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UM01-HW Windows CE driver Release Notes

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UM01-HW Windows CE driver Release Notes

1 Software

1.1 About This Release

This version is base on the “Huawei 3G Modem Windows CE Driver V2.0”, add to support the UM01-HW USB product ID: 0x1012 and fixed the dialup fail issue.

1.2 File list

The release package includes following files:

- └─WinCE5.0 (Release file for WinCE 5.0)
 - | └─ARM
 - | PPPVSP.reg (All necessary registry key for use the driver
 - | PPPVSP.bib (All necessary file need to build in the OS image)
 - | PPPVSP.dll (Driver binary)
 - | PPPVSP.rel (Driver binary)
 - |
- └─WinCE6.0 (Release file for WinCE 6.0)
 - └─ARM
 - PPPVSP.reg (All necessary registry key for use the driver
 - PPPVSP.bib (All necessary file need to build in the OS image)
 - PPPVSP.dll (Driver binary)
 - PPPVSP.rel (Driver binary)

1.3 Major features

- 1) Support multi-interface of USB device.
- 2) Support Windows CE 5.0 of ARM CPU.
- 3) Support Windows CE 6.0 of ARM CPU.

1.4 What's New in This Release

- 1) Add to support the UM01-HW product ID: 0x1012.
- 2) Fixed the dialup fail issue.

1.5 Requirement of the platform

- 1) The platform must support USB Host.
- 2) The USB Host of platform must support at least one interrupt endpoint, one bulk-in endpoint and one bulk-out endpoint (modem port). Modem port: one interrupt endpoint, one bulk-in endpoint and one bulk-out endpoint; Debug port: one bulk-in endpoint and one bulk-out endpoint; AT port: one bulk-in endpoint and one bulk-out endpoint.

1.6 Known issues

2 Guideline for Windows CE 5.0

2.1 Modify USBD.cpp

As Windows CE 5.0's USB driver has some bug to support USB devices, we need change usbd.cpp in folder \$(COMMONOAKROOT)\DRIVERS\USB\USBD such as X:\WINCE500\PUBLIC\COMMON\OAK\DRIVERS\USB\USBD.

```
BOOL LoadDeviceDrivers(SDevice * pDev, BOOL * pfLoaded)
{
    //.....

    // Original:
    /*
    if (fRet && bLoaded) { // Driver Loaded for this interface.
        pDev->rgbInterfaceFlag[iInterface] |= INTERFACE_FLAG_ACTIVATE;
    }
    else
        break;
    */

    // New:
    if (fRet && bLoaded) { // Driver Loaded for this interface.
        pDev->rgbInterfaceFlag[iInterface] |= INTERFACE_FLAG_ACTIVATE;
    }

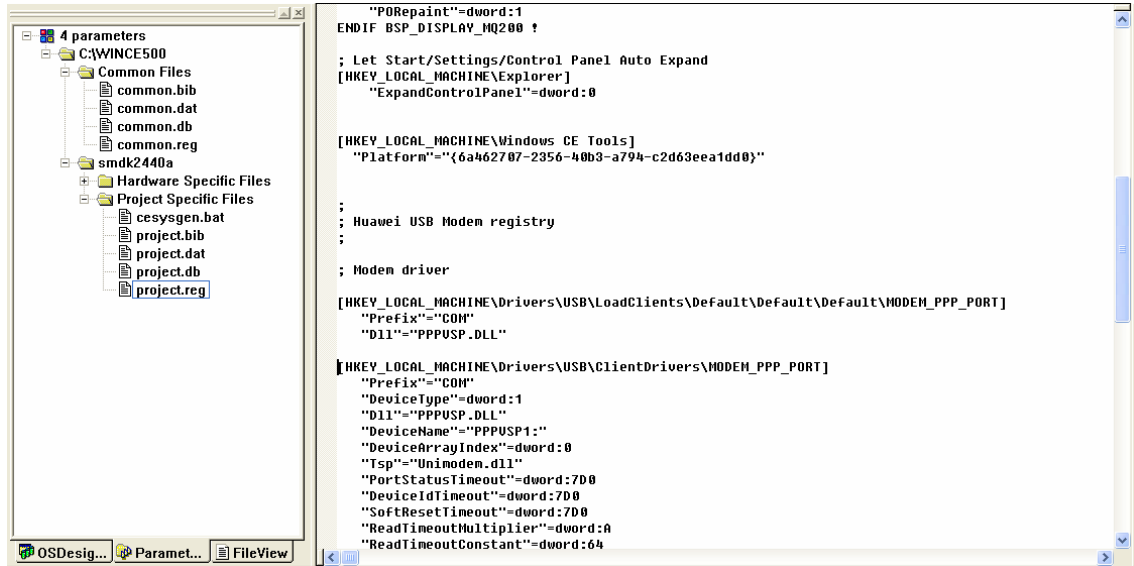
    // End of New

    //.....
}
```

2.2 Add PPPVSP.reg into project.reg and edit the registry setting.

Please add the content of “PPPVSP.reg” into “project.reg” and, then save the file. About the registry setting please refer chapter 4 Registry setting.

