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Letter of Volatility

Product Information

Product Series: ICE-K8M series of devices
Product Models: ICE-K8M
Summary: ICE-K8M devices contain both volatile and non-volatile memory.

Non-Volatile Memory

TYPE	SIZE	Manufacturer's Part #	User Modifiable	Physical Access
Flash	128 Mbit	N25Q128A11ESE40G	Yes	No
Function	Flash is generally unused on processor modules			
Process for Clearing	Reprogram or erase with vendor utility – provided with device			
Notes	The checksum of the flash can be verified to confirm flash integrity. See website for checksum of module load.			
TYPE	SIZE	Manufacturer's Part #	User Modifiable	Physical Access
F-RAM	256 Kbit	FM31256-G	Yes	No
Function	Stores module ID			
Process for Clearing	Reprogram or erase with vendor utility – provided with device			



To ensure the user EEPROM contains only the content from ICE firmware, provided by ICE, a 32-bit CRC checksum is calculated on the entire content of the EEPROM. A procedure is provided to read-back the user accessible EEPROM content and calculate its 32-bit CRC. This 32-bit CRC is then checked against the 32-bit CRC signatures located in the icexxx/hlp/crcs.hlp file for a match.

Example of a check flash session within NeXt-Midas:

```
nM> picd checkflash pic1
Unloading SPI FLASH - 16006832 bytes
.....
..... done
Flash ChkSum = 0x04AFF507

nM> pic help crcs

PIC5:
LoadFlash File=ICEPIC5_SS CRC=0x792BAD35
LoadFlash File=ICEPIC5_DD CRC=0x6ABE1CE9
LoadFlash File=ICEPIC5_HH CRC=0x2C2BA130
Press RETURN=NextLine, SPACE=NextPage, Q=Quit:
```

See ICE website for official checksums of ICE products.

Volatile Memory

The ICE-K8M series of devices contain volatile memory across multiple subcomponents, which is cleared when power is removed.