

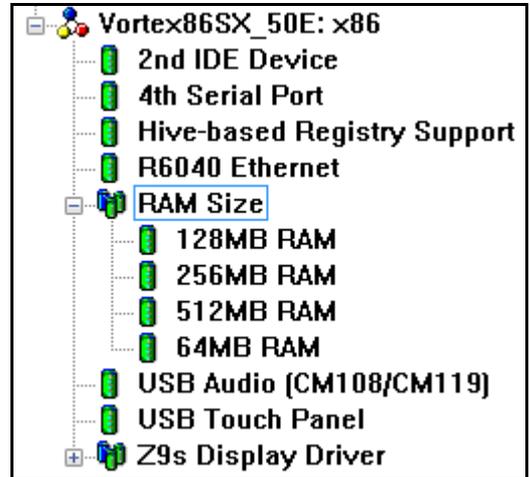
Vortex86SX Windows CE 5.0 BSP Note

2009-03-02

After installing Vortex86SX BSP for Windows Embedded CE 5.0, developer can start Windows CE development for Vortex86SX boards. Here are notes for your reference:

Install QFE

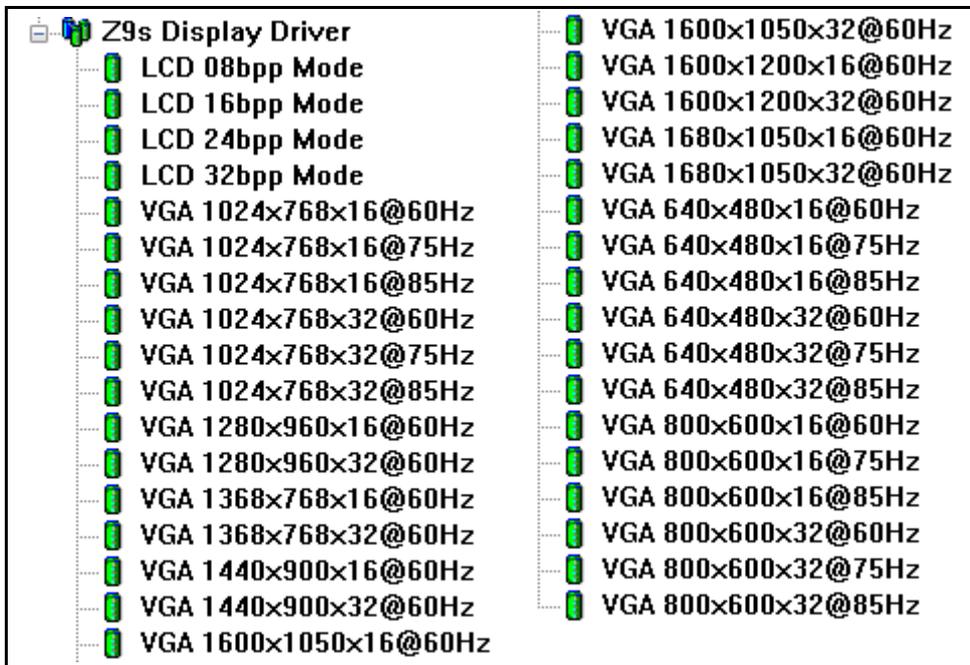
You can download QFE from Microsoft web site for Platform Builder:
<http://msdn.microsoft.com/en-us/embedded/aa731256.aspx>. Install QFE "Cumulative Product Update Rollup Package (through 12/31/2008)" to fix a lot of bugs. If more newer QFE are available, please install them.



(Vortex86SX BSP Options)

XGI Z9s Display Driver

Z9s graphic chipset is for most Vortex86SX boards with video function. Vortex86SX BSP will not add XGI Z9s display driver by default. If your evaluation boards have video function, select one display resolution.



R6040 Ethernet

R6040 is the built-in 10/100Mb Ethernet in Vortex86SX SoC. In order to use KITL to debug, please use eboot.bin at "Vortex86SX_50E\Src\Bootloader\Boot\bin".

Hive-based Registry

The registry settings for hive-based registry settings are added platform.reg. Just add "Hive-based Registry" from catalog window into your workspace to enable hive-based registry support.

Serial Ports

User can find the I/O address of COM1 in **platform.reg** is 0x2F8 and IRQ is 3. This is because Windows CE uses the first serial port as debug port. Here is the table of serial ports setting in Windows CE:

Windows CE	I/O Address	IRQ	Normal PC
Debug Serial	0x3F8		COM1:
COM1:	0x2F8	3	COM2:
COM2:	0x3E8	4	COM3:
COM3:	0x2E8	5	COM4:

If user opens "COM1:" to send data in Windows CE, data will be sent to serial port 2. Follow those steps to disable debug serial port in Windows CE:

1. Open "%_WIN_DIR%\PUBLIC\COMMON\OAK\CSP\X86\OAL\debug.c" in Platform Builder 5.0:

```
void OEMInitDebugSerial(void)
{
    pBootArgs = (BOOT_ARGS *) ((ULONG)*(PBYTE *)BOOT_ARG_PTR_LOCATION) | 0x80000000);

    if ( ! pBootArgs->ucBaudDivisor ) {
        pBootArgs->ucBaudDivisor = 6; // Default to 19.2 if nothing specified.
    }

    pBootArgs->ucComPort = 0; //-- add this line

    switch ( pBootArgs->ucComPort ) {
    case 1:
        IoPortBase = (PUCHAR)COM1_BASE;
        break;
    
```

2. Platform Builder -> Build -> Open Build Release Directory.
3. Change work directory to "%_WIN_DIR%\public\common\oak\csp\x86\oal"
4. Run "build".
5. The registry settings for serial ports are okay in platform.reg in Vortex86SX BSP. It is no need to modify.
6. If you need COM4, add this environment variable "BSP_SERIAL4=1". (or, add "4th Serial Port" from BSP catalog)
7. Build your image.

History

2009-03-02

- Fix: hive-based registry issue.

Technical Support

For more technical support, please visit <http://www.dmp.com.tw/tech/vortex86sx> or mail to tech@dmp.com.tw.