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Electromagnetic compatibility and Radio spectrum Matters (ERM); Short Range Devices (SRD) intended for operation in the bands 865 MHz to 868 MHz and 915 MHz to 921 MHz; Guidelines for the installation and commissioning of Radio Frequency Identification (RFID) equipment at UHF

Reference
RTR/ERM-TG34-22

Keywords
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Contents

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Foreword

This Technical Report (TR) has been produced by ETSI Technical Committee Electromagnetic compatibility and Radio spectrum Matters (ERM).

Every TR prepared by ETSI is voluntary. This text should be considered as guidance only and does not make the present document mandatory.

The present document has been produced by ETSI in response to a perceived need by RFID manufacturers, installers and end users for general guidance on the installation and commissioning of RFID systems operating at UHF.

Modal verbs terminology

In the present document "**shall**", "**shall not**", "**should**", "**should not**", "**may**", "**may not**", "**need**", "**need not**", "**will**", "**will not**", "**can**" and "**cannot**" are to be interpreted as described in clause 3.2 of the ETSI Drafting Rules (Verbal forms for the expression of provisions).

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1 Scope

The present document provides recommendations to system integrators and installers on good practice for the installation and commissioning of RFID systems operating at UHF at power levels up to 4 W e.r.p. Guidance is given on making best use of the available spectrum as envisaged within the ETSI standard EN 302 208 [i.1]. In addition the present document covers the use of reduced power RFID devices at UHF, such as hand held readers and proximity printers, operating in accordance with EN 300 220 [i.2]. This includes operation in the sub-bands 869,40 - 869,65 MHz at power levels of 500 mW and 869,7 - 870,0 MHz at power levels of 5 mW. In particular the present document considers the practices necessary to minimize interference in situations where multiple interrogators are co-located in close proximity. Failure to take the necessary precautions could lead to degradation in system performance. The present document also endeavours to cover the approaches necessary to ensure that the operational requirements of the end-user are met.

The present document concerns itself with radio matters only. It does not provide any guidance on computer hardware and software that may be used to process the data recovered from tags.

Many of the techniques recommended in the present document have been subject to practical tests in a working distribution centre. However each application is different and the techniques recommended in the present document may not be applicable in all situations.

End users may wish to make use of the present document as a general guide.

The present document does not cover matters related to Health and Safety. End-users and system integrators should familiarize themselves with the relevant national and international standards.

2 References

References are either specific (identified by date of publication and/or edition number or version number) or non-specific. For specific references, only the cited version applies. For non-specific references, the latest version of the reference document (including any amendments) applies.

Referenced documents which are not found to be publicly available in the expected location might be found at http://docbox.etsi.org/Reference.

NOTE: While any hyperlinks included in this clause were valid at the time of publication, ETSI cannot guarantee their long term validity.

2.1 Normative references

The following referenced documents are necessary for the application of the present document.

Not applicable.

2.2 Informative references

The following referenced documents are not necessary for the application of the present document but they assist the user with regard to a particular subject area.

[i.1] ETSI EN 302 208 (Parts 1 and 2): "Electromagnetic compatibility and Radio spectrum Matters (ERM); Radio Frequency Identification Equipment operating in the band 865 MHz to 868 MHz with power levels up to 2 W".

[i.2] ETSI EN 300 220 (Parts 1 and 2): "Electromagnetic compatibility and Radio spectrum Matters (ERM); Short Range Devices (SRD); Radio equipment to be used in the 25 MHz to 1 000 MHz frequency range with power levels ranging up to 500 mW".

[i.3] CEPT ERC/REC 70-03: "Relating to the use of Short Range Devices (SRD)".