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This standard includes the English version of the European Standard.

Táto norma bola oznámená vo Vestníku ÚNMS SR č. 09/14

Obsahuje: EN 62676-1-2:2014, IEC 62676-1-2:2013

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**Video surveillance systems for use in security applications -
Part 1-2: System requirements – Performance requirements for video
transmission
(IEC 62676-1-2:2013)**

Systèmes de vidéosurveillance destinés à être utilisés dans les applications de sécurité -
Part 1-2: Exigences systèmes -
Exigences de performances pour la transmission vidéo
(CEI 62676-1-2:2013)

Videoüberwachungsanlagen für Sicherheitsanwendungen -
Teil 1-2: Allgemeine Anforderungen an die Videoübertragung
(IEC 62676-1-2:2013)

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Comité Européen de Normalisation Electrotechnique
Europäisches Komitee für Elektrotechnische Normung

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Foreword

The text of document 79/433/FDIS, future edition 1 of IEC 62676-1-2, prepared by IEC TC 79 "Alarm and electronic security systems" was submitted to the IEC-CENELEC parallel vote and approved by CENELEC as EN 62676-1-2:2014.

The following dates are fixed:

- latest date by which the document has to be implemented at national level by publication of an identical national standard or by endorsement (dop) 2014-09-03
- latest date by which the national standards conflicting with the document have to be withdrawn (dow) 2016-12-03

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In the official version, for Bibliography, the following notes have to be added for the standards indicated:

IEC 62676-2-3	NOTE	Harmonised as EN 62676-2-3.
ISO 19111	NOTE	Harmonised as EN ISO 19111.
ISO 19115	NOTE	Harmonised as EN ISO 19115.

Annex ZA (normative)

Normative references to international publications with their corresponding European publications

The following documents, in whole or in part, are normatively referenced in this document and are indispensable for its application. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

NOTE When an international publication has been modified by common modifications, indicated by (mod), the relevant EN/HD applies.

<u>Publication</u>	<u>Year</u>	<u>Title</u>	<u>EN/HD</u>	<u>Year</u>
IEC 61709	-	Electric components - Reliability - Reference conditions for failure rates and stress models for conversion	EN 61709	2011
IEC/TR 62380	-	Reliability data handbook - Universal model for reliability prediction of electronics components, PCBs and equipment	-	-
IEC 62676-1-1	-	Video surveillance systems for use in security applications - Part 1-1: Video system requirements	EN 62676-1-1	-
IEC 62676-2-1	-	Video surveillance systems for use in security applications - Part 2-1: Video transmission protocols - General requirements	EN 62676-2-1	-
ISO/IEC 10646	-	Information technology - Universal Coded Character Set (UCS)	-	-
ISO/IEC 13818-9	-	Information technology - Generic coding of moving pictures and associated audio information - Part 9: Extension for real time interface for system decoders	-	-
ISO/IEC 14496-2	-	Information Technology – Coding of audio-visual objects - Part 2: Visual	-	-
ISO/IEC 14496-3	-	Information technology - Coding of audio-visual objects - Part 3: Audio	-	-
ISO/IEC 14496-10	-	Information technology - Coding of audio-visual objects - Part 10: Advanced Video Coding	-	-
ITU-T Recommendation G.711	-	Pulse code modulation (PCM) of voice frequencies	-	-
ITU-T Rec .726	-	General Aspects of Digital Transmission Systems, Terminal Equipment - 40, 32, 24, 16 kbit/s Adaptive Differential Pulse Code Modulation (ADPCM)	-	-
IEEE Std 1413.1	-	IEEE Guide for Selecting and Using Reliability - Predictions Based on IEEE 1413	-	-
IETF RFC 1122	-	Requirements for Internet Hosts - Communication Layers	-	-
IETF RFC 1157	-	Simple Network Management Protocol (SNMP)	-	-
IETF RFC 1441	-	Introduction to version 2 of the Internet-standard Network Management Framework	-	-
IETF RFC 2030	-	Simple Network Time Protocol (SNTP) Version 4 for IPv4, IPv6 and OSI	-	-

<u>Publication</u>	<u>Year</u>	<u>Title</u>	<u>EN/HD</u>	<u>Year</u>
RFC 2069	-	Digest Access Authentication	-	-
IETF RFC 2131	-	Dynamic Host Configuration Protocol	-	-
IETF RFC 2246	-	The TLS Protocol Version 1.0	-	-
IETF RFC 2326	1998	Real time Streaming protocol (RTSP)	-	-
IETF RFC 2435	-	RTP Payload Format for JPEG-compressed Video	-	-
IETF RFC 2453	-	Routing Information Protocol	-	-
IETF RFC 2617	-	HTTP Authentication: Basic and Digest Access Authentication	-	-
IETF RFC 3016	-	RTP Payload Format for MPEG-4 Audio/Visual Streams	-	-
IETF RFC 3268	-	Advanced Encryption Standard (AES) Ciphersuites for Transport Layer Security (TLS)	-	-
IETF RFC 3315	-	Dynamic Host Configuration Protocol for IPv6 (DHCPv6)	-	-
IETF RFC 3410	-	Introduction and Applicability Statements for Internet Standard Management Framework	-	-
IETF RFC 3550	-	A Transport Protocol for Real-Time Applications	-	-
IETF RFC 3551	-	RTP Profile for Audio and Video Conferences with Minimal Control	-	-
IETF RFC 3984	-	RTP Payload Format for H.264 Video	-	-
IETF RFC 4346	-	The Transport Layer Security (TLS) Protocol Version 1.1	-	-
IETF RFC 4541	-	IGMP and MLD Snooping Switches	-	-
IETF RFC 4566	-	SDP: Session Description Protocol	-	-
IETF RFC 4607	-	Source-Specific Multicast for IP	-	-
IETF RFC 4862	-	IPv6 Stateless Address Autoconfiguration	-	-



INTERNATIONAL STANDARD

NORME INTERNATIONALE



**Video surveillance systems for use in security applications –
Part 1-2: System requirements – Performance requirements for video
transmission**

**Systèmes de vidéosurveillance destinés à être utilisés dans les applications de
sécurité –
Partie 1-2: Exigences systèmes – Exigences de performances pour la
transmission vidéo**





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INTERNATIONAL STANDARD

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CONTENTS

FOREWORD.....	5
INTRODUCTION.....	7
1 Scope.....	8
2 Normative references	8
3 Terms, definitions and abbreviations	10
3.1 Terms and definitions	10
3.2 Abbreviations	24
4 Performance requirements	26
4.1 General.....	26
4.2 Network time services	27
4.2.1 General	27
4.2.2 Real-time clock.....	27
4.2.3 Accurate time services for the transport stream	27
4.3 Video transmission timing requirements	27
4.3.1 General	27
4.3.2 Connection time	27
4.3.3 Connection capabilities.....	28
4.4 Performance requirements on streaming video	28
4.4.1 Introduction latency, jitter, throughput.....	28
4.4.2 Requirements on network jitter	29
4.4.3 Packet loss.....	29
4.4.4 Level of performance	30
4.4.5 Packet jitter	30
4.4.6 Monitoring of interconnections	31
5 IP video transmission network design requirements.....	31
5.1 General	31
5.2 Overview	31
5.3 Digital network planning	32
5.3.1 General	32
5.3.2 Critical requirements for IP video streaming performance	32
5.3.3 Availability.....	33
5.4 Additional architecture principles.....	34
5.5 Network design	34
5.5.1 Small unicast network.....	34
5.5.2 Small multicast video network.....	35
5.5.3 Hierarchical VSS network	35
5.5.4 Effective video IP network capacity planning	36
5.5.5 Wireless interconnections.....	37
5.6 Replacement and redundancy	37
5.6.1 Redundant network design	37
5.6.2 Availability.....	38
5.7 Centralized and decentralized network recording and video content analytics	38
6 General IP requirements.....	39
6.1 General.....	39
6.2 IP – ISO Layer 3.....	39
6.3 Addressing	39

