PowerBoot

Rel 3.2

for PPMC-270/270SL/275/280/ PCORE695

Release Notes

P/N 224693 Revision AA

December, 2004

Copyright

World Wide Web: www.forcecomputers.com

24-hour access to on-line manuals, driver updates, and application notes is provided via SMART, our SolutionsPLUS customer support program that provides current technical and services information.

Headquarters

The Americas

Corporate Headquarters/CA
Force Computers
4211 Starboard Drive
Fremont, CA 94538
Tel.: +1 (510) 624-5300
Fax: +1 (510) 624-5301
Email: support@fci.com

Europe

Force Computers GmbH
Lilienthalstr. 15
D-85579 Neubiberg/München
Germany
Tel.: +49 (89) 608 14-0
Fax: +49 (89) 609 77 93
Email: support-de@fci.com

Asia

Force Computers Japan KK
Force Computers Japan KK
Shibadaimon MF Bldg. 4F
Shiba Daimon 2-1-16
Minato-ku, Tokyo 105-0012
Tel.: +81 (03) 3437-3948
Fax: +81 (03) 3437-*3968
Email: support-de@fci.com

224693 410 000 AA

Contents of the Deliverable Package

PowerBoot Release 3.2 for PPMC-270/270SL/275/280/PCORE695 boards includes the following components:

- **frcPPMC27X_PowerBoot_3_2.bin**
  - Powerboot binary for PPMC270 / 270SL / 275
- **Readme.txt**

- **frcPPMC280_PowerBoot_3_2.bin**
  - Powerboot binary for PPMC280
- **Readme.txt**

- **frcPPMC275_fullPowerBoot_3_2.bin**
  - Full Powerboot binary for PPMC275 (TLA#121695)
- **Readme.txt**

- **frcPCORE695_PowerBoot_3_2.bin**
  - Powerboot binary for PCORE695
- **Readme.txt**

- **224692 410 000 – Installation Guide**

Features Supported in This Release 3.2

The changes or additions implemented in this release include:

- **PowerBoot Upgrade recovery implemented using two PowerBoots namely full PowerBoot and Mini PowerBoot. (PMC275 TLA# 121695 Variant)**
- **Mini PowerBoot supports bare minimum functionality (PMC275 TLA# 121695 Variant)**
- **Both the PowerBoot support serial download mechanism using Xmodem protocol. (PMC275 TLA# 121695 Variant)**
- **Ability to set and read the boot parameters from the OS has been implemented. (PMC275 TLA# 121695 Variant)**
- **Software Compatibility The commands should be backward compatible to PMC260 and PcoreVME6750 in case of PCORE695**

- **Processor Initialization.**
  PowerBoot initializes CPU0 (PPMC 270 /270SL /275 /280 /PCORE695) and also CPU1 (in PMC280 and PMC270).
- **On Board Function Support**
  Support for all the onboard Serial Ports, Ethernet interfaces (10/ 100/1000 Mbps), ECC checking and correction (IDMA Scrubbing), Routines for erasing/programming user flash memories, Allow read of onboard EEPROM contents, Only PCI bus 0 Enumeration is done by the board in the Monarch Mode.
- **ARP / RARP, TFTP, BOOTP Network Protocols Supported**
- **Miscellaneous Features**
  Implementation of routines to read/write/modify/display/search/verify memory areas.
  Uploading of data from the onboard Ethernet ports to memory.
  MAC numbers stored in EEPROM should be used for Onboard Ethernet Driver Initialization.
  The PowerBoot must disable MV64360 watchdog timer.
  - **Boot Options**
    Network boot (TFTP) from all onboard Ethernet devices.
    Auto-Boot from the onboard user flash memory. This feature has to be independent of the physical memory layout.
  - **Build time and date**
    PowerBoot shall correctly display the date and time of the build during every boot-up.
  - **PowerBoot shell**
    PowerBoot shell shall support the following two features backspace key (delete character in the buffer and also clear that character on the console.) and automatic command completion.
  - **Batch command**
  - **Auto-boot and batch command sequencing**
  - **Debug messages**
  - **Version display**
  - **Deliverables**
  - **Linux Command Line**
  - **PowerBoot console over PCI**
  - **No Writes to boot flash with out end user knowledge**
  - **Boot VxWorks from PowerBoot**
  - **No Memory Scrubbing on Warm Boot**
  - **Baud Rate Change Support**
  - **Setboot – Netload both kernel and ramdisk.**
  - **Single PowerBoot for all Hardware Revisions and Variants**
  - **Ability to change both EEPROM contents**
  - **Change_bootfile command**

Revision History

P/N	Revision	Date	Description
224693 410 000	AA	December, 2004	**Release 3.2**

Changes from Release 3.1 to 3.2

- **Support for PCORE695.**
- **Merged PMC275 TLA# 121695 Variant Full PowerBoot into the common Source Base.**
- **New DFCDL values for SDRAM configuration.**
- **Clean-up of setboot.**
- **EREADY bug fixed**
- **Default boot filename and ramdisk filename changed to linux-ram.bin and ramdisk.gz respectively.**
- **Support for PMC280 Variant G (TLA# 120791) provided.**
- **Support for PMC280 Variant K (TLA #121716) provided.**
- **Added PCI subsystem ID for PMC280 Variants**

Changes from Release 3.0 to 3.1

- **Support for PMC275 TLA# 121695 Variant**
- **Support for 1GB SDRAM(PMC275 TLA# 121695 Variant)**
- **Support for 128 MB user flash(PMC275 TLA# 121695 Variant)**
- **Serial Download mechanism using Xmodem(PMC275 TLA# 121695 Variant)**
- **PowerBoot Upgrade recovery mechanism(PMC275 TLA# 121695 Variant)**

- **Support for Boot parameters setting from OS(PMC275 TLA# 121695 Variant)**

Changes from Release 2.x to 3.0

- **Merged Source Base for PMC270/270SL/275/280**
- **Number of commands that can be executed on the PowerBoot shell is Infinite.**
- **Fix has been provided for the screen capture in ProComm plus with Powerboot (^H characters eliminated while recording)**
- **POT Results Stored in Location 0x4000(as default), can be modified using setboot.**
- **Interrupt registers are cleared before handing over control to Linux**
- **By Default Data Cache is disabled.**
- **Display of TLA Numbers (PMC280 only)**
- **Support for Variant C (TLA No 120047) is provided**

Known Problems

No known problems

Restrictions

The restrictions in this release are detailed below:

- **PCI scan is restricted to scan only Bus**
- **Only instruction cache L1 is supported.**
- **EEPROM are not write protected. If EEPROM at 0xA4 and 0xA6 are reprogrammed**
- **Use vt100 serial protocol, if terminal emulator is not displaying characters properly.**
- **Some Processor Exceptions are not handled properly, due to console shutdown before GO/GOLINUX.**

Product Error Report

Product:	Serial No.:
Date Of Purchase:	Originator:
Company:	Point Of Contact:
Tel.:	Ext.:
Address:	
Present Date:	
Affected Product: ❑ Hardware ❑ Software ❑ Systems	Affected Documentation: ❑ Hardware ❑ Software ❑ Systems
Error Description:	

This Area to Be Completed by Force Computers:

Date:

PR#:

Responsible Dept.: ❑ Marketing ❑ Production

Engineering ➠ ❑ Board ❑ Systems

☞ Send this report to the nearest Force Computers headquarter listed on the back of the title page.