SLOVENSKI STANDARD
oSIST prEN IEC 63033-4:2021

01-julij-2021

Multimedijski sistemi in oprema za vozila - Sistem prostorskega pogleda - 4. del: Uporaba za nadzorne sisteme kamer

Multimedia Systems and equipment for vehicle - Surround view system - Part 4: Application for Camera Monitor Systems

Systèmes et équipements multimédias pour véhicules - Système de vision panoramique - Partie 4: Application des systèmes à caméra et moniteur

Ta slovenski standard je istoveten z: **prEN IEC 63033-4:2021**

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

oSIST prEN IEC 63033-4:2021 **en,fr,de**

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100/3587/CDV

COMMITTEE DRAFT FOR VOTE (CDV)

PROJECT NUMBER: **IEC 63033-4 ED1**	
DATE OF CIRCULATION: **2021-05-21**	CLOSING DATE FOR VOTING: **2021-08-13**
SUPERSEDES DOCUMENTS: **100/3511/CD, 100/3574/CC**	

IEC TA 17 : MULTIMEDIA SYSTEMS AND EQUIPMENT FOR VEHICLES	
SECRETARIAT: Korea, Republic of	SECRETARY: 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.
FUNCTIONS CONCERNED: ☐ EMC ☐ ENVIRONMENT ☐ QUALITY ASSURANCE ☐ SAFETY	
☒ 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.	☐ NOT SUBMITTED FOR CENELEC PARALLEL VOTING

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TITLE:

Multimedia Systems and equipment for vehicle - Surround view system - Part 4: Application for Camera Monitor Systems

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 – SURRPUND VIEW SYSTEM

Part 4: Application for Camera Monitor Systems

FOREWORD

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International Standard IEC 63033-4 has been prepared by technical area 17: Multimedia systems and equipment for cars 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.

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,
- replaced by a revised edition, or
- amended.

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98 # INTRODUCTION

99 To install CMS (Camera Monitor System) in car, it must comply with UN Regulation No. 46.
100 The current CMS only shows one camera image on one display. This document specifies that
101 is the multiple camera composite images generated by the surround view system of IEC
102 63033-1 is applied to the FOV and display requirement specified UN Regulation No. 46.

103

MULTIMEDIA SYSTEMS AND EQUIPMENT FOR VEHICLES – SURROUND VIEW SYSTEM

Part 4: Application for Camera Monitor Systems

1 Scope

This document specifies that is the multiple camera composite images generated by the surround view system of IEC 63033-1 is applied to the FOV and display requirement specified UN Regulation No. 46.

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

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*

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

The system model of surround view system is described in Figure 1. The 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 5. This system shall generate multiple views according to the fields of view to be secured.

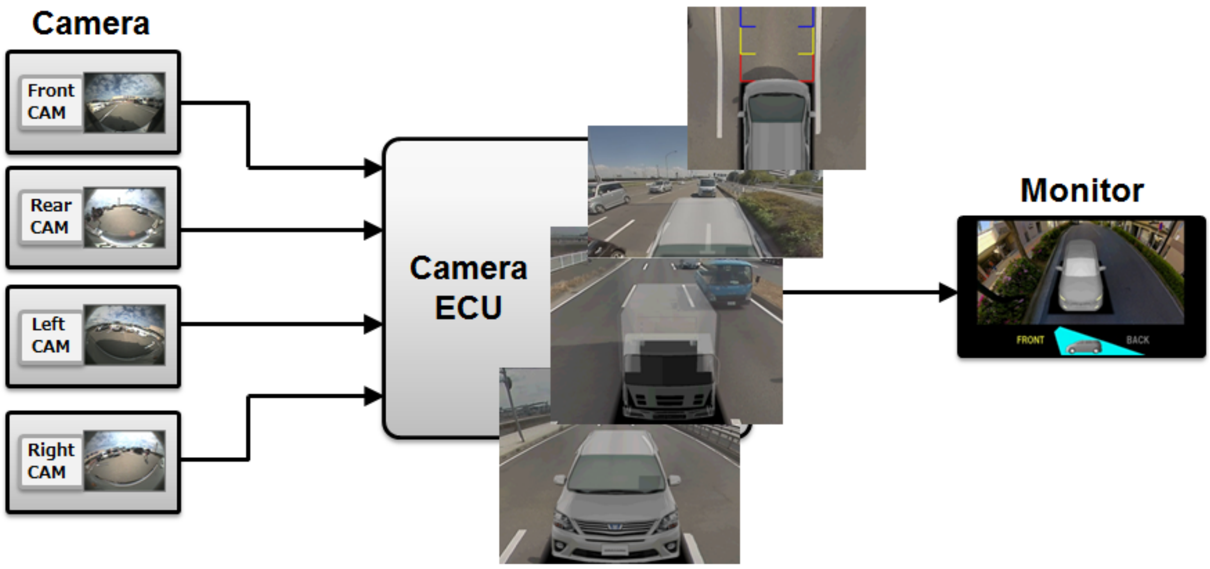

Figure 1 – System model of surround view system

5 Field of view

The field of view of the system is the visible area as displayed by composite images (i.e. from the multiple cameras composing the system) or the image captured by any single camera that is then converted and displayed. If the target of the application of this system is to replace an existing type approval that is required for vehicular equipment, it shall follow the respective regulation. For example, the FOV shall capture the respective FOV as defined in UN Regulation No. 46 (Class I to VI) if the system is intended to be used in such an application. The compulsory or optional FOV shall follow the requirement as specified in the table under paragraph 15.2.1.1.1. in UN Regulation No. 46.

