Vortex86SX/DX/MX Windows CE BSP Note

2010-07-23

After installing BSP, please read below note to get start of Windows CE development.

Install QFE

Download and Install QFE "Windows Embedded CE 6.0 Cumulative Product Update Rollup 2009" and "Windows Embedded CE 6.0 Monthly Updates" from http://msdn.microsoft.com/zh-tw/windowsembedded/ce/dd430902(en-us).aspx#ce6. Please check this link to get newest Windows CE environment.

IDE Issue for Vortex86DX Version D

In order to make IDE work on Vortex86DX version D, please set IDE as **native mode** in BIOS.

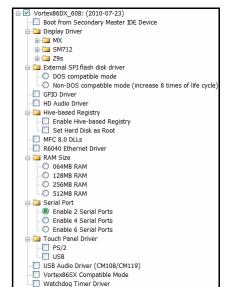
Boot from Secondary Master IDE Device

Some CF or DOM on Vortex86SX/DX board is set as master device of secondary IDE (for example: eBox-3300A). Please enable this option to make them work properly.

Hive-based Registry

If developer need hive-based registry to save settings in storage, enable this option in BSP to add essentials components. Registry will saved onto hard disk as left picture. If "Set hard disk as root" is checked, Windows CE will use DOM or hard disk as root (right picture). It needs more time to boot because Windows CE will extract image onto hard disk. Any change to root will be saved.

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(Vortex86DX BSP Options)

XGI Z9s Display Driver

Z9s graphic chipset is for most Vortex86DX boards with video function. Vortex86DX BSP will not add XGI Z9s display driver by default. If your evaluation boards have video function, select one display resolution.

SMI SM712 Display Driver

Some boards will use SMI SM712 for graphic solution. Developers can select display mode in BSP to enable SM712 in Windows CE. It can work properly with CRT for most case. If you have trouble with SIM712 for display (ex: LCD support), please contact <u>soc@dmp.com.tw</u> or SMI.

Vortex86MX Display Driver

There is built-in VGA in Vorex86MX SoC. It can work properly with CRT for most case.

Vortex86SX

For Vortex86SX users, please select "Vortex86SX Compatible Mode" in BSP to enable floating point emulation in Windows CE image.

R6040 Ethernet

R6040 is the built-in 10/100Mb Ethernet in Vortex86DX SoC. In order to use KITL to debug, please use eboot.bin at "Vortex86DX_60B\Src\Bootloader\eBoot\bin\".

Serial Ports

Debug serial port on COM1 is disabled by default in BSP. If developers need it, please edit function OEMInitDebugSerial () in "\WINCE600\PLATFORM\Vortex86DX_60B\SRC\DRIVERS\OTHER\debug.c" to remove line 197.

→ 29s → LCD 08bpp Mode → LCD 16bpp Mode → LCD 24bpp Mode → LCD 32bpp Mode → LCD 32bpp Mode → LCD 32bpp Mode → VESA BIOS 2.0-Compliant → VGA 1024x768x16@57Hz → VGA 1024x768x32@57Hz → VGA 1024x768x32@57Hz → VGA 1024x768x32@57Hz → VGA 1024x768x32@50Hz → VGA 1280x720x16@60Hz → VGA 1280x768x16@60Hz → VGA 1280x66@0Hz → VGA 1280x66@0Hz → VGA 1280x66@0Hz → VGA 1280x960x32@60Hz → VGA 1280x960x32@60Hz	 VGA 1368x768x16@60Hz VGA 1368x768x32@60Hz VGA 1440x900x16@60Hz VGA 1440x900x32@60Hz VGA 1600x1050x16@60Hz VGA 1600x1050x32@60Hz VGA 1600x1020x32@60Hz VGA 1600x1200x32@60Hz VGA 1600x1050x32@60Hz VGA 1680x1050x32@60Hz VGA 1680x1050x32@60Hz VGA 640x480x16@05Hz VGA 640x480x16@75Hz VGA 640x480x22@60Hz VGA 640x480x22@5Hz VGA 640x480x32@55Hz VGA 640x480x32@55Hz VGA 640x480x32@65Hz VGA 800x600x16@55Hz VGA 800x600x16@55Hz VGA 800x600x16@55Hz VGA 800x600x32@60Hz VGA 800x600x32@55Hz VGA 800x600x32@55Hz

(Z9s modes)

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0	MX VGA 1024x768x16x75
1024x768x32	MX VGA 1024x768x16x85
640x480x16	MX VGA 1024x768x32x60
0	MX VGA 1024x768x32x75
640x480x32	MX VGA 1024x768x32x85
800x600x16	MX VGA 1280x1024x16x60
	MX VGA 1280x1024x16x75
800x600x32	— MX VGA 1280x1024x16x85
	— MX VGA 640x480x16x60
	MX VGA 640x480x16x75
(SM712 modes)	MX VGA 640x480x16x85
· · · · · ·	MX VGA 640x480x32x60
	MX VGA 640x480x32x75
	MX VGA 640x480x32x85
	MX VGA 800x600x16x60
	MX VGA 800x600x16x75
	MX VGA 800x600x16x85
	MX VGA 800x600x32x60
	MX VGA 800x600x32x75
	MX VGA 800x600x32x85

(MX VGA modes)

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History

2010-08-11

Correct Z9s VGA modes.

2010-07-23

- Add GPIO and watchdog timer driver.
- Add HD audio driver for Vortex86MX.
- Update SPI flash disk driver.
- Update Vortex86MX VGA driver modes.

2010-06-21

- Add Vortex86MX VGA support.
- Add PS/2 touch panel driver in Vortex86DX2.

2010-05-28

■ Fix registry settings for new IDE in Vortex86DX version D and newer.

Add SMI SM712 support.

2009-10-28

- Support Vortex86DX version D.
- Add VESA VGA option in BSP.
- Add SPI flash disk support.

2009-08-20

- Add "No Display" option in Z9s driver.
- Support new IDE for Vortex86DX version D.

2009-03-24

Fix registry settings for 4 serial port work together.

2009-03-19

■ Fix registry settings for 4th serial port.

2009-03-03

Add "Mount as Root" option for hive-based registry.

2009-02-17

■ Fix: hive-based registry issue.

2009-01-22

- Add options for MFC 8.0 and 64M RAM size.
- Fix: booting from secondary master IDE device issue.

2008-12-25

Add options for display resolution, USB audio, USB touch panel and RAM size.

Technical Support

For more technical support, please visit <u>http://www.dmp.com.tw/tech/vortex86dx</u> or mail to <u>soc@dmp.com.tw</u>.