ISP1760; ISP1761 Windows CE 5.0 user installation guide Rev. 03 — 12 October 2009 User ma

User manual

Document information

Info	Content
Keywords	usb; universal serial bus; isp1760; isp1761
Abstract	This document describes the Platform Builder setup for the ISP176x Universal Serial Bus (USB) Host Controller Driver. The document covers the installation of software for the ISP176x on the Microsoft Windows CE platform version 5.0.
	Remark : The ISP176x denotes the ISP1760 and ISP1761 Hi-Speed Universal Serial Bus controllers, and any future derivative.





Revision history

Rev	Date	Description
03	20091012	Rebranded to the ST-Ericsson template.
02	20090216	Rebranded to the ST-NXP Wireless template.
01	20051018	First release.

Contact information

For additional information, please visit: http://www.stericsson.com

For document related queries, please send an email to: wired.support@stericsson.com

UM10067_3



Remark: The ISP176x denotes the ISP1760 and ISP1761 Hi-Speed Universal Serial Bus controllers, and any future derivative.

1. Introduction

This document describes the Platform Builder setup for the ISP176x Universal Serial Bus (USB) Host Controller Driver (HCD). The document covers the installation of software for the ISP176x on the Microsoft Windows CE platform Ver. 5.0.

The software architecture supports the PCI and GPIO bus. The software is tested and proven on the PCI platform using the PLX9054 bridge.

Remark: It is assumed that the reader is well versed with the Windows CE development environment and fully understands the driver development for Windows CE Ver. 5.0.

2. Installing the ISP176x host software

- 1. Install the ISP176x host software on the PC using the setup utility.
- Under the WINCE500 root directory, create directory 3rdParty. Under 3rdParty create directory ST-ERICSSON.
- 3. Copy directories PhISP1761HCD and PhISP1761Bus from the eval kit disk to directory \WINCE500\3rdParty\ ST-ERICSSON\.
- 4. Copy CEC files ISP1761Host.cec and PCIKit.cec from the eval kit disk to folder \WINCE500\PUBLIC\COMMON\OAK\CATALOG\CEC.

3. ISP176x HCD Windows CE Ver. 5.0 operating system design

This section explains the steps involved in adding Windows CE Ver. 5.0 ISP176x HCD and its dependent modules for x86 processor.

1. Install Windows CE Ver. 5.0 with your selected BSP.

After installing Windows CE Ver. 5.0, follow the steps to add the ISP176x HCD and its dependent modules.

2. Create a platform workspace with your BSP.



ISP1760; ISP1761 Win CE 5.0 User Installation Guide

	🕹 Platform Builder
	G 🔁 🖻 🗭 ∬ CE Device
5	<u>File Edit V</u> iew <u>P</u> roject Pl <u>a</u> tform Ta <u>r</u> get <u>B</u> uild Proje
	Image: New Platform Ctrl+N Image: Second
	Glose
	Open <u>W</u>orkspace Sa <u>v</u> e Workspace Close Wor <u>k</u> space
	E Save Ctrl+S Save As Save Alj
	Page Setyp Print Ctrl+P
	Recent Eiles
	<u>M</u> anage Catalog Items License Run-Time Image
	E⊻it
g 1. Step 1.	



ISP1760; ISP1761 Win CE 5.0 User Installation Guide

) () e Ec (26)		Welcome to the New Platform Wizard This wizard guides you through the process of creating an OS design for a Windows CE-based platform. An OS design defines the characteristics of a Windows CE OS. You can create an OS design by choosing a design template and one or more board support packages (BSPs). A BSP includes an OEM adaptation layer (OAL) and device drivers.
		This wizard helps you: Choose a BSP. Choose a design template. Add items to your OS design or remove items from it. To continue, click Next.
	Q	< Back Next > Finish Cancel
Fig 2.	Step 2.	

New Platform Wiz Workspace Na Choose a frier	rard - Step 2 Ime And Location ndly name for your workspace.	×
	Name: ISP1761CE Path: F:\WINCE500\PBWorkspaces\ISP1761CE	
0	< <u>Back Next></u> Einish Cance	21
Fig 3. Step 3.		



ISP1760; ISP1761 Win CE 5.0 User Installation Guide

Jew Platform Wizard - Step 3 Board Support Packages (BSPs) A BSP contains a set of device drivers that are added to your OS design.					
Available BSPs: AWD GEODE: X86 CEPC: X86 EMULATOR: X86 INTEL PXA27X DEV PLATFOR PHILO DEVELOPMENT BOAR SAMSUNG SMDK2410: ARMV	M:ARMV41 D: ARMV41 41	Select one o	or more BSPs for y	our OS design.	
•	< Back	Note: Only I are displaye Next≯	BSPs supported by ed in the list. Finish	/ installed CPUs	
Fig 4. Step 4.					

New Platform Wizard - Step 3 Board Support Packages (BSPs) A BSP contains a set of device drivers that are added to your OS design.					
Available BSPs:					
AMD GEODE: X86	Select one or more BSPs for your OS design.				
CEPC X86 EMULATOR: X86 INTEL PXA27X DEV PLATFORM:ARMV4I PHILO DEVELOPMENT BOARD: ARMV4I SAMSUNG SMDK2410: ARMV4I	A BSP for a Windows CE PC-based hardware reference platform. The platform uses the OS based on the x86 architecture.				
	Note: Only BSPs supported by installed CPUs are displayed in the list.				
(2) < Back	Next > Finish Cancel				
Fig 5. