



# ASAM

Association for Standardization of  
Automation and Measuring Systems

---

## **ASAM ODS**

Open Data Services 6.1.1

Part 1 of 15

### **Introduction**

Version 6.1.1

Date: 2021-06-30

### **Base Standard**

**Disclaimer**

This document is the copyrighted property of ASAM e.V.  
Any use is limited to the scope described in the license terms. The license terms can be viewed at [www.asam.net/license](http://www.asam.net/license)

---

**Table of Contents**

<b>Foreword</b>	<b>5</b>
<b>1 Introduction to ASAM ODS</b>	<b>7</b>
<b>1.1 Goals and Benefits of ASAM ODS</b>	<b>7</b>
1.1.1 Positioning of ASAM ODS within ASAM	7
1.1.2 Drawbacks of Current Systems	9
1.1.3 Benefits of ASAM ODS	9
<b>1.2 Technical Approach</b>	<b>11</b>
1.2.1 The Data Model	11
1.2.2 The Interfaces	12
1.2.3 The Physical Storage	14
1.2.4 The ASAM Transport Formats (ATF)	15
1.2.5 Application Models	16
<b>1.3 Impact on Products</b>	<b>17</b>
<b>1.4 Technological Level for Implementation</b>	<b>18</b>
<b>1.5 The ODS Data Model – A Deeper Insight</b>	<b>19</b>
1.5.1 The Base Model	19
1.5.2 The Application Model	22
1.5.3 The Instances	24
<b>1.6 The ODS Application Programming Interface (API) - A Deeper Insight</b>	<b>26</b>
1.6.1 The HTTP-based API (HTTP-API)	29
1.6.1.1 The Entry Point	29
1.6.1.2 Access to the Application Model	29
1.6.1.3 Access to Descriptive and Mass Data	30
1.6.1.4 Transaction Handling	30
1.6.1.5 Miscellaneous Standard Functionality	30
1.6.1.6 Security Management Functionality	31
1.6.1.7 Notification Functionality	31
1.6.2 The Object-Oriented API (OO-API)	32
1.6.2.1 The Entry Point	32
1.6.2.2 Access to the Base Model	33
1.6.2.3 Access to the Application Model	34
1.6.2.4 Access to General Instances	34
1.6.2.5 Access to Result Data	35
1.6.2.6 Queries	36
1.6.3 The Procedural API (RPC-API)	37
<b>1.7 The Physical Data Storage - A Deeper Insight</b>	<b>38</b>
<b>1.8 The ASAM Transport Format (ATF) - A Deeper Insight</b>	<b>42</b>
1.8.1 ATF/CLA	43
1.8.2 ATF/XML	44
<b>1.9 Application Models - A Deeper Insight</b>	<b>45</b>
1.9.1 The NVH Application Model	45
1.9.2 The Calibration Application Model	45
1.9.3 The VSIM Application Model	45
1.9.4 The Geometry Application Model	46
1.9.5 The Workflow Application Model	46

---

1.9.6	The Bus Data Application Model	46
1.9.7	The Big Data Connector	46
1.9.8	The Instrumentation Application Model	47
	Figure Directory	48
	Table Directory	49

## FOREWORD

This document contains chapter 1 of the ASAM ODS base standard, version 6.1.1.

Chapter 1 of the ASAM ODS base standard provides a brief overview on all main aspects of ASAM ODS.

It is intended as initial source of information for people interested in ASAM ODS and shall be used to gain insight into the various features of ASAM ODS.

This chapter is part of a series of chapters specifying the ASAM ODS base standard, and must not be used as a stand-alone specification. The technical reference of the ASAM ODS base standard is built by the complete set of chapters as listed below:

- Chapter 1: Introduction
- Chapter 2: Relation to Other Standards
- Chapter 3: Architecture
- Chapter 4: Base Model (35)
- Chapter 5: OO-API (5.3.1)
- Chapter 6: RPC-API (3.2.1)
- Chapter 7: ATF/XML (1.3.1)
- Chapter 8: ATF/CLA (1.4.1)
- Chapter 9: Physical Storage (1.3.2)
- Chapter 10: MIME Types and External References (1.2.3)
- Chapter 11: HTTP-API (1.1.1)
- Chapter 12: Terms and Definitions
- Chapter 13: Symbols and Abbreviations
- Chapter 14: Bibliography
- Chapter 15: Appendices