Opal Release Notes

For the Windows Embedded Compact 7 Kernel Images and Source BSP

Windows Embedded Compact 7 Release 289
Wednesday, 18 September 2013

Table of Contents

Release Contents

The contents of the release packages are described below. The release packages can be downloaded at this permanent link: http://guruce.com/opal/release/r289

The release packages:

1. Opal Release Notes r289.pdf
2. Opal Windows Embedded Compact 7 Developers Guide.pdf
3. Opal SDK r289.msi
4. Opal Image Binaries r289.7z

Opal Release Notes r289.pdf

This document.

Opal Windows Embedded Compact 7 Developers Guide.pdf

This document is a step-by-step guide to getting started with the Opal Windows Embedded Compact Image Binaries and Source BSP and describes how to develop software for the Opal using Visual Studio 2008.

Opal SDK r289.msi

This installer contains the Opal Software Development Kit (SDK) needed to be able to develop applications for the Opal running Windows Embedded Compact 7 using Visual Studio 2008.

Opal Image Binaries r289.7z

This 7-zip (see 7-zip.org) package contains the Windows Embedded Compact 7 image binaries in nb0 format. The files can be flashed to the Opal using the Freescale Manufacturing Tool (included in the 7-zip).

Changelist

Release 289

- Removed Freescale mp3 decoder (mp3's now play correctly)
- Added DVFC resulting in a small power consumption improvement
- Merged with latest Freescale BSP updates
- Added fix for headless OS Designs
- Fixed UUT OS Design
- Fixed ECSPI SDK header
- Added support for 2Gb Micron NAND
- DRAM size now configurable through catalog
- Updated FlexCAN source to latest
- Updated XAML OpenGL renderer to work with latest WEC7 updates
- Now using GuruCE ECSPI and CSPI drivers (full functionality, production quality code)
- Fixed ActiveSync connection to WMDC
- Default USB Function now selectable in catalog
- Added support for flashing eboot/nk from within WEC7

Release 160

- Initial release
- Added KSZ8051 Ethernet PHY datasheet
- Changed power enable GPIO from GPIO_8 to GPIO_17
- Forced DDR3 setup
- Added support for UART4 debug
- Updated PHY ID for Opal PHY
- Cloned FEC code to support KSZ8051 Ethernet PHY
- General Cleanup of Freescale BSP code
- Fixed many issues in many Freescale drivers
- Cloned ESDHC code to support DAT3 as CD
- Cloned GPIO part of CSPDDK so we can add functionality and fix some bugs
- Removed (not working) Freescale CAN driver
- Added GuruCE FlexCAN driver
- Added GuruCE GPIO driver
- Removed MC13892 PMIC code
- Cloned MX53_FSL_V3/CSPDDK/DDK_IOMUX to add some missing functionality
- Cloned mx53_ddk.h to add the function headers added in DDK_IOMUX
- Cloned common_macros.h to fix some nasty hard to find bugs
- Cloned csp.h so it includes the headers from our BSP INC (instead of COMMON INC)
- Fixed sizeof bug in ESDHC interrupt setup code.
- Fixed IRQ pin definition in ESDHC code
- Added support for Datavision 7" panel
- Fixed PMIC_IRQ assignment
- Fixed PHY initialisation for ethernet in release build
- Added ConMGR subproject
- Added Revision subproject
- Added accelerometer and multimedia codecs to OpalRelease OS Design
- Merged Freescale iMX53 BSP drop 11-05-03 ER
- Fixed GPIO definitions in LVDS touch driver
- Changed bib entries for SDK dll so they can be accessed from user mode
- Replaced NOMIPS16CODE macro with NOIMPLICITIMPORT in sources.cmn
- Fixed copying of SDK libraries and headers
- Added touch gesture support
- Increased performance of ESDHC writes
- Fixed ESDHC card detect code
- Added hive-based registry support (on NAND/SD/ATA)
- Removed dependence on PMIC for ESDHC driver
- Added PWM backlight control
- Increased the Bpp to 24 for all displays
- Added bootloader options for network settings and clean registry & databases
- Cloned & changed ATA/SD boot code so it outputs status & progress to serial debug.)

- Increased BSP_ARGS_VERSION (and linked it to EBOOT version number)
- Added OALIoCtlHalGetHiveCleanFlag and OALIoCtlHalInitRegistry IOCTL code
- Moved bootloader ATA menu to the right place
- Re-ordered bootloader menu
- Fixed invalid save to Flash when just asked to download in bootloader
- Optimized OpenGL XAML renderer
- Add support for 4GBit and 8GBit Micron SLC NAND parts
- Enabled NKForceCleanBoot(); in init.c (no RAM retention)
- Removed NOR code and settings
- Fixed ROMOFFSET in eboot.bib for NAND
- Fixed up eboot stack and IRQ stack offsets
- Catalog now supports easy boot selection
- Added eboot.bib to resource files for easy selection in solution explorer
- Fixed FEC PHY name print text
- Added explaining comments in image_cfg.h
- Removed BLOCK_STATUS_READONLY and BLOCK_STATUS_RESERVED NAND driver debug messages (floods output)
- Fixed BBI_MAIN_ADDR calculation
- Changed some platform strings to match Opal
- Cloned and fixed DisplaySet and DisplayCpl code
- Display configuration now configurable from bootloader
- Removed display related catalog items
- Removed all BSP_DISPLAY_ conditionals from platform.bib and .reg
- Removed all references to NAND IPL (not used anymore)
- Added NAND progress output in NAND boot routines
- Removed Giantplus LCD code (not used anymore)
- Added GPS reset driver
- Added GPS, accelerometer and microSD support
- Added AutoExec subproject
- Disabled corecon security
- Added support for ESDHC2 (assuming WIFI card always inserted)
- Added Summit SDC40NBT WIFI driver
- Updated Summit drivers to latest version
- Added WIFI and HSD100 Touch
- Cloned Common GPT and added GPT SDK code
- Enabled charging of supercap
- Cloned all DA9052 code and added all SDK headers and libs to SDK roller
- Added ECSPI header and lib to SDK roller
- Added I2C header and lib to SDK roller
- Fixed some warnings in various sources/dirs
- Fixed many warnings in Multimedia/components
- Now supporting dynamic loading of touch driver depending on selected screen
- HSD100 touch driver now autodetects to which I2C bus the touch screen is connected to
- Fixed watchdog definitions, reset issue and time calculation
- Set default boot to NAND
- Set default display mode to 800x600 VGA
- Fixed OWIRE build issue
- Changed name of Opal SDK to "Opal SDK" (from "Opal")
- Added 1360x768 and 1440x900 VGA resolutions

Known Issues and Limitations

Issue ID	Category	Description	Workaround
0000194	BSP	Images larger than 100 MB do not load	Configure OS Design so that resulting kernel stays below 100 MB
0000202	BSP	Add support for PMIC RTC	No workaround available
0000208	BSP	Add PWM driver and SDK	No workaround available
0000209	BSP	Add splash screen support	Basic splash screen shown on 10” Freescale panel on LVDS1
0000211	BSP	Add support for multi-monitor and dual-display configurations	No workaround available Possible full rewrite of display driver required

GuruCE prioritizes work according to customer requests.

If you find any other bugs or components not working correctly, please send a bug report to bugs@guruce.com using the template on the next page.

Revision: Opal [rXXX]
Component: [USB/I2C/Active Sync/etc.]
Description of current behaviour:

Description of expected behaviour:

Steps to reproduce:

Additional information:

Support

GuruCE offers various support options. Please visit http://guruce.com/support for more information.

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