 V Buck2 = 5 V Buck3 = 0.97 V LD01 = 5 V LD02 = 5 V	System supply configuration 1	20 (*)
SPSB100PTR			Buck1 = 5 V Buck2 = 5 V Buck3 = 3.3 V LD01 = 5 V LD02 = 3.3 V	System supply configuration 2	

Note (\*): In Deep-sleep mode



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