5.1 Class I FOV

The field of vision shall be such that the driver can see at least a 20 m wide, flat, horizontal portion of the road centred on the vertical longitudinal median plane of the vehicle and extending from 60 m behind the driver's ocular points to the horizon. Class I FOV and an example of display view conforming to this FOV is described in Figure 2.

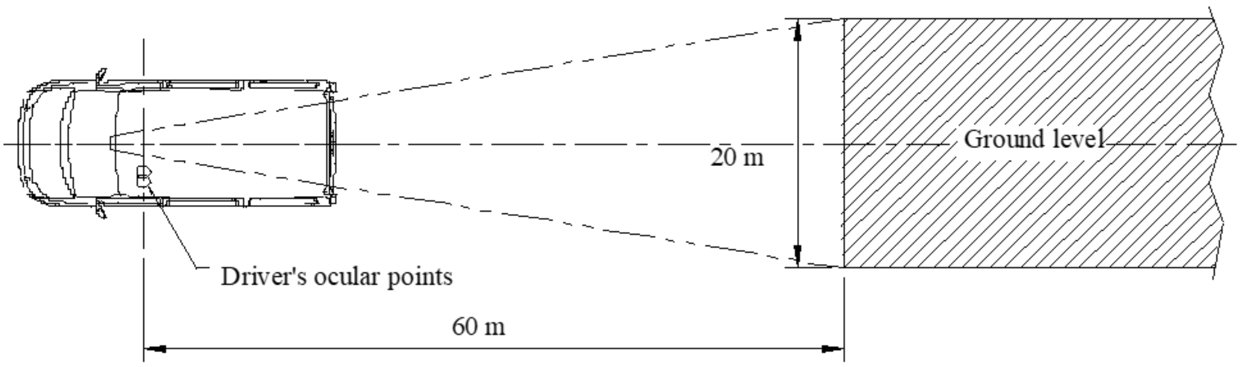

Figure 2 – Class I FOV and example of display view

5.2 Class II FOV

The field of vision shall be such that the driver can see at least a 5 m wide, flat, horizontal portion of the road, which is bounded by a plane which is parallel to the median longitudinal vertical plane and passing through the outermost point of the vehicle on the driver's side of the vehicle and extends from 30 m behind the driver's ocular points to the horizon. In addition, the road shall be visible to the driver over a width of 1 m, which is bounded by a plane parallel to the median longitudinal vertical plane and passing through the outermost point of the vehicle starting from a point 4 m behind the vertical plane passing through the driver's ocular points. The corresponding text is valid on the passenger side. Class II FOV and an example of display view conforming to this FOV is described in Figure 3. For composite images of left and right cameras, non-continuous images shall be clearly separated from each other. The image of the right side field of view shall be presented to the right of the longitudinal vertical plane through the ocular reference point. The image of the left side field of view shall be presented to the left of the longitudinal vertical plane through the ocular reference point.

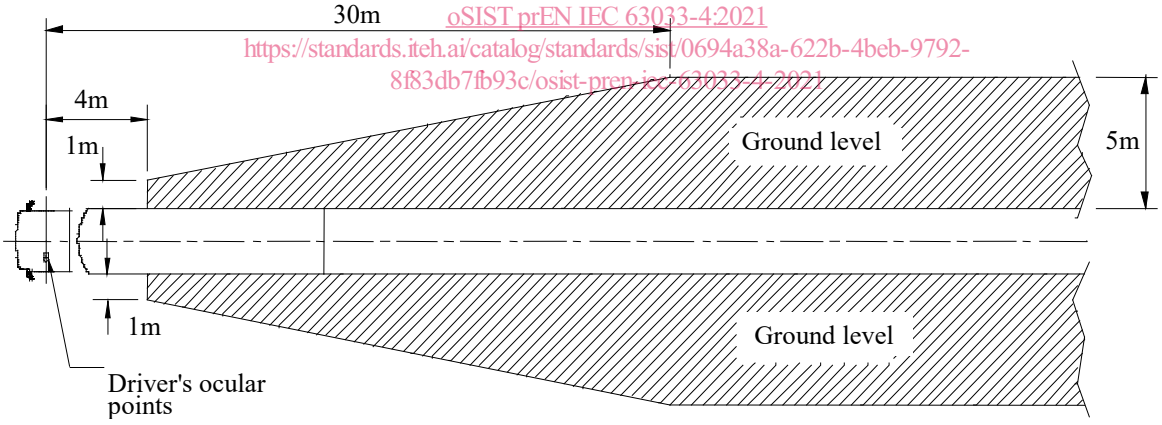

Figure 3 – Class II FOV and example of display view

5.3 Class III FOV

The field of vision shall be such that the driver can see at least a 4 m wide, flat, horizontal portion of the road, which is bounded by a plane parallel to the median longitudinal vertical