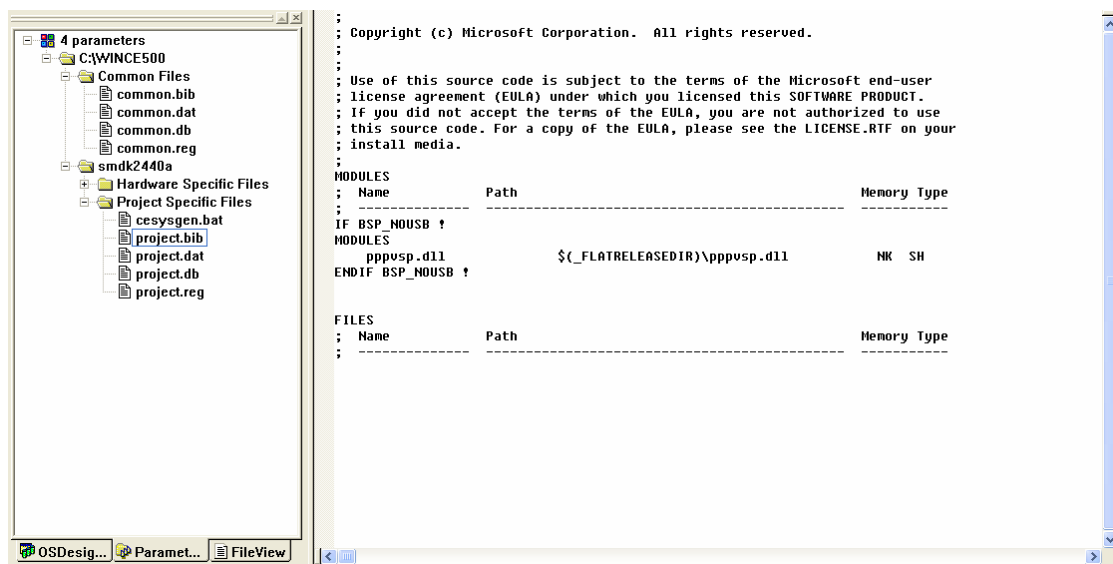
You may find the file “project.reg” in “ParameterView” window of item “Project Specific Files”.



2.3 Add PPPVSP.bib into project.bib

Please add the content of “PPPVSP.bib” into “project.bib”, then save the file.

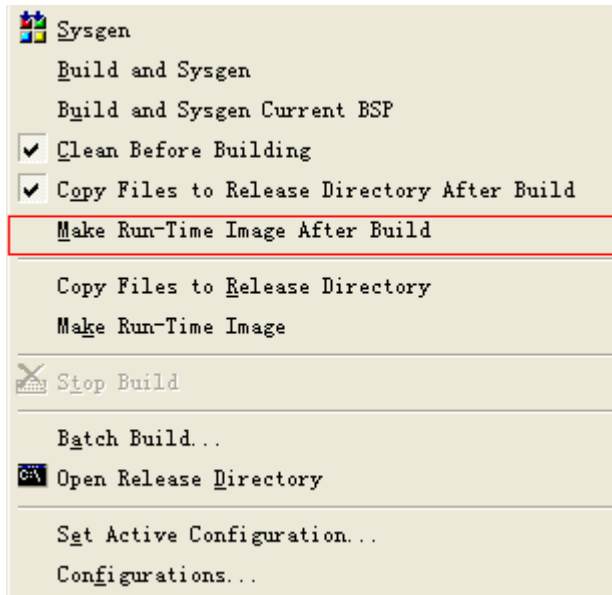
You may also find the file “project.bib” in “ParameterView” window of item “Project Specific Files”.



2.4 Build and Sysgen Platform

Please re-sysgen and build the platform because the modification of Step1 to Step3. If you have ever built the platform before change USB.D.cpp, please select “Clean Before Building” in Platform Builder’s “Build OS” menu.

Disable the selected of “Make Run-Time Image After Build” .



2.5 Copy driver binary

Please copy “PPP.VSP.dll” and “PPP.VSP.rel” into your \$(_FLATRELEASEDIR) folder.

2.6 Make image

Run “Make Run-Time Image” now. Then you may get the BIN file.

