ISO 17364:2013-03 (E)

Supply chain applications of RFID - Returnable transport items (RTIs) and returnable packaging items (RPIs)

Contents

Page

Foreword v

Introduction vi

1 Scope 1

2 Conformanceandperformancespecifications 1

3 Normative references 1

4 Termsanddefinitions 3

5 Concepts 5
5.1 Differentiation between this layer and the preceding layers 5
5.2 Unique RTI and RPI identification 7
5.3 Other identification requirements 9

6 Differentiation within this layer 9

7 Data content 11
7.1 Introduction 11
7.2 System data elements 12
7.3 Tag structure 12
7.4 Protocol control (PC) bits 14
7.5 Data elements 15
7.6 Traceability 16
7.7 Combined RTI/RPI and transport unit data 16
7.8 Unique item serialization 17

8 Data security 17
8.1 Confidentiality 17
8.2 Data integrity 17
8.3 Data preservation 18
8.4 Interrogator authentication 18
8.5 Non-repudiation/audit trail 18

9 IdentificationofRFIDlabelledmaterial 18

10 Human readable information 18
10.1 Human readable interpretation 18
10.2 Human readable translation 19
10.3 Data titles 19
10.4 Backup 19

11 Tag operation 20
11.1 Data protocol 20
11.2 Minimum performance requirements (range and rate) 20
11.3 Environmental parameters 20
11.4 Tag orientation 21
11.5 Packaging material 21
11.6 Shock loads and abrasions 21

11.7 Tag lifetime 21
11.8 Minimum system reliability 21
11.9 Air interface 22
11.10 Memory requirements for application 22
11.11 Sensor interface, if applicable 22
11.12 Real time clock option 22
11.13 Safety and regulatory considerations 22
11.14 Tag reusability 22

12 Tag location and presentation 22
12.1 Material on which the tag is mounted or inserted 23
12.2 Geometry of the package/tag environment 23
12.3 Working environment 23

13 Interrogator and reader requirements 23
13.1 Safety and regulatory considerations 23
13.2 Data privacy 23

14 Interoperability, compatibility and non-interference with other RF systems 23

Annex A (informative) Returnable packaging items 24

Annex B (normative) Encoding 33

Annex C (informative) Table of useful data elements for product life cycle management 43

Bibliography 45