

# Topaz Release Notes

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*For the Windows Embedded CE 6.0 R3 Image and BSP*

*CE 6.0 R3 Release 706*

*Tuesday, 12 June 2012*

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## Release Contents

The contents of the release packages are described below. The release packages can be downloaded at this permanent link: <http://guruce.com/topaz/release/r706>

The release packages:

- 1) Topaz Release Notes r706.pdf
- 2) Getting Started with the Topaz.pdf
- 3) Topaz Binary BSP Users Guide.pdf
- 4) Topaz CE6R3 SDK r706.msi
- 5) Topaz CE6R3 Image Binaries r706.zip
- 6) Topaz CE6R3 Binary BSP r706.zip

### Topaz Release Notes r706.pdf

This document.

### Getting Started with the Topaz.pdf

This document is a step-by-step guide to getting started with the Topaz Windows CE 6.0 R3 Image Binaries and describes how to develop software for the Topaz using Visual Studio 2008.

### Topaz Binary BSP Users Guide.pdf

This document is a step-by-step guide to getting started with the Topaz Windows CE 6.0 R3 Binary BSP and describes how to develop custom image binaries using Visual Studio 2005 with Platform Builder for Windows CE 6.

### Topaz CE6R3 SDK r706.msi

This installer contains the Topaz Software Development Kit (SDK) needed to be able to develop applications for the Topaz running Windows CE 6.0 R3 using Visual Studio 2008.

### Topaz CE6R3 Image Binaries r706.zip

This zip package contains the Windows CE 6.0 R3 image binaries in bin format. The bin files can be flashed to the Topaz using the Topaz Flasher (<http://guruce.com/topaz-flasher>).

### Topaz CE6R3 Binary BSP r706.zip

This zip package contains the Topaz BSP in binary form and the standard Topaz OS Design. These can be used to create custom Windows CE 6.0 R3 images using Visual Studio 2005 with Platform Builder for Windows CE 6.0.

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## Windows Embedded Compact 7 on Topaz

Windows Embedded Compact 7 generates huge kernels in comparison to Windows CE 6.0 R3. The increase is x2 in all cases and x3 or even x4 in some other cases (depending on the selection of OS Components). The result is that you need massive amounts of flash (to store the image) and even more RAM (to run the image). The Topaz is a low-cost device with limited resources (Topaz standard configuration hosts 128 MB of Flash and 64 MB of RAM). Until Microsoft fixes the dependency checker of Platform Builder for WEC7 (so it generates normal size kernels) WEC7 is not suited for low-cost limited resources devices. At this moment we do not recommend WEC7 on a Topaz configuration with less than 128 MB of RAM, however, it is possible to run WEC7 on the Topaz and we have a WEC7 BSP for the Topaz.

Please contact us if you need to run WEC7 on your Topaz.

## Changelist

### CE 6.0 R3 Release 706

- Shorter timeout for NETUI when using a headless kernel
- Added bootloader support for serial output on UART4 and UART5
- Fixed issue with FlexCAN low power mode D4

### CE 6.0 R3 Release 676

- Changed version number and product name of Topaz SDK
- Updated FlexCAN driver source
- Now turning backlight off after 10 minutes (instead of 1 minute)
- Fixed serial debug redirection in bootloader (now works)
- Added boot splash screen support from NAND and SD
- Added registry setting so NETUI times out quicker on headless configurations

### CE 6.0 R3 Release 589

- Added property to SDK1.sdkcfg so that SDK shows up in VS New Project wizard
- Fixed wrong library name in flexcan.def and flexcansdk.def
- Added easy hardware configuration setup table for FlexCAN
- Added FlexCAN LED support
- Fixed parameter order error in flexcansdk.h comments
- Fixed static initialization bug in FlexCAN2 SDK
- Added FlexCAN2, removed PWM4
- Added some parameter checking to BSP\_ARGS related calls
- Fixed keypad/keybd registry settings
- EBOOT minor version now coupled to BSP\_ARGS structure version
- Fixed a bug in FlexCAN when no Activity LED or Error LED was specified
- Removed VSTBY\_REQ from LCD initialization code

### WEC 7.0 Release 507

- Synched CE 6.0 R3 Release 506 branch with WEC7 branch (see "CE 6.0 R3 Release 506" for the list of changes)

