ISO 17366:2013-03 (E)

Supply chain applications of RFID - Product packaging

Contents

Page

Foreword v

Introduction vi

1 Scope 1

2 Conformanceandperformancespecifications 1

3 Normative references 1

4 Termsanddefinitions 2

5 Concepts 3
5.1 Differentiation between this layer and the preceding layers 3
5.2 Returnable packaging item 5
5.3 Unique item identifier 5
5.4 Other identification requirements 8

6 Differentiation within this layer 8
6.1 Business processes 8
6.2 Lot/batch vs. serial number vs. product identification only 9
6.3 Consumer products vs. industrial/government 9

7 Data content 9
7.1 Introduction 9
7.2 System data elements 10
7.3 Tag structure 10
7.4 Protocol control (PC) bits 12
7.5 Data elements 13
7.6 Traceability 14
7.7 Unique item serialization 14

8 Data security 14
8.1 Confidentiality 14
8.2 Data integrity 14
8.3 Interrogator authentication 14
8.4 Non-repudiation/audit trail 14
8.5 Product authentication/anti-counterfeiting 14

9 IdentificationofRFIDlabelledmaterial 15

10 Backup in case of RF tag failure 15
10.1 Human readable interpretation 15
10.2 Human readable translation 15
10.3 Data titles 15
10.4 Backup 15

11 Tag operation 16
11.1 Data protocol 16
11.2 Minimum performance requirements (range and rate) 16
11.3 Environmental considerations 17
11.4 Tag orientation 18

11.5 Packaging material 18
11.6 Shock loads and abrasions 18
11.7 Tag lifetime 18
11.8 Minimum system reliability 18
11.9 Air interface 18
11.10 Memory requirements for application 18
11.11 Sensor interface, if applicable 18
11.12 Real time clock option 19
11.13 Safety and regulatory considerations 19
11.14 Non-observable data 19
11.15 Tag recyclability 19
11.16 Tag reusability 19

12 Tag location and presentation 19
12.1 Material on which the tag is mounted or inserted 20
12.2 Geometry of the package/tag environment 20

13 Interrogator and reader requirements 20
13.1 Safety and regulatory considerations 20
13.2 Data privacy 20

14 Interoperability,compatibilityandnon-interferencewithotherRFsystems 20

Annex A (informative)Tableofusefuldataelementsforproductlifecyclemanagement 21

Annex B (normative) Encoding 22

Bibliography 32