

IO-Link maintenance cycle





What is happening?

- IO-Link learned that it is important to **frequently maintain the specification**
- IO-Link learned that it is important to **bundle related and dependant specification versions**
- An **annual package release cycle** was agreed to
- **Manufacturers** profit from:
 - Ability to coordinate their development in accordance to versions
- **Customers** profit from:
 - Identify the level of functionality and compatibility by one sight
 - Trusting the stability of the standard by a clear release communication and roadmap
- This relies on an **established versioning scheme** of specifications

What is a „package“?

- A package bundles consistent and cross-checked base specification versions:

- IO-Link Interface and System Specification
- IO-Link Test Specification
- IODD IO Device Description Specification
- IO-Link Common Profile Specification
- IO-Link Manufacturer Declarations (Templates)

Following specifications are related to specific packages

- IO-Link Profile BLOBs & Firmware Update Specification
- IO-Link Profile Smart Sensors 2nd Ed Specification
- IO-Link Safety System Extensions with SMI Specification
- IO-Link Safety - Test & Assessment Specification
- IO-Link Wireless System Extensions Specification
- IO-Link Wireless System Extensions Test Specification

IO-Link Base Specification Packages

Package	Validity start	Status	Validity end
Package 2024		Active	
• IO-Link Interface and System Specification V1.1.4	Sep. 2024		
• IO-Link Test Specification V1.1.4	Sep. 2024		
• IO Device Description Specification V1.1.4	Sep. 2024		
• IO-Link Device Description Specification V1.0.1 <small>Note)</small>	Mar. 2010		
• IO-Link Common Profile Specification V1.2	Sep. 2024		
• IO-Link Manufacturer Declarations V1.1.4 Sep. 2024	Sep. 2024		

Note): Use for backward compatibility to IO-Link V1.0 devices only

IO-Link Profiles

Specification	Validity start	Valid with Package
Firmware Update		
IO-Link Profile BLOB Transfer & Firmware Update Specification V1.2	Sep. 2024	2024
Smart Sensor Profile		
IO-Link Smart Sensor Profile Specification Ed. 2 V1.2	Jan. 2024	2024

IO-Link Safety System Extensions

Specifications	Validity start	Valid with Package
• IO-Link Safety System Extensions with SMI Specification V1.1.4	Sep. 2024	2024
• IO-Link Safety – Test & Assessment V1.1.4	Sep. 2024	2024

IO-Link Wireless System Extensions

Specifications	Validity start	Valid with Package
• IO-Link Wireless System Extensions Specification V1.1.3	Jun. 2022	2020, 2024
• IO-Link Wireless System Extensions Test Specification V1.1.3	Jun. 2023	2020, 2024



How do we versionize our specifications?

- Starting with Package 2024 / base specification version 1.1.4 we follow this versioning rules:

Version	Content	What does this mean?
1.1.X	Annually released Only clarifications / bugfixes	Intrinsic compatibility, bugfixes must be performed
1.Y	New release with added features	Since there are new features, these are available in new systems only, but compatible to old systems
2.0	WE DON'T PLAN ON THAT ONE!!!	



Changes with IO-Link Package 2024

- **Interface Specification and Test Specification**
 - Some bugfixes and clarifications
 - The device status must follow the event status, which is now also tested
- **Profiles (Common Profile, Smart Sensor Profile, BLOB Transfer and Firmware Update Profile and IO-Link Safety)**
 - Some bugfixes and clarifications
 - The representation of all released profiles in the IODD is now described with IODD-Snippets
 - For the BLOB Transfer and Firmware Update Profile this is new, for the others it was valid also before (since V1.1.3)
 - There was no test tool available and therefore the implementations were not really conformant and well tested
 - The IODD-Checker V1.1.13 (and newer) checks the profile implementation in the IODD bases on the IODD-Snippets released
 - The transition period for the Checker V1.1.11 ends September 30th 2025 (was prolonged, but we recommend to use the new one)
- **IODD Specification**
 - Some bugfixes and clarifications
 - The Profile specification and test mechanism based on the IODD-Snippets is described as a new chapter
- **IO-Link Safety**
 - Some Bugfixes
 - The DTI interface for the “Dedicated Tools” is changed from Microsoft COM to a much more future-proof REST interface.
 - The first IO-Link Safety certifications will be done based on V1.1.4. There is no transition period for V1.1.3.



How to handle issues with IODD-Snippets?

- The IODD-Checker **V1.1.13** (and newer) checks IODD-Snippets conformity, which is on the one hand assistance for the manufacturers, but on the other hand requires to provide IODDs with strict uniform IO-Link Profile look and feel from **2025-10-01** at the latest.
- Issues with the Snippets can be adressed via the IO-Link Project Document Management System:
 - Common Profile: https://www.io-link-projects.com/view_crs_page.php?project_id=259
 - BLOB Transfer and Firmware Update Profile: https://www.io-link-projects.com/view_crs_page.php?project_id=308
 - Smart Sensor Profile: https://www.io-link-projects.com/view_crs_page.php?project_id=257
 - Safety Extension: https://www.io-link-projects.com/view_crs_page.php?project_id=282
 - IODD-Checker: https://www.io-link-projects.com/view_crs_page.php?project_id=303
- In case of no access to the CR Databases, contact info@io-link.com instead.
- The IODD-Checker **V1.1.11** can be used until **2025-09-30** to avoid roadblocks regarding Snippets and / or IODD-Checker V1.1.13 issues.