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Electromagnetic compatibility requirements for information perception equipment

Recommendation ITU-T K.141

ITU-T

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Electromagnetic compatibility requirements for information perception equipment

Summary

Recommendation ITU-T K.141 gives the general electromagnetic compatibility (EMC) requirements for information perception equipment (IPE) used in the perception layer on the basis of Internet of things (IoT), combined with wireless and wired access, broadband and narrowband applications, as well as various intelligent applications.

History

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Electromagnetic compatibility, EMC, information perception equipment, IPE, Internet of things, IoT.

* To access the Recommendation, type the URL <http://handle.itu.int/> in the address field of your web browser, followed by the Recommendation's unique ID. For example, <http://handle.itu.int/11.1002/1000/11830-en>.

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Recommendation ITU-T K.141

Electromagnetic compatibility requirements for information perception equipment

1 Scope

This Recommendation specifies the general requirements for electromagnetic compatibility (EMC) for information perception equipment (IPE) used in the perception layer of Internet of things (IoT) network, taking into account combinations of devices to form schemes of an information perception system including control, monitoring, communication and process interface equipment.

In most cases, a typical IPE includes different parts such as sensor and communication parts, and it has the mandatory capabilities of communication and optional capabilities of sensing, actuation, data capture, data storage and data processing. The EMC measurement methods and performance criteria should consider the specific of these various devices, e.g., sensor part or telecommunication part, respectively.

2 References

The following ITU-T Recommendations and other references contain provisions which, through reference in this text, constitute provisions of this Recommendation. At the time of publication, the editions indicated were valid. All Recommendations and other references are subject to revision; users of this Recommendation are therefore encouraged to investigate the possibility of applying the most recent edition of the Recommendations and other references listed below. A list of the currently valid ITU-T Recommendations is regularly published. The reference to a document within this Recommendation does not give it, as a stand-alone document, the status of a Recommendation.

- [IEC CISPR 11] IEC CISPR 11:2015+AMD1:2016+AMD2:2019, *Industrial, scientific and medical equipment – Radio-frequency disturbance characteristics – Limits and methods of measurement.*
- [IEC CISPR 24] IEC CISPR 24:2010, *Information technology equipment – Immunity characteristics – Limits and methods of measurement.*
<<https://webstore.iec.ch/publication/22154>>
- [IEC CISPR 32] CISPR 32:2015+COR1:2016, *Electromagnetic compatibility of multimedia equipment – Emission requirements.*
- [IEC CISPR 35] IEC CISPR 35:2016, *Electromagnetic compatibility of multimedia equipment – Immunity Requirements.*
- [IEC 61000-2-5] IEC TR 61000-2-5:2017, *Electromagnetic compatibility (EMC) – Part 2-5: Environment – Description and classification of electromagnetic environments.*
<<http://webstore.iec.ch/webstore/webstore.nsf/artnum/045165>>
- [IEC 61000-6-1] IEC 61000-6-1:2016, *Electromagnetic compatibility (EMC) – Part 6-1: Generic standards – Immunity standard for residential, commercial and light-industrial environments.*
- [IEC 61000-6-2] IEC 61000-6-2:2016, *Electromagnetic compatibility (EMC) – Part 6-2: Generic standards—Immunity standard for industrial environments.*
- [IEC 61000-6-3] IEC 61000-6-3:2006+AMD1:2010: *Amendment 1 – Electromagnetic compatibility (EMC) – Part 6-3: Generic standards -Emission standard for residential, commercial and light-industrial environments.*