Freescale Semiconductor
Technical Data

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MPC7410 RISC Microprocessor Hardware Specifications Addendum for the MPC7410T*xxnnn*LE Series

This document describes part-number-specific changes to the *MPC7410 RISC Microprocessor Hardware Specifications* (Document No. MPC7410EC).

Specifications provided in this document supersede those in the *MPC7410 RISC Microprocessor Hardware Specifications*, Rev. 1 or later, for the part numbers listed in Table A only. Specifications not addressed herein are unchanged.

Because this document is frequently updated, see the website listed on the back page of this document or contact your Freescale sales office for the latest version.

Freescale Part Numbers Affected:

MPC7410THX400LE
MPC7410THX450LE
MPC7410THX500LE
MC7410TVU400LE

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Table A. Part-Number-Specific Changes

Freescale Part Number	Operating Conditions				Significant Changes from Hardware Specification
	CPU Frequency (MHz)	V_{DD}	T_J (°C)	OV_{DD} (V)	
MPC7410THX500LE	500	1.8 V ±100 mV	–40 to 105	1.8/2.5/3.3	Extended temperature range. For all DC/AC specifications not mentioned in this document, see the MPC7410RX500LE specifications in the *MPC7410 RISC Microprocessor Hardware Specifications*.
MPC7410THX450LE	450	1.8 V ±100 mV	–40 to 105	1.8/2.5/3.3	Extended temperature range. For all DC/AC specifications not mentioned in this document, see the MPC7410RX450LE specifications in the *MPC7410 RISC Microprocessor Hardware Specifications*.
MPC7410THX400LE	400	1.8 V ±100 mV	–40 to 105	1.8/2.5/3.3	Extended temperature range. For all DC/AC specifications not mentioned in this document, see the MPC7410RX400LE specifications in the *MPC7410 RISC Microprocessor Hardware Specifications*.
MC7410TVU400LE	400	1.8 V ±100 mV	–40 to 105	1.8/2.5/3.3	Extended temperature range. For all DC/AC specifications not mentioned in this document, see the MC7410VU400LE specifications in the *MPC7410 RISC Microprocessor Hardware Specifications*.

DC Electrical Characteristics

The MPC7410T*xxnnn*LE series DC electrical characteristics are identical to that of the MPC7410, with the exception shown in Table B.

Table B. Recommended Operating Conditions

Characteristic	Symbol	Recommended Value	Unit
Die-junction temperature	T_j	–40 to 105	°C

Note: See the *MPC7410 RISC Microprocessor Hardware Specifications*.

Part Numbers Addressed by this Specification

Table C provides the ordering information for the MPC7410T*xxnnn*LE series.

Table C. Part Marking Nomenclature

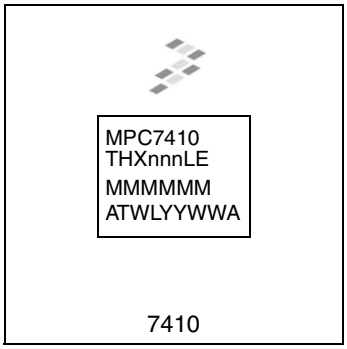
MPC	7410	T	*xx*	*nnn*	L	E

Product Code	Part Identifier	Process Descriptor	Package	Processor Frequency [1]	Application Modifier	Revision Level
MPC	7410	T: –40 to 105°C	HX = HCTE_CBGA	400 450 500	L: 1.8 V ±100 mV	E: 1.4; PVR = 800C 1104
MC			VU = HCTE_CBGA (Lead Free C5 Solder Spheres)	400		

Note:
1. Processor core frequencies supported by parts addressed by this specification only. Parts addressed by other specifications may support other maximum core frequencies.

Part Marking

Parts are marked as the example shown in Figure A.



BGA

Notes:
nnn is the speed grade of the part.
MMMMMM is the 6-digit mask number.
ATWLYYWWA is the traceability code.
CCCCC is the country of assembly. This space is left blank if parts are assembled in the United States.

Figure A. Part Marking for BGA Device

Document Revision History

Table D provides a revision history for this document.

Table D. Document Revision History

Revision	Date	Substantive Chagnes(s)
1	11/2010	• Removed “HX” from document title. • Added MC7410TVU400LE to list of devices covered by this document. • Updated Table C, “Part Marking Nomenclature,” to include MC7410TVU400LE.
0.1	4/2005	Document template update
		Document ID change from MPC7410THXLEPNS for Part Number Specification to MPC7410ECS08AD for Hardware Specification Addendum.
0	10/2003	Initial release.

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Freescale Semiconductor, Inc.
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Tempe, Arizona 85284
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+1-480-768-2130
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Schatzbogen 7
81829 Muenchen, Germany
+44 1296 380 456 (English)
+46 8 52200080 (English)
+49 89 92103 559 (German)
+33 1 69 35 48 48 (French)
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Japan:
Freescale Semiconductor Japan Ltd.
Headquarters
ARCO Tower 15F
1-8-1, Shimo-Meguro, Meguro-ku
Tokyo 153-0064
Japan
0120 191014 or
+81 3 5437 9125
support.japan@freescale.com

Asia/Pacific:
Freescale Semiconductor China Ltd.
Exchange Building 23F
No. 118 Jianguo Road
Chaoyang District
Beijing 100022
China
+86 10 5879 8000
support.asia@freescale.com

For Literature Requests Only:
Freescale Semiconductor
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