ICS 35.240.60, 91.140.01, 97.120

SLOVENSKÁ TECHNICKÁ NORMA

August 2025

STN	**Otvorená dátová komunikácia v automatizácii, ovládaní a riadení budov Protokol riadiacej siete Časť 10: Špecifikácia webových služieb pre protokol riadiacej siete**	**STN EN 14908-10** 74 7306

Open Data Communication in Building Automation, Controls and Building Management - Control Network Protocol - Part 10: Web Services for Control Networking Protocol Specification

Táto norma obsahuje anglickú verziu európskej normy.
This standard includes the English version of the European Standard.

Táto norma bola oznámená vo Vestníku ÚNMS SR č. 07/25

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EUROPEAN STANDARD
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EN 14908-10

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ICS 35.240.67; 91.140.01; 97.120

English Version

Open Data Communication in Building Automation, Controls and Building Management - Control Network Protocol - Part 10: Web Services for Control Networking Protocol Specification

Communication de données ouverte dans le domaine de l'automatisation, du contrôle et de la gestion des bâtiments - Protocole de contrôle réseau - Partie 10 : Services Web pour la spécification du protocole de contrôle réseau

Firmenneutrale Datenkommunikation für die Gebäudeautomation und Gebäudemanagement - Gebäude-Netzwerk-Protokoll - Teil 10: Spezifikation der Webdienste für das Kontrollnetzwerkprotokoll

This European Standard was approved by CEN on 17 February 2025.

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This European Standard exists in three official versions (English, French, German). A version in any other language made by translation under the responsibility of a CEN member into its own language and notified to the CEN-CENELEC Management Centre has the same status as the official versions.

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EUROPEAN COMMITTEE FOR STANDARDIZATION
COMITÉ EUROPÉEN DE NORMALISATION
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European foreword

This document (EN 14908-10:2025) has been prepared by Technical Committee CEN/TC 247 "*Building Automation, Controls and Building Management*", the secretariat of which is held by SNV.

This European Standard shall be given the status of a national standard, either by publication of an identical text or by endorsement, at the latest by October 2025, and conflicting national standards shall be withdrawn at the latest by October 2025.

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. CEN shall not be held responsible for identifying any or all such patent rights.

This document is part of the EN 14908 series, which consists of the following parts:

— EN 14908-1, *Open Data Communication in Building Automation, Controls and Building Management — Control Network Protocol — Part 1: Protocol Stack*

— EN 14908-2, *Open Data Communication in Building Automation, Controls and Building Management — Control Network Protocol — Part 2: Twisted Pair Communication*

— EN 14908-3, *Open Data Communication in Building Automation, Controls and Building Management — Control Network Protocol — Part 3: Power Line Channel Specification*

— EN 14908-4, *Open Data Communication in Building Automation, Controls and Building Management — Control Network Protocol — Part 4: IP Communication*

— EN 14908-5, *Open Data Communication in Building Automation, Controls and Building Management Implementation Guideline — Control Network Protocol — Part 5: Implementation*

— EN 14908-6, *Open Data Communication in Building Automation, Controls and Building Management — Control Network Protocol — Part 6: Application Elements*

— EN 14908-7, *Open communication in building automation, controls and building management — Control Network Protocol — Part 7: Communication via internet protocols*

— EN 14908-8, *Open Data Communication in Building Automation, Controls and Building Management — Control Network Protocol — Part 8: Communication using Broadband over Power Line Networks – with internet protocols*

— EN 14908-9, *Open Data Communication in Building Automation, Controls and Building Management — Control Network Protocol — Part 9: Wireless Communication in ISM bands*

Any feedback and questions on this document should be directed to the users' national standards body. A complete listing of these bodies can be found on the CEN website.

According to the CEN-CENELEC Internal Regulations, the national standards organisations of the following countries are bound to implement this European Standard: Austria, Belgium, Bulgaria, Croatia, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Republic of North Macedonia, Romania, Serbia, Slovakia, Slovenia, Spain, Sweden, Switzerland, Türkiye and the United Kingdom.

