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Overview of Chipless RFID Reader Architecture ""; ""3.3 Chipless RFID Readers and Tag Reading Techniques ""; ""3.3.1 Time Domain Readers and Tag Reading Techniques ""; ""3.3.2 Frequency Domain Readers and Tag Reading Techniques "" ""3.3.3 Hybrid Domain Readers and Tag Reading Techniques "" ""3.3.4 SAR Based Readers and Tag Reading Techniques ""; ""3.4 Limitations and Issues with Current Chipless RFID Readers ""; ""3.4.1 Cost of Readers""; ""3.4.2 Read Range""; ""3.4.3 Tag Reading Speed""; ""3.4.4 Anticollision, Error Correction, and Data Integrity ""; ""3.4.5 Orientation of the Tag""; ""3.5 Conclusion""; ""Questions""; ""References ""; ""4 Frequency Domain Based RFID Reader Development ""; ""4.1 Introduction""; ""4.1.1 Organization of This Chapter""; ""4.2 Operation of Frequency Domain Based Chipless RFID Readers "" ""4.2.1 Detecting the Features of the Frequency Signatures of Chipless Tags: Type-1 Readers "" ""4.2.2 Recovering the Frequency Signature of Chipless Tags: Type-2 Readers ""; ""4.3 Design of Frequency Domain Based Chipless RFID Readers ""; ""4.3.1 Design of a Reader That Detects the Frequency Signatures of Chipless RFID Tags ""; ""4.3.2 Design of a Reader That Recovers t""; ""4.4 Results""; ""4.4.1 Results: Detecting the Features of""; ""4.4.2 Results: Recovering the Frequency ""; ""4.5 Conclusion""; ""Questions""; ""References ""; ""5 Time Domain Based Chipless RFID Reader""

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## Sommario/riassunto

In the era of information communication technology (ICT), radio frequency identification (RFID) has been going through tremendous development. RFID technology has the potential of replacing barcodes due to its large information carrying capacity, flexibility in operations, and applications. The deployment of RFID has been hindered by its cost. However, with the advent of low powered ICs, energy scavenging techniques, and low-cost chipless tags, RFID technology has achieved significant development. This book addresses the new reader architecture, presents fundamentals of chipless RFID systems,

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