3 Guideline for Windows CE 6.0

We can use the same way to add the driver into WinCE 6.0’s platform. Please use the files in folder “WinCE 6.0” while you need the driver on WinCE 6.0

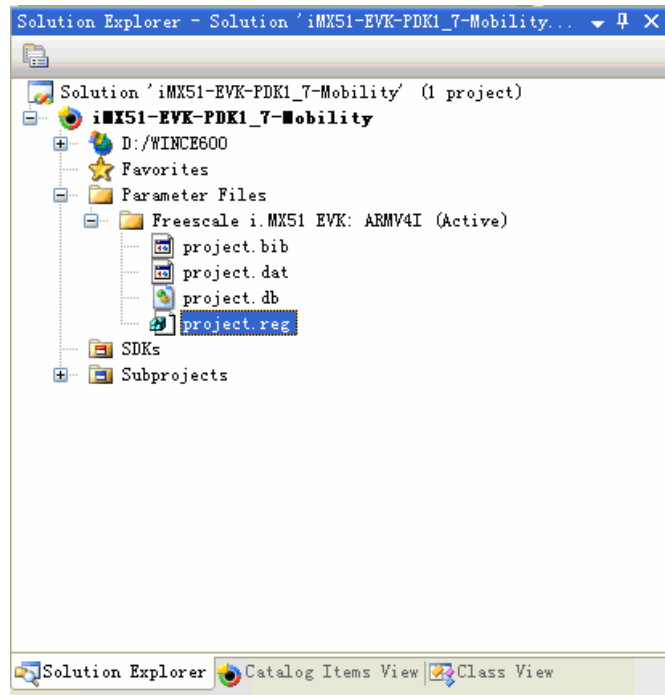
3.1 Sysgen Platform

Before add the PPP.VSP driver, you need sysgen your platform at first. Use “Build” > “Advanced Build Commands” > “Build Current BSP and Subprojects” to sysgen the platform.

3.2 Add PPP.VSP.reg into project.reg and edit the registry setting.

Please add the content of “PPP.VSP.reg” into “project.reg”, then save the file. About the registry setting please refer chapter 4 Registry setting.

You may find the file “project.reg” in “Solution Explorer” window “Parameter Files”.



3.3 Add PPPVSP.bib into project.bib

Please add the content of “PPPVSP.bib” into “project.bib”, then save the file.

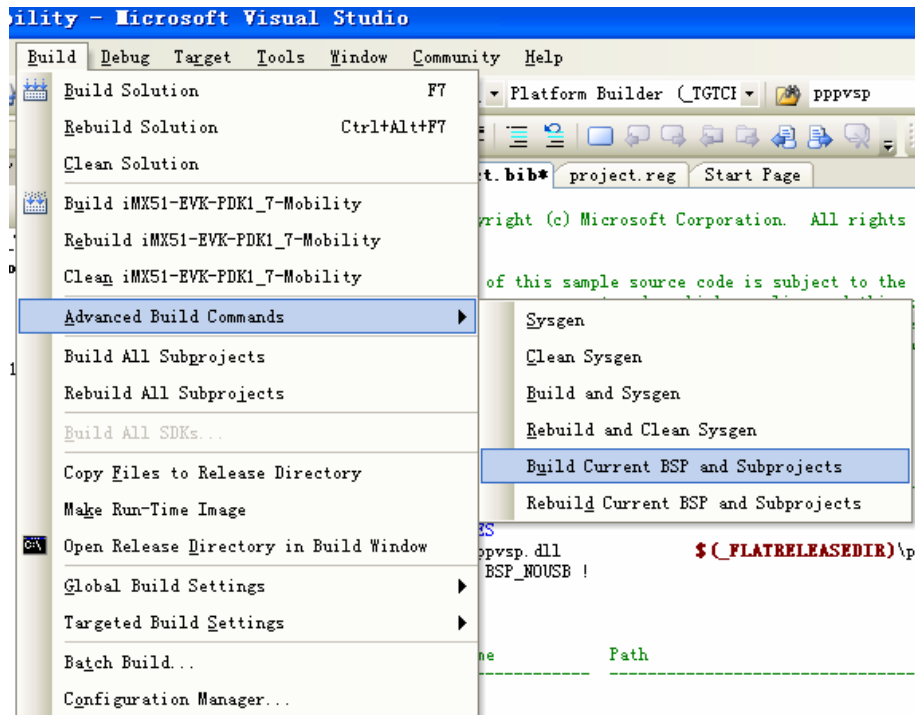
You may find the file “project.reg” in “Solution Explorer” window “Parameter Files”.

3.4 Copy driver binary

Please copy “PPPVSP.dll” and “PPPVSP.rel” into your \$(_FLATRELEASEDIR) folder.

