SLOVENSKI STANDARD
oSIST prEN IEC 63033-3:2021

01-julij-2021

Multimedijski sistemi in oprema za vozila - Sistem prostorskega pogleda - 3. del: Merilne metode

Multimedia Systems and equipment for vehicle - Surround view system - Part 3: Measurement methods

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Systèmes et équipements multimédias pour véhicules - Système de vision panoramique - Partie 3: Méthodes de mesurage

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Ta slovenski standard je istoveten z: prEN IEC 63033-3:2021

ICS:

33.160.60	Večpredstavni (multimedijski) sistemi in oprema za telekonference	Multimedia systems and teleconferencing equipment
43.040.15	Avtomobilska informatika. Vgrajeni računalniški sistemi	Car informatics. On board computer systems

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2003-01.Slovenski inštitut za standardizacijo. Razmnoževanje celote ali delov tega standarda ni dovoljeno.

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100/3586/CDV

COMMITTEE DRAFT FOR VOTE (CDV)

PROJECT NUMBER:	
IEC 63033-3 ED2	
DATE OF CIRCULATION:	CLOSING DATE FOR VOTING:
2021-05-21	**2021-08-13**
SUPERSEDES DOCUMENTS:	
100/3514/CD, 100/3579/CC	

IEC TA 17 : MULTIMEDIA SYSTEMS AND EQUIPMENT FOR VEHICLES

SECRETARIAT:	SECRETARY:
Korea, Republic of	Mr Ock-Woo Nam
OF INTEREST TO THE FOLLOWING COMMITTEES:	PROPOSED HORIZONTAL STANDARD: ☐ Other TC/SCs are requested to indicate their interest, if any, in this CDV to the secretary.

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FUNCTIONS CONCERNED:

☐ EMC ☐ ENVIRONMENT ☐ QUALITY ASSURANCE ☐ SAFETY

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☒ SUBMITTED FOR CENELEC PARALLEL VOTING ☐ NOT SUBMITTED FOR CENELEC PARALLEL VOTING

Attention IEC-CENELEC parallel voting

The attention of IEC National Committees, members of CENELEC, is drawn to the fact that this Committee Draft for Vote (CDV) is submitted for parallel voting.

The CENELEC members are invited to vote through the CENELEC online voting system.

This document is still under study and subject to change. It should not be used for reference purposes.

Recipients of this document are invited to submit, with their comments, notification of any relevant patent rights of which they are aware and to provide supporting documentation.

TITLE:

Multimedia Systems and equipment for vehicle - Surround view system - Part 3: Measurement methods

PROPOSED STABILITY DATE: 2024

NOTE FROM TC/SC OFFICERS:

In the voting for the maintenance of 63033-1,2,3 and 4, the 63033-1 and 4 received comments.

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INTERNATIONAL ELECTROTECHNICAL COMMISSION

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MULTIMEDIA SYSTEMS AND EQUIPMENT FOR VEHICLES– SURROUND VIEW SYSTEM

Part 3: Measurement methods

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International Standard IEC 63033-3 has been prepared by technical area 17: Multimedia systems and equipment for vehicles of IEC technical committee 100: Audio, video and multimedia systems and equipment.

The text of this International Standard is based on the following documents:

FDIS	Report on voting
XX/XX/FDIS	XX/XX/RVD

Full information on the voting for the approval of this International Standard can be found in the report on voting indicated in the above table.

This document has been drafted in accordance with the ISO/IEC Directives, Part 2.

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The committee has decided that the contents of this document will remain unchanged until the stability date indicated on the IEC website under "http://webstore.iec.ch" in the data related to the specific document. At this date, the document will be

- reconfirmed,
- withdrawn,
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INTRODUCTION

This document specifies measurement methods for the surround view system that is specified in IEC International Specification 63033-1. IEC 63033-1 specifies the model for generating the surrounding visual image of a surround view system. The system allows drivers to monitor the car's perimeter in real time by using "free eye point" technology, which allows drivers to dynamically change the viewing perspective to obtain the most appropriate views according to the driving situation.

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MULTIMEDIA SYSTEMS AND EQUIPMENT FOR VEHICLES– SURROUND VIEW SYSTEM

Part 3: Measurement methods

1 Scope

This document specifies measurement methods for the surround view system that is specified in IEC 63033-1.

2 Normative references

The following documents are referred to in the text in such a way that any of their content constitutes requirements of this document. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

IEC 63033-1:2020, *Multimedia systems and equipment for vehicles– Surround view system – Part 1: General*

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ISO 16505:2019, *Road vehicles- Ergonomic and performance aspects of Camera Monitor Systems – Requirements and test procedures*

UN Regulation No. 46, *Uniform provisions concerning the approval of devices for indirect vision and of motor vehicles with regards to the installation of these devices*

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UN Regulation No. 125, *Uniform provisions concerning the approval of motor vehicles with regards to the forward field of vision of the motor vehicle driver*

3 Terms, definitions and abbreviated terms

3.1 Terms and definitions

No terms and definitions are listed in this document.

ISO and IEC maintain terminological databases for use in standardization at the following addresses:

- IEC Electropedia: available at http://www.electropedia.org/
- ISO Online browsing platform: available at http://www.iso.org/obp

3.2 Abbreviated terms

FOV field of view

4 System model

A surround view system shall generate multiple camera composite images and/or single camera images, using cameras that are mounted on the outside the car. The views to be generated by this system shall capture the fields of view specified in Clause 7. This system shall generate multiple views according to the fields of view to be secured. For measurement methods, the system shall refer to ISO 16505 and UN REGULATION No. 46. However, the system does not need to fully comply with ISO 16505 and UN REGULATION No. 46.

