

Customer Notification

78K4TM Series

CCWIN-CDR-78K4

Operating Precautions

**Embedded Workbench 78K4
Integrated Development Environment**

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(A) Table of Operating Precautions (IDE)

No.	Outline	EW78400				
		Version	2.31e			
A1	Temporary File isn't deleted		X			
A2	Assembler Error Message isn't displayed		X			

- ✓ : Not applicable
- X : applicable
- : Not checked

(B) Table of Operating Precautions (Assembler)

No.	Outline	A78400				
		Version	1.33A			
B1	Backslash as last character in a comment		X			
B2	Project using only absolute segments		X			

- X : Applicable
- ✓ : Not applicable
- : Not checked

(C) Table of Operating Precautions (C-Compiler)

No.	Outline	Version	ICC78400			
			1.33A	1.33B		
C1	Stack area location exceeding 64K boundary		X	X		
C2	Missing external variable entry, if a global variable is only used in Inline-Assembler		X	X		
C3	For some C assignments no source code is generated		X	✓		

- X : Applicable
- ✓ : Not applicable
- : Not checked

(D) Table of Operating Precautions (Linker)

No.	Outline	Version	XLINK			
			4.53I			
D1	Unused Segments in multi-segment-definition line causes unnecessary error message		X			

- X : Applicable
- ✓ : Not applicable
- : Not checked

(E) Description of Operating Precautions (IDE)

No. A1	Temporary File isn't deleted
<p><u>Details</u> The Embedded Workbench generated under special conditions a temporary file (0001.tmp) in the project directory, which isn't deleted after exiting the Workbench. The problem occurs only if the used operating system is Windows 98 and at the first generation of a new project.</p> <p><u>Workaround(s)</u></p> <p>a) Update the operating system to Windows 98 SE b) Delete the temporary file manually.</p>	

No. A2	Assembler Error Message isn't displayed
<p><u>Details</u> If the total character size of filename, path and error message exceeds a certain limit and an assembler list file is generated an assembler error message may be not displayed. As the size of the message depends on the line number, kind of error etc. the maximum length of path and file name is not easily predictable. Keeping the path and file name within 80 characters should work.</p> <p><u>IAR Bug-ID</u> EW13168</p> <p><u>Workaround(s)</u></p> <p>Don't enable the generation of an assembler list file.</p>	

(F) Table of Operating Precautions (Assembler)

No. B1	Backslash as last character in a comment
<p><u>Details</u></p> <p>If the last character in a comment is a backslash the pre-processor looks upon the next source line as a comment too. So the assembler code in the following line is not used.</p> <p><u>Workaround</u></p> <p>Don't use the backslash as the last character in a comment</p>	

No. B2	Project using only absolute segments
<p><u>Details</u></p> <p>If a project uses only absolute segments, the linker generates a correct output file in XCOFF78K-format. But the NEC debugger (or simulator) before version 2.30 can't read the file (Error message; c0003(A): Failed in reading file).</p> <p><u>Workaround</u></p> <p>Use relative segments and do the segment definition in the XCL file.</p>	

(G) Description of Operating Precautions (C Compiler)

No. C1	<p>Stack area location exceeding 64K boundary</p> <p><u>Details</u></p> <p>Please take care of locating the stack area. If the stack area exceeds a 64K boundary, the consequence is a wrong stack access, because the access is done only with a 16-Bit pointer.</p> <p>Example:</p> <pre>void test (int index) { unsigned char array [10], *p; p=&array[index]; }</pre> <p>The list-file shows the 16 Bit access, which produces wrong results if a 64K boundary is exceeded:</p> <pre>P=&array[index] MOVG RG7,SP ADDW RP7,RP0 ; 16 Bit access!!</pre> <p><u>Workaround</u></p> <p>Do not place the stack area, which exceeds a 64K boundary.</p>
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No. C2	<p>Missing external variable entry, if a global variable is only used in Inline-Assembler</p> <p><u>Details</u></p> <p>The global variable "var2" does not have an external entry! The result will be an unresolved external error during linking.</p> <p>Example:</p> <pre>extern char var1; extern char var2; void func1(void) { var1 = 2; _ASM("MOV R0,#var1"); _ASM("MOV R0,#var2"); }</pre> <p><u>Workaround</u></p> <p>Use the global variable in a C statement, too</p>
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No. C3	For some C assignments no source code is generated
	<p><u>Details</u></p> <p>The error occurs when assigning one saddr variable with another. If only one of them is a saddr variable, the error will not occur.</p> <p>.</p> <p>Example:</p> <pre>saddr char i1,i2; char i3,i4; void test1(void) { i2 = 0; i1 = i2; } void test2(void) { i2 = 0; i2 = i1; // -> no code generated }</pre> <p><u>Workaround</u></p> <p>Install the update patch V1.33b.</p>

(H) Description of Operating Precautions (Linker)

No. D1	Unused Segments in multi-segment-definition line causes unnecessary error message
	<p><u>Details</u></p> <p>If an unused segment is defined in a multi-segment-definition-line and there are no more bytes available the linker generates an unnecessary error message telling that the unused segment can not be located:</p> <p style="padding-left: 40px;"><i>Error[e16]: Segment NO_INIT (size: 0 align: 0) is too long for segment definition. At least 0 more bytes needed.</i></p> <p>Example:</p> <pre>-Z (DATA) CSTACK+20, NO_INIT, IDATA2, UDATA2, ECSTR, TEMP=FE00-FE1F</pre> <p>The segment CSTACK uses the complete address area, but even if the following segments are not used the linker generates the error message and stops the link process.</p> <p><u>Workaround</u></p> <p>Change the segment order: Unused segments should be defined before the last used segment:</p> <pre>-Z (DATA) NO_INIT, IDATA2, UDATA2, ECSTR, TEMP, CSTACK+20=FE00-FE1F</pre>

(I) Valid Specification

Item	Date published	Document No.	Document Title
1	December 1997	ICC78400C-2	78400 C Compiler Programming Guide
2	December 1997	A78400C-2	78400 Assembler, Linker and Librarian Programming Guide
3	December 1997	EW78400-1	78400 Windows Workbench Interface Guide
4	October 2001	XLINK-453E	XLINK Linker™ and XLIB Librarian™ Reference Guide
5	September 2000	IARCLIB-1	C Library Functions Reference Guide
6	December 2001	ILG-2	Installation and Licensing Guide for Embedded Workbench™

(J) Revision History

Item	Date published	Document No.	Comment
1	11-04-2002	DTOP0004V10	First release.
2	18-04-2002	DTOP0004V11	Correction: Item A2 deleted
3	08-05-2002	DTOP0004V12	Item D1 added
4	05-08-2002	DTOP0004V13	Item C3 added
5	05-12-2002	DTOP0004V14	Item A2 added