### CE 6.0 R3 Release 506

- Added support for USB keyboard mappings
- Fixed backlight build error when building headless image
- Fixed minor issue in GPIO driver
- Removed flood of BLOCK\_STATUS\_ messaged in bootloader output
- Added FlexCAN driver
- Fixed several bugs in common\_macros.h
- Added bootlogging and fixed some text in nand and sd code
- Added "Waiting for link" to the fec boot driver
- Removed old Freescale CAN driver (didn't work)
- Now setting PAD settings for all UART pins
- Added mouse cursor (fixes mouse cursor issue in r432) and kbdus components

### Release 432

- Default LCD panel now set to 4.3" 480x272 with new backlight enable signals (GPIO 3.18 instead of GPIO 4.9)
- Fixed set wallpaper bug in LCD autodetection routines
- Added GPT SDK headers
- Added interrupt capability to the GPIO driver and SDK library
- Mouse cursor now appears/disappears when USB mouse is attached/detached
- Added SD 4-bit capability in SDHC driver (massive speed increase)
- SD 2nd interface now configured correctly
- UART1 now DTE (instead of DCE; not connected on Topaz)
- Removed Camera driver (as it was very specific and hard to configure)
- Added SIM2 driver (smartcard)

- Serial Debug Port now selectable in bootloader
- Added UART1 driver to kernel (so UART1 is available for applications)
- Added support for CSPI2 and CSPI3
- Catalog selection now notifies user of possible IOMUX conflicts when selecting drivers
- ActiveSync USB Serial connection now always COM6 (prevents collisions with physical UART drivers)
- Bootloader now defaults to boot from NAND, KITL disabled and Serial Debug Port disabled
- Added OAL\_IOMUX\_SELECT\_INPUT macro and fixed some serial debug bugs
- Moved CANBUS registry entries to separate file (consistent with all other drivers)
- All drivers now adhere to BSP\_NO environment variables
- Removed LCD\_D0 and LCD\_D12 from LCD IOMUX setup (not used on Topaz so free to use as GPIO)

## Release 366

- Improved LCD autodetection routines
- Added support for LCD autodetection in 24LC32+ EEPROMs
- Added support for backlight configuration in LCD structures
- Added support for LCD enable configuration in LCD structures
- LCD autodetection is now an optional component
- Fixed PWM2 and PWM4 pad settings
- Added SDK headers and library for PWM
- Added automatic prescaler selection for PWM
- Fixed UART4 pad settings
- Added UART5 DMA support
- Fixed I2C pad and ALT settings
- Fixed I2C and USB OTG duplicated pin use
- Changed driver selection to match DevKit EXP headers
- Fixed flash in IE

## Release 298

- Added missing CAN SDK function declarations
- Added some more GPIO functions and fixed some bugs in the GPIO & DDK MUX code
- Added GPIO driver and SDK
- Improved LCD autodetection
- Added GPIO SDK description to documentation

## Release 280

- Added SPI, CAN and GPT drivers to the image (bus access through SDK)

## Release 272

- Removed Jscript from kernel (was causing problems with pictures on guruce.com)
- Removed IE and related components from Topaz OS Design in Binary BSP package (debug build got too big for available memory on Topaz)
- Fixed SDK so it installs the documentation correctly on systems with VS2008 installed

## Release 256

- Fixed GPT SDK code
- Added revision information to copyrights tab of system control panel applet

## Known Issues and Limitations

Issue ID	Category	Description	Workaround
0000101	BSP	OTG port not working in host mode	Hardware problem. New LCD design fixes this.
0000097	BSP	Ethernet LEDs not setup correctly after wakeup from suspend	No workaround available
0000078	BSP	ActiveSync not recognized on all PC's	Try other USB port or other machine.

GuruCE is working hard to resolve these issues as soon as possible. If you find any other bugs or components not working correctly, please send a bug report to [topazbugs@guruce.com](mailto:topazbugs@guruce.com) using the template on the next page.

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*Revision: [rXXX]*

*Component: [USB/I2C/Active Sync/etc.]*

*Description of current behaviour:*

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*Description of expected behaviour:*

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*Steps to reproduce:*

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*Additional information:*

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## Support

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

### **GuruCE APAC/NZ**

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