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1. Overview

There are two primary tools used to program flash memory components on a Springboard module.

First, the version of Palm-Debugger that comes with the Handspring GNU Tools can be used by developers to program a module. The “flash” command from this Palm-Debugger supports the specific components listed in the table below.

Second, the CardUpdaterMaker SDK can be used. This is a GNU project that allows a developer to create a user friendly application to program a ROM binary image onto the module. This is often used to distribute module software updates and contains logic to ensure that the Updater is being applied to the correct module. The SDK uses a Flash Manager library which currently supports the components listed in the below table. The Flash Manger library can be extended by developers to support additional components.

Both the Handspring GNU Tools and the CardUpdaterMaker SDK are available on the Handspring website:

http://www.handspring.com/developers/sw_dev.jhtml

Both program require the use of Palm-MakeROM to create a ROM image (.bin) file. Palm-MakeROM is documented separately in the “*Handspring Development Tools Guide*” located here.

<http://www.handspring.com/developers/documentation.jhtml>

2. Flash Memory Support

This following table describes flash memory components that are supported in the Handspring GNU Tools (2.03 and later) and the CardUpdaterMaker SDK.

Manufacturer	Flash Model	Device ID	Handspring Tools ¹	Card Updater Maker SDK	Notes
AMD	Am29DL323CB	0x53	yes		
AMD	Am29LV160BB	0x49	yes	yes	
AMD	Am29LV160BT	0xC4	yes	yes	Top boot block
AMD	Am29LV800B	0x5B	yes	yes	Bottom book block
Fujitsu	MBM29LV160B	0x49		yes	Equivalent to Am29LV160BB
Fujitsu	MBM29LV160TE	0xC4		yes	Equivalent to Am29LV160BT
Hyundai	HY29LV160BT	0x86		yes	Bottom boot block
Hitachi	HN29WB800	0x86	yes		
Intel	i28F160B3B	0x91	yes		Bottom boot block
Intel	E28F320J3	0x16		yes	Intel StrataFlash
Intel	E28F640J3	0x17		yes	Intel StrataFlash
Intel	E28F128J3	0x18		yes	Intel StrataFlash
Mitsubishi	M5M29FB800	0x5E	yes		
Sharp	i28F640J5	0x69	yes		Bottom boot block
Sharp	LH28F016SU	0x88	yes		No boot block
Toshiba	TC58FYB160	0x43	yes	yes	Equivalent to Am29LV160BB
SST	SST32HF802	0x81		yes	1MB, 4KB sectors. Device ID = 2781 (hex). Mfgr ID = 0xBF.
SST	SST32HF162/164	0x82		yes	2MB, 4KB sector, Device ID = 2782 (hex). Mfgr ID = 0xBF.
Toshiba	TC58FVB321	0x9C	yes		Bottom boot block
Toshiba	TC58FVT321	0x9A	yes		Top boot block

1: The Handspring Palm OS GNU Tools includes a version of the Palm Debugger which the above flash memory support.

3. History

Date	Revision #	Description of changes
27 July 2001	1.02	Am29LV800B Bottom Boot Block only supported. Not specified (top or bottom) previously.
23 May 2001	1.01	Added support for SST flash to CardUpdaterMaker SDK.
17 May 2001	1.00	Initial release.

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