Freescale Semiconductor
Engineering Bulletin

Document Number: EB807
Rev 1, 12/2014

Kinetis K24 120 MHz Family Mask Sets and Revision Numbers

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1 Introduction

This engineering bulletin contains the device revision numbers (REVID), along with their corresponding mask set numbers and JTAG ID codes, for all existing revisions of Freescale's Kinetis K24 120 MHz 32-bit MCUs. Device revisions can be referred to by either the revision number or the silicon mask set identifier. Both of these are provided in this document for easy reference.

2 JTAG device identification register

The Kinetis family of devices have two JTAG TAPs. One is the ARM® Cortex-M4® JTAG TAP and the second is the SoC JTAG TAP.

The ARM Cortex-M4 JTAG TAP, which is accessed first by default with IDCODE (1110), reads back as 0x4BA0_0477. For further details, please refer to the ARM website at www.arm.com.

The SOC JTAG TAP, accessible via SOC_IDCODE (0000), allows these elements to be determined through the TAP:

- Part revision number
- Design center

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- Part identification number
- Manufacturer identity code

The part revision number (PRN), which is a copy of the SIM_SDID[REVID], may change for a mask revision. The part identification number (PIN) will vary depending on the Kinetis family identification SIM_SDID[FAMID]. Further details can be found in the JTAG chapter of each device-specific Kinetis reference manual.

3 Device revision numbers

For each device, Table 1 shows the:

- Mask set number
- Family
- Flash memory size
- Shortened part number
- Internal ID numbers

The SIM_SDID[REVID] and SIM_SDID[DIEID] can be used to determine the part that is being used at run-time. The PRN is part of the JTAG ID register used to identify the part during factory test.

Table 1. Kinetis K24 120 MHz family device revision numbers

Mask Set	1N83J	0N78M
Family	K24	K24
Flash memory size	1 MByte	256 KByte
Flash memory type	FTFE	FTFA
Short part number (no package/speed information)	MK24FN1M0	MK24FN256
SIM_SDID[DIEID]	0x6	0xE
SIM_SDID[REVID]	0x1	0x0
JTAG PIN	0xB319	0xB319
JTAG PRN	1	0

4 Documentation

While the MK24FN1M0 and MK24FN256 devices share a lot of common functionality, there are functional differences between the devices. Therefore, there are different documentation sets for the parts. Table 2 lists the document IDs for the reference manual, data sheet, and errata documents for both parts.

Table 2. Kinetis K24 120 MHz family documentation

Short part number	MK24FN1M0	MK24FN256
Reference manual	K24P144M120SF5RM	K24P121M120SF5RM
Data sheet	K24P144M120SF5	K24P121M120SF5
Errata	KINETIS_1N83J	KINETIS_0N78M

5 Revision history

The table given in this section provides details regarding the current and previous versions of this document and the major changes incorporated in each of these versions.

Table 3. Revision history

Date	Rev No.	Substantive Change(s)
08/2014	0	Initial release.
12/2014	1	Correction to data sheet docID in Table 2.

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