Introduction

This document specifies the Internet of Thing IoT Access Protocol (IAP) as a standard web services application protocol based on MQTT (Message Queuing Telemetry Transport), and REST (Representational State Transfer) and WebSockets over HTTP or HTTPS transport protocols.

MQTT, REST, and WebSockets are widely used today for the IoT, but they are low-level protocols with no standardization in the application data and service requests sent using the protocols. IAP delivers that standardization for control and automation networks.

IAP provides secure and open access to the most complex building automation and control systems, enabling integration of existing controls and automation systems with emerging analytics and AI applications that transform operations from a closed single-protocol loop to an intelligent multi-protocol system.

EN 14908-10 IoT Access Protocol (IAP) web services are an open and extensible standard designed for residential, commercial, and industrial control and automation applications using the EN 14908-1 control network protocol and related protocols to provision and manage IoT devices, to access and update data from the devices, and to aggregate data from diverse devices and protocols for delivery to external applications and services.

IAP web services are typically implemented on a central gateway or edge server that communicates with multiple sensor, actuator, and controller edge devices using one or more drivers such as EN 14908-1, and also interfaces with one or more enterprise and cloud services or applications. The following figure 1 illustrates a gateway or edge server that uses IAP to communicate with edge devices and cloud services.

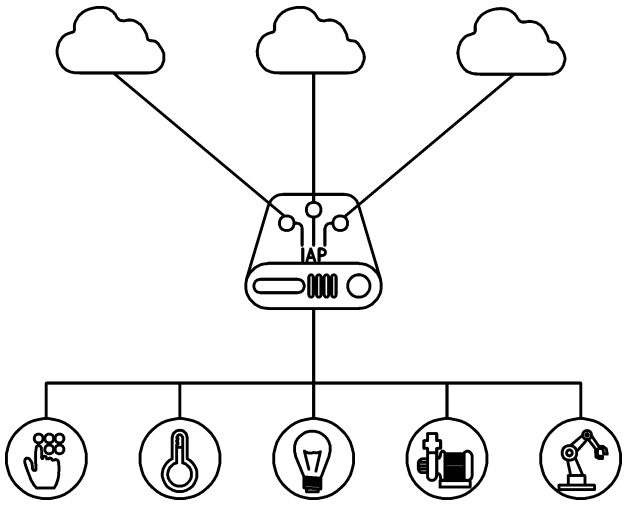

Figure 1 — Edge Server

This document is for software developers and web-page authors. It documents three APIs: *IAP/MQ*, which uses MQTT (Message Queuing Telemetry Transport) as the transport protocol, *IAP/REST (REpresentational State Transfer),* which uses REST over HTTP or HTTPS, and IAP/WS (WebSockets), which uses WebSockets over HTTP or HTTPS. These APIs are typically implemented on a gateway or edge server that interfaces with edge devices such as energy meters, motion sensors, temperature sensors, HVAC controllers, water heaters/boilers, lighting controllers, refrigeration controllers, variable-frequency drives, motion controllers, and switches. The gateway or edge server typically communicates with the edge devices using a variety of building controls communication protocols including EN 14908-1 control network protocol, BACnet (ISO 16484-5), Modbus, EnOcean, and LoRaWAN.

This document consists of the following four main sections:

— IAP API Fundamentals;

— IAP/MQ API;

— IAP/REST API;

— IAP/WS API.

1 Scope

This document specifies an open and extensible standard for residential, commercial, and industrial control and automation applications using the EN 14908-1 control network protocol and related protocols (EN 14908-2 to EN 14908-9) to provision and manage IoT devices, to access and update data from the devices, and to aggregate data from diverse devices and protocols for delivery to external applications and services.

The web services as specified in this document are typically implemented on a central gateway or edge server that communicates with multiple sensor, actuator, and controller edge devices using one or more drivers, such as EN 14908-1, and typically also interfaces with one or more enterprise and cloud services or applications.

2 Normative references

The following documents are referred to in the text in such a way that some or all 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.

EN 14908-5, *Open Data Communication in Building Automation, Controls and Building Management Implementation Guideline — Control Network Protocol — Part 5: Implementation*

EN 14908-6, *Open Data Communication in Building Automation, Controls and Building Management Implementation Guideline — Control Network Protocol — Part 6: Application elements*