3.5 Build Current BSP and Subprojects

Just use “Build”>”Advanced Build Commands”>”Build Current BSP and Subprojects” to build and sysgen the platform.



3.6 Make image

If you have select “Build”>”Global Build Settings”>”Make Run-Time Image After Build” or “Build”>”Targeted Build Settings”>”Make Run-Time Image After Building”, you may already got the BIN file. Otherwise run “Make Run-Time Image” now. Then you may get the BIN file.

4 Registry setting

This chapter will describe the content of “PPPVSP.reg”. Please read this chapter carefully to create your own registry.

The “PPPVSP.reg” includes three parts: PPPVSP driver part, ExtModem part and Dial part.

4.1 PPPVSP registry

The following registry keys show the default PPPVSP driver as a USB function serial client driver. This part must be included to add the driver into your OS.

```
; This item used to indicate the system to use PPPVSP as the default USB driver.
[HKEY_LOCAL_MACHINE\Drivers\USB\LoadClients\4817\Default\8\HUAWEI_MODEM_PORT]
"Prefix"="COM"
"Dll"="PPPVSP.DLL"

[HKEY_LOCAL_MACHINE\Drivers\USB\LoadClients\Default\Default\Default\HUAWEI_MODEM_PORT]
"Prefix"="COM"
"Dll"="PPPVSP.DLL"

[HKEY_LOCAL_MACHINE\Drivers\USB\ClientDrivers\HUAWEI_MODEM_PORT]
```



```
"Prefix"="COM"
"DeviceType"=dword:00000001
"RxBufferSize"=dword:00006000
"Dll"="PPPVSPP.DLL"
"DeviceName"="PPPVSPP1:"
"DeviceArrayIndex"=dword:00000000
"Tsp"="Unimodem.dll"
"PortStatusTimeout"=dword:000007d0
"DeviceIdTimeout"=dword:000007d0
"SoftResetTimeout"=dword:000007d0
"ReadTimeoutMultiplier"=dword:0000000a
"ReadTimeoutConstant"=dword:00000064
"WriteTimeoutMultiplier"=dword:00000032
"WriteTimeoutConstant"=dword:000003e8
"InterfaceIndex"=dword:00000000
"IClass"="{7690C995-91F2-486A-8983-C4BC3EFC0686}"

[HKEY_LOCAL_MACHINE\Comm\PPPVSPP]
"DisplayName"="USB-PPP Port Driver"
"Group"="Serial"
"ImagePath"="PPPVSPP.DLL"
```

4.2 ExtModem registry

The ExtModem registry is for add an external modem into your OS. If you don't want add the external modem, you may delete these registry key. Even if you need the external modem, you may also need change the commands of init your modem.

1. To change the init AT commands of modem, change the strings in [HKEY_LOCAL_MACHINE\ExtModems\HuaweiModem\Init], Please confirm the APN and modify the init AT commands:
"4"="AT+cgdcont=1,\"ip\", \"1234\"<cr>\"."

```
;
; Huawei ExtModem config.
; It can be cut because customer can config it manually

[HKEY_LOCAL_MACHINE\Drivers\Unimodem\Init]
"1"="AT<cr>"
"2"="ATE0V1&C1&D2<cr>"
"3"="ATE0<cr>"
"4"="AT+cgdcont=1,\"ip\", \"1234\"<cr>"
```

4.3 Dial registry

The Dial part has added a dial pattern. You may also change it as your wish.



Each MultiSz location has the format of “LocationName, LocalFmt, LdFmt, IntntlFmt, AreaCode, CwCode, CountryCode, & Options”. Please refer the [Dialing Locations Registry Settings](#) of MSDN.

```
; Dial number config
; It can be cut because customer can config it manually

[HKEY_CURRENT_USER\ControlPanel\Dial]
"CurrentLoc"=dword:00000002
"HighLocID"=dword:00000003

[HKEY_CURRENT_USER\ControlPanel\Dial\Locations]
"2"=multi_sz: "MID",
               "G",
               "G",
               "G",
               "425",
               " ",
               "1",
               "0"
```

4.4 Trace log

Set the value of the item “LogOn” in “[HKEY_LOCAL_MACHINE\ExtModems\HayesCompat]” to “00000001” can switch on the trace log, and the trace log will save to the “\window\log.txt”.

```
; Dial number config
[HKEY_LOCAL_MACHINE\ExtModems\HayesCompat]
"MODEM"="com"
"DeviceType"=dword:00000001
"DeviceExistOrNot"=dword:00000000
"UseMultLoadItem"=dword:00000000
"LogOn"=dword:00000000
"PCUI"="com"
"DIAG"="com"
```



List of reference: