

Australian/New Zealand Standard™

**Video surveillance systems for use in  
security applications**

**Part 2.1: Video transmission protocols  
— General requirements (IEC 62676-  
2-1:2013, MOD)**



AS/NZS 62676.2.1:2020

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The following are represented on Committee EL-031:

- Australian Digital & Telecommunications Industry Association
- Australian Federal Police
- Australian Industry Group
- Australian Security Industry Association
- Engineers Australia
- Fire Protection Association Australia
- Insurance Council of Australia
- New Zealand Security Association
- NSW Police Force
- Queensland Police Service
- Security Providers Association of Australia
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1:2013, MOD)**

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## Preface

This Standard was prepared by the Joint Standards Australia/Standards New Zealand Committee EL-031, Intruder Alarm Equipment and Installations.

The objective of this Standard is to introduce an IP network interface for devices in surveillance applications. This Standard specifies a network protocol for the full interoperability of video devices. On top of the basic layers protocols are defined to accomplish the full interoperability of video devices. In surveillance applications IP video devices have to use standardized protocols to accomplish following functionality: video streaming, stream control, event handling, discovery, capability description, device management, PTZ control, auxiliaries and other functions.

This Standard is an adoption with national modifications, and has been reproduced from, IEC 62676-2-1:2013, *Video surveillance systems for use in security applications — Part 2-1: Video transmission protocols — General requirements*. The modifications are additional requirements and are set out in [Appendix ZZ](#), which has been added at the end of the source text.

[Appendix ZZ](#) lists the variations to IEC 62676-2-1:2013 for the application of this Standard in Australia and New Zealand.

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- (a) In the source text “this part of IEC 62676” should read “this Australian/New Zealand Standard”.
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## NOTES

## CONTENTS

FOREWORD.....	4
INTRODUCTION.....	6
1 Scope.....	7
2 Normative references .....	7
3 Terms, definitions and abbreviations .....	8
3.1 Terms and definitions .....	8
3.2 Abbreviations .....	15
4 Video transmission network architecture.....	16
4.1 General.....	16
4.2 Networking and connectivity .....	17
4.2.1 General .....	17
4.2.2 Network streaming performance: quality of service .....	18
4.3 Device discovery and description .....	18
4.4 Video media types and payload formats .....	18
4.5 Video transport.....	18
4.6 Eventing and health check.....	18
5 The building block of existing standards .....	19
6 VSS device model .....	19
6.1 Overview .....	19
6.2 Device model elements .....	20
7 General IP interoperability requirements.....	21
7.1 General .....	21
7.2 General protocol requirements overview.....	21
7.3 General high level IP video interface and protocol requirements.....	21
7.3.1 General .....	21
7.3.2 Versioning, capability exchange, and extensibility requirements .....	22
7.3.3 Implementations .....	22
7.4 Non-conformance video transmission systems and devices .....	22
7.5 Mandatory documentation for the IP video interface of a VTD.....	22
7.6 Video and data transport: mandatory streaming requirements .....	24
7.7 Overview .....	24
8 Live streaming.....	25
8.1 General.....	25
8.2 Media stream protocol .....	25
8.2.1 Transport format.....	25
8.2.2 Media transport .....	25
8.2.3 Synchronization point .....	27
8.3 Media control protocol .....	28
8.3.1 Stream control.....	28
8.3.2 RTSP .....	28
8.3.3 Keep-alive method for RTSP session.....	29
8.3.4 RTSP audio and video synchronization.....	30
8.3.5 RTSP message example.....	31
8.4 Error handling .....	32
9 Playback .....	32
9.1 General.....	32

9.2 RTP header extension .....	32
10 Device discovery and description.....	32
11 Eventing requirements.....	32
Bibliography.....	34
Figure 1 – Overview IP Video standard protocol.....	17
Figure 2 – Functional protocol layers .....	17
Figure 3 – Building block of existing standards .....	19
Figure 4 – VTD example network .....	20
Figure 5 – Layer structure.....	24
Figure 6 – RTCP sequence.....	26
Figure 7 – RTCP sender report.....	27
Figure 8 – Media synchronization.....	27
Figure 9 – Stream control .....	28
Figure 10 – Keep alive .....	30
Table 1 – RTSP methods .....	29

## INTERNATIONAL ELECTROTECHNICAL COMMISSION

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**VIDEO SURVEILLANCE SYSTEMS FOR USE  
IN SECURITY APPLICATIONS –**
**Part 2-1: Video transmission protocols –  
General requirements**

## FOREWORD

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International Standard IEC 62676-2-1 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
79/435/FDIS	79/448/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 series, 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 62676-2 series consists of 3 subparts, numbered parts 2-1, 2-2 and 2-3 respectively:

IEC 62676-2-1, *Video transmission protocols – General requirements*

IEC 62676-2-2, *Video transmission protocols – IP interoperability implementation based on HTTP and REST services*

IEC 62676-2-3, *Video transmission protocols – IP interoperability implementation based on Web services*

The first subpart of this IEC 62676-2 series defines protocol requirements to be fulfilled by any high-level IP video device interface. The following two parts – Part 2-2 and Part 2-3 – define two alternative protocols, one is based on HTTP and REST services and the second is based on Web Services. It is based on the general requirements for video transmission of IEC 62676-1-2, which defines minimum IP connectivity requirements, basic video streaming, stream control, eventing, discovery and description functions.

The purpose of the transmission system in a video surveillance system installation is to provide reliable transmission of video signals between the different types of Video Surveillance System (VSS) so far called CCTV 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 2-1: Video transmission protocols – General requirements**

#### **1 Scope**

This part of IEC 62676 introduces an IP network interface for devices in surveillance applications. This International Standard specifies a network protocol for the full interoperability of video devices. On top of the basic layers protocols are defined to accomplish the full interoperability of video devices. In surveillance applications IP video devices have to use standardized protocols to accomplish following functionality: video streaming, stream control, event handling, discovery, capability description, device management, PTZ control, auxiliaries and other functions.

Some areas of this transmission standard are covered by more than one approach, e.g. ZeroConf and WS-Discovery.

The network protocols recommended and defined by this video transmission standard are selected with a sense for future relevance and further extensions.

Video transmission equipment may be combined with additional functions, e.g. for audio or metadata transmission.

#### **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 62676-1-2, *Video surveillance systems for use in security applications – Part 1-2: System requirements – Performance requirements for video transmission*

IEC 62676-2-2, *Video surveillance systems for use in security applications – Part 2-2: Video transmission protocols – IP interoperability implementation based on HTTP and REST services*

IEC 62676-2-3, *Video surveillance systems for use in security applications – Part 2-3: Video transmission protocols – IP interoperability implementation based on web services*

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

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

IETF RFC 3550, *A transport protocol for Real-Time Applications* (Replaces RFC 1889)

IETF RFC 3550, Standard 64, *RTP: A Transport Protocol for Real-Time Applications*

IETF RFC 3551, *Profile for audio and video conferences with minimal control* (Replaces RFC890)