Integration of Power Management Units onto the SoC

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Abstract. SoC complexity has increased exponentially adding new requirements to power management. To manage power dissipation and increase battery autonomy developers need to have flexible control over the supply of the multiple SoC power domains. Requirements include: supply voltages much lower than those available from the main supply; fine voltage programming, complex power sequencing; and very fast load response. All with high power conversion efficiency. External IC solutions make it difficult to comply with SoC performance and functional requirements, and result in a large BOM. Developers should consider flexible power management IP that can integrate onto their SoC or SiP to optimize performance, power efficiency, cost and size.