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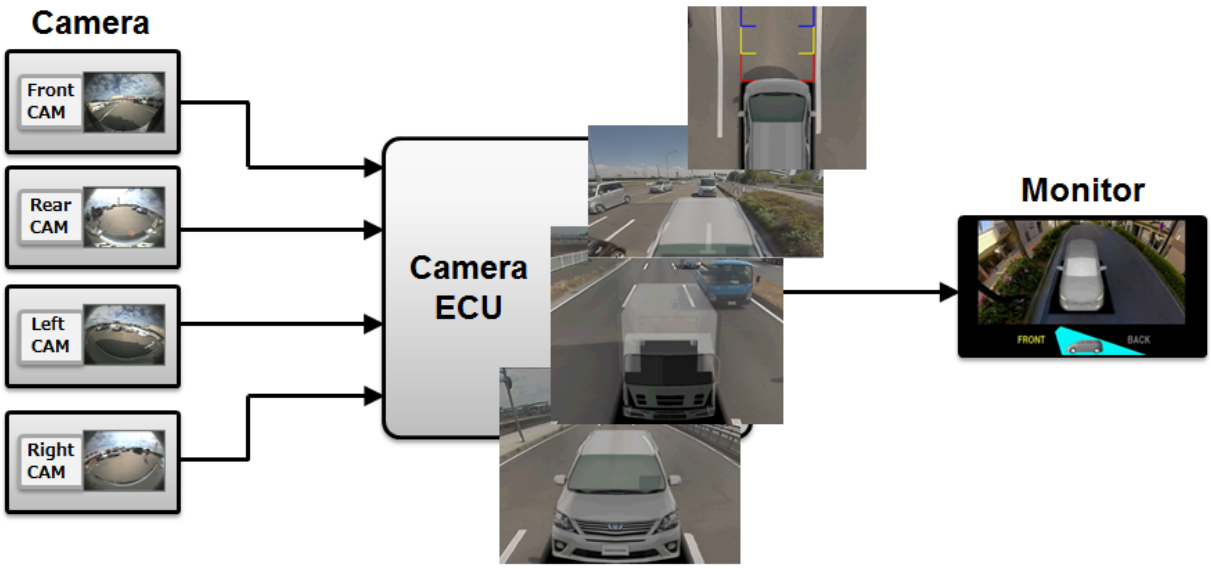

Figure 1 – System model of surround view system

5 Camera image quality

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5.1 Camera resolution

The resolution of the camera shall be 300 000 pixels or more.

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5.2 Camera image quality

The camera's image quality shall comply with ISO 16505, 6.7, and shall be measured as specified in ISO 16505, 7.8. The monitor image quality shall comply with ISO 16505, 6.7, and shall be measured as specified in ISO 16505, 7.8, as well. For the measurement of the camera's image quality, the monitor mentioned above shall be used.

6 Camera calibration

6.1 General

The calibration of the camera shall be performed as specified in Annex C of IEC 63033-1:2020.

6.2 Verification

Draw an orthogonal frame at a distance of 1,5 m from the outline of the vehicle; this frame is to be captured within the camera's image. This frame is shown in Figure 2 and can be seen on the captured camera image. The guideline shown in Figure 3 representing the frame 1,5 m around the car's body that is later drawn on the composite video shall match up within a tolerance of 10 cm.

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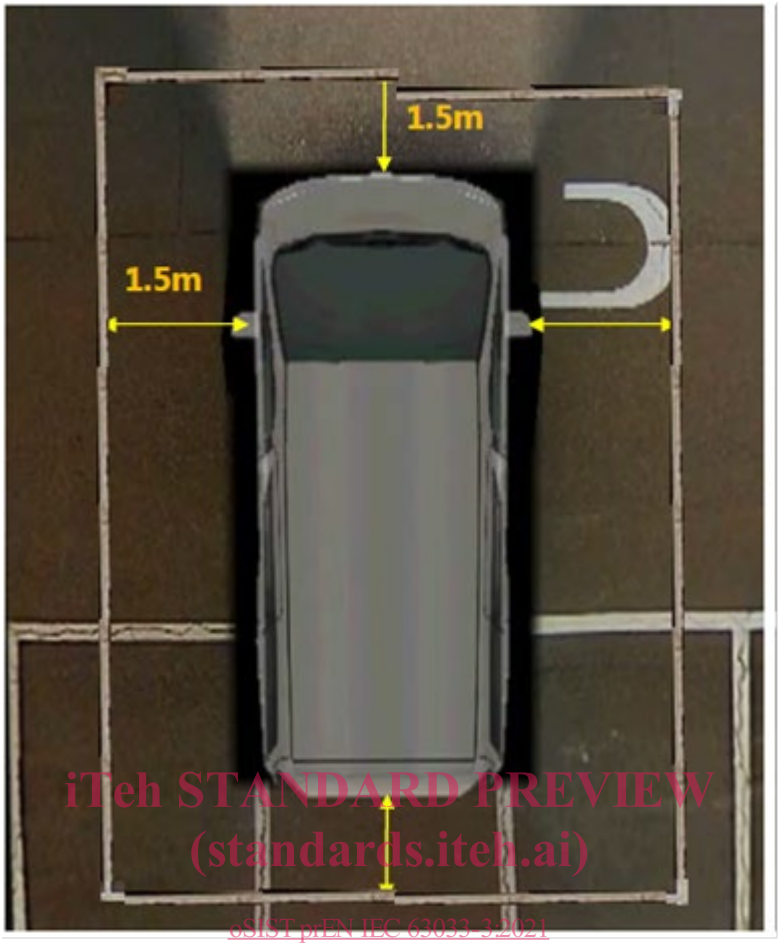

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Figure 2 – Orthogonal reference