6.4	Internet control message protocol (ICMP).....	40
6.4.1	General	40
6.4.2	Diagnostic requirements	40
6.5	Diagnostics	41
6.6	IP multicast	41
6.6.1	General	41
6.6.2	Internet group multicast protocol (IGMP) requirements	41
7	Video streaming requirements	41
7.1	General	41
7.2	Transport protocol	42
7.2.1	General	42
7.2.2	JPEG over RTP	42
7.2.3	JPEG over HTTP	42
7.3	Documentation and specification	43
7.3.1	General	43
7.3.2	Non-compliant, proprietary and vendor specific payload formats.....	43
7.3.3	Receiving unsupported RTP payload formats.....	44
7.4	Streaming of metadata	44
7.4.1	General	44
7.4.2	XML documents as payload	44
7.4.3	General	44
8	Video stream control requirements	45
8.1	General	45
8.2	Usage of RTSP in video transmission devices	45
8.2.1	General	45
8.2.2	The use of RTSP with multicast	45
8.3	RTSP standards track requirements	46
8.3.1	General	46
8.3.2	High level IP video streaming and control interfaces.....	46
8.3.3	Minimal RTSP method and header implementation	46
8.3.4	RTSP authentication.....	46
9	Device discovery and description requirements	46
10	Eventing requirements.....	47
11	Network device management requirements.....	47
11.1	General	47
11.2	IP video MIB example.....	48
11.3	The SNMP agent and manager for video transmission devices	48
11.4	Performance requirements on the SNMP agent	49
11.5	VSS SNMP trap requirements for event management	50
12	Network security requirements	50
12.1	General	50
12.2	Transport level security requirements for SG4 transmission	51
	Bibliography.....	52
	Figure 1 – Network buffer	29
	Figure 2 – Network latency, jitter, loss	33
	Figure 3 – System design	34

Figure 4 – Small network	35
Figure 5 – Multicast network	35
Figure 6 – Hierarchical network.....	36
Figure 7 – Redundant network	38
Figure 8 – MIB structure	48
Table 1 – Time service accuracy for video transport stream	27
Table 2 – Interconnections – Timing requirements	28
Table 3 – Video transmission network requirements	28
Table 4 – Video transmission network requirements	28
Table 5 – Performance requirements video streaming and stream display	30
Table 6 – Video stream network packet jitter.....	31
Table 7 – Monitoring of interconnections.....	31

INTERNATIONAL ELECTROTECHNICAL COMMISSION

**VIDEO SURVEILLANCE SYSTEMS
FOR USE IN SECURITY APPLICATIONS –**
**Part 1-2: System requirements –
Performance requirements for video transmission**
FOREWORD

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International Standard IEC 62676-1-2 has been prepared by IEC technical committee 79: Alarm and electronic security systems.

The text of this standard is based on the following documents:

FDIS	Report on voting
79/433/FDIS	79/446/RVD

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

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

A list of all parts in the IEC 62676, published under the general title *Video surveillance systems for use in security applications*, can be found on the IEC website.

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

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

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INTRODUCTION

The IEC Technical Committee 79 in charge of alarm and electronic security systems together with many governmental organisations, test houses and equipment manufacturers have defined a common framework for video surveillance transmission in order to achieve interoperability between products.

The IEC 62676 series of standards on video surveillance system is divided into 4 independent parts:

- Part 1: System requirements
- Part 2: Video transmission protocols
- Part 3: Analog and digital video interfaces
- Part 4: Application guidelines (to be published)

Each part has its own clauses on scope, references, definitions and requirements.

