Highly Integrated RF and Digital Architectures

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The proliferation of smart sensors across the consumer, industrial and defense industries presents a new set of technical challenges that must be holistically addressed for optimal implementation. Whether it's IoT hardware for the connected home or a miniaturized electronic warfare system deployed overseas, size, weight and power (SWaP) considerations are quickly becoming one of the most critical metrics. This presentation discusses some of the key challenges encountered when designing highly integrated microelectronics and some examples of how they are addressed. For applications that require a high-reliability solution, there are unique challenges facing the system architect desiring a SWaP-optimized design. Successfully developing and deploying next-generation microelectronics solutions demands a new breed of contract manufacturers with highly integrated, cross-functional engineering and manufacturing resources.