Description:
This book is an introduction to the topic of integrated power management systems. More specifically, it targets the battery powered systems on a chip that provide different functions such as wireless connectivity, sensing (e.g. temperature, pressure, movement), localization, processing, and more. Power management is a crucial part of such systems, as they must provide different power supplies, tailored to the requirements of each sub-block, and must maintain high efficiency in order to allow for a long battery life. The book covers the fundamental principles and guidelines needed to start the design of an integrated power management system, and an overview of practical techniques used in state-of-the-art implementations.

Keywords: Power management, PMU, LDO, linear regulator, SoC, IoT, low-power, efficiency, battery-powered, DC-DC, converter, regulator, control system, switched-capacitor converter, energy harvesting, buck converter, boost converter