
**Programming languages — C —
Extensions to support embedded
processors**

*Langages de programmation — C — Extensions pour supporter les
processeurs intégrés*

PDF disclaimer

This PDF file may contain embedded typefaces. In accordance with Adobe's licensing policy, this file may be printed or viewed but shall not be edited unless the typefaces which are embedded are licensed to and installed on the computer performing the editing. In downloading this file, parties accept therein the responsibility of not infringing Adobe's licensing policy. The ISO Central Secretariat accepts no liability in this area.

Adobe is a trademark of Adobe Systems Incorporated.

Details of the software products used to create this PDF file can be found in the General Info relative to the file; the PDF-creation parameters were optimized for printing. Every care has been taken to ensure that the file is suitable for use by ISO member bodies. In the unlikely event that a problem relating to it is found, please inform the Central Secretariat at the address given below.



COPYRIGHT PROTECTED DOCUMENT

© ISO/IEC 2008

All rights reserved. Unless otherwise specified, no part of this publication may be reproduced or utilized in any form or by any means, electronic or mechanical, including photocopying and microfilm, without permission in writing from either ISO at the address below or ISO's member body in the country of the requester.

ISO copyright office
Case postale 56 • CH-1211 Geneva 20
Tel. + 41 22 749 01 11
Fax + 41 22 749 09 47
E-mail copyright@iso.org
Web www.iso.org

Published in Switzerland

Contents	Page
1 SCOPE.....	1
2 NORMATIVE REFERENCES	1
3 CONFORMANCE.....	1
4 FIXED-POINT ARITHMETIC	2
4.1 Overview and principles of the fixed-point data types	2
4.1.1 The data types	2
4.1.2 Spelling of the new keywords	3
4.1.3 Rounding and Overflow	4
4.1.4 Type conversion, usual arithmetic conversions	5
4.1.5 Fixed-point constants	6
4.1.6 Operations involving fixed-point types	7
4.1.7 Fixed-point functions	9
4.1.8 Fixed-point definitions <stdfix.h>	11
4.1.9 Formatted I/O functions for fixed-point arguments	11
4.2 Detailed changes to ISO/IEC 9899:1999	12
5 NAMED ADDRESS SPACES AND NAMED-REGISTER STORAGE CLASSES	37
5.1 Overview and principles of named address spaces	37
5.1.1 Additional address spaces	37
5.1.2 Address-space type qualifiers	37
5.1.3 Address space nesting and rules for pointers	38
5.1.4 Standard library support	39
5.2 Overview and principles of named-register storage classes	39
5.2.1 Access to machine registers	39
5.2.2 Named-register storage-class specifiers	39
5.2.3 Ensuring correct side effects via objects allocated in registers	41
5.2.4 Relationship between named registers and I/O-register designators	41
5.3 Detailed changes to ISO/IEC 9899:1999	41
6 BASIC I/O HARDWARE ADDRESSING.....	49
6.1 Rationale	49
6.1.1 Basic Standardization Objectives	49
6.2 Terminology	49
6.3 Basic I/O Hardware addressing header <iohw.h>	51
6.3.1 Standardization principles	51
6.3.2 The abstract model	52