

IEEE 1003.1-2017 - IEEE Standard for Information Technology--Portable Operating System Interface (POSIX(R)) Base Specifications

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Table 1: Data sheet for IEEE Standard for [Information Technology](#)--Portable Operating System [Interface](#)

Title	IEEE Standard for Information Technology--Portable Operating System Interface
Acronym	POSIX
Version	2017
Document Number	IEEE 1003.1-2017
Approved Date	2017-12-06
Published Date	2018-01-31
Reference	https://standards.ieee.org/standard/1003_1-2017.html
	http://pubs.opengroup.org/onlinepubs/9699919799/toc.htm

Note: The following is an excerpt from the official IEEE catalog. It is provided here as a convenience and is not authoritative. Refer to the original document as the authoritative reference.

Standard Details

POSIX.1-2017 defines a standard [operating system](#) interface and environment, including a command interpreter (or “shell”), and common utility programs to support [applications portability](#) at the [source code](#) level. It is intended to be used by both application developers and system implementors.

POSIX.1-2017 comprises four major components (each in an associated volume):

- 1. General terms, concepts, and interfaces common to all volumes of POSIX.1-2017, including utility conventions and C-language header definitions, are included in the Base Definitions volume of POSIX.1-2017.*
- 2. Definitions for system service functions and subroutines, language-specific system services for the C programming language, function issues, including portability, error handling, and error recovery, are included in the System Interfaces volume of POSIX.1-2017.*
- 3. Definitions for a standard source code-level interface to command interpretation services (a “shell”) and common utility programs for application programs are included in the Shell and Utilities volume of POSIX.1-2017.*
- 4. Extended rationale that did not fit well into the rest of the document structure, containing historical information concerning the contents of POSIX.1-2017 and why features were included or discarded by the standard developers, is included in the Rationale (Informative) volume of POSIX.1-2017.*

The following areas are outside of the scope of POSIX.1-2017:

- Graphics interfaces
- [Database management system](#) interfaces
- Record I/O considerations
- Object or binary code portability
- System configuration and resource [availability](#)

POSIX.1-2017 describes the external characteristics and facilities that are of importance to application developers, rather than the internal construction techniques employed to achieve these capabilities. Special emphasis is placed on those functions and facilities that are needed in a wide variety of commercial applications.

The facilities provided in POSIX.1-2017 are drawn from the following base documents:

- IEEE Std 1003.1, 2004 Edition (POSIX-1) (incorporating IEEE Std 1003.1-2001, IEEE Std 1003.1-2001/Cor 1-2002, and IEEE Std 1003.1-2001/Cor 2-2004)
- The Open Group Technical Standard, 2006, Extended [API](#) Set Part 1
- The Open Group Technical Standard, 2006, Extended API Set Part 2
- The Open Group Technical Standard, 2006, Extended API Set Part 3
- The Open Group Technical Standard, 2006, Extended API Set Part 4
- ISO/IEC 9899:1999, Programming Languages - C, including ISO/IEC 9899:1999/Cor.1:2001(E), ISO/IEC 9899:1999/Cor.2:2004(E), and ISO/IEC 9899:1999/Cor.3

Emphasis has been placed on standardizing existing practice for existing users, with changes and additions limited to correcting deficiencies in the following areas:

- Issues raised by Austin Group defect reports, IEEE Interpretations against IEEE Std 1003.1, and ISO/IEC defect reports against ISO/IEC 9945
- Issues raised in corrigenda for The Open Group [Technical Standards](#) and working group resolutions from The Open Group
- Issues arising from ISO TR 24715:2006, Conflicts between POSIX and the LSB
- Changes to make the text self-consistent with the additional material merged
- Features, marked Legacy or obsolescent in the base documents, have been considered for removal in this version
- A review and reorganization of the options within the standard
- Alignment with the ISO/IEC 9899:1999 standard, including ISO/IEC 9899:1999/Cor.2:2004(E)

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