This IEC 62676-1 series consists of 2 subparts, numbered parts 1-1 and 1-2 respectively:

IEC 62676-1-1, *System requirements – General*

IEC 62676-1-2, *System requirements – Performance requirements for video transmission*

The second subpart of this IEC 62676-1 series applies to video transmission. The purpose of the transmission system in a Video Surveillance System (VSS) installation is to provide reliable transmission of video signals between the different types of VSS equipment in security, safety and monitoring applications.

Today VSS reside in security networks using IT infrastructure, equipment and connections within the protected site itself.

VIDEO SURVEILLANCE SYSTEMS FOR USE IN SECURITY APPLICATIONS –

Part 1-2: System requirements – Performance requirements for video transmission

1 Scope

This part of IEC 62676 introduces general requirements on video transmission. This standard covers the general requirements for video transmissions on performance, security and conformance to basic IP connectivity, based on available, well-known, international standards.

Clauses 4 and 5 of this standard define the minimum performance requirements on video transmission for security applications in IP networks. In surveillance applications the requirements on timing, quality and availability are strict and defined in the last section of this standard. Guidelines for network architecture are given, how these requirements can be fulfilled.

Clause 6 and the next clauses of this standard define requirements on basic IP connectivity of video transmission devices to be used in security applications. If a video transmission device is used in security, certain basic requirements apply. First of all a basic understanding of IP connectivity needs to be introduced which requests the device to be compliant to fundamental network protocols. These could be requirements which may be applied to all IP security devices even beyond IP video. For this reason requirements are introduced in a second step for compliance to basic streaming protocols, used in this standard for video streaming and stream control. Since security applications need high availability and reliability, general means for the transmission of the video status and health check events have to be covered. These are defined in general requirements on eventing and network device management. In security proper maintenance and setup is essential for the functioning of the video transmission device. Locating streaming devices and their capabilities is a basic requirement and covered in 'device discovery and description'.

2 Normative references

The following documents, in whole or in part, are normatively referenced in this document and are indispensable for its application. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

IEC 61709, *Electric components – Reliability – Reference conditions for failure rates and stress models for conversion*

IEC/TR 62380, *Reliability data handbook – Universal model for reliability prediction of electronics components, PCBs and equipment*

IEC 62676-1-1, *Video surveillance systems for use in security applications – Part 1-1: System requirements – General*

IEC 62676-2-1, *Video surveillance systems for use in security applications – Part 2-1: Video transmission protocols – General requirements*

ISO/IEC 10646, *Information technology – Universal multiple-octet coded character set (UCS)*

ISO/IEC 13818-9, *Information technology – Generic coding of moving pictures and associated audio information – Part 9: Extension for real time interface for systems decoders*

ISO/IEC 14496-2, *Information technology – Coding of audio-visual objects – Part 2: Visual*

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IETF RFC 1157, *Simple Network Management Protocol*

IETF RFC 1441, *Introduction to version 2 of the Internet-standard Network Management Framework*

IETF RFC 2030, *Simple Network Time Protocol (SNTP) Version 4 for IPv4, IPv6 and OSI*

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IETF RFC 2131, *Dynamic Host Configuration Protocol*

IETF RFC 2246, *The TLS Protocol Version 1.0*

IETF RFC 2326:1998, *Real Time Streaming Protocol (RTSP)*

IETF RFC 2435, *RTP Payload Format for JPEG-compressed Video*

IETF RFC 2453, *RIP - Routing Information Protocol*

IETF RFC 2617, *HTTP Authentication Basic and Digest Access Authentication, June 1999.*

IETF RFC 3016, *RTP Payload Format for MPEG-4 Audio/Visual Streams.*

IETF RFC 3268, *Advanced Encryption Standard (AES) Cipher suites for Transport Layer Security (TLS)*

IETF RFC 3315, *Dynamic Host Configuration Protocol for IPv6 (DHCPv6)*

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IETF RFC 3551, *RTP Profile for Audio and Video Conferences with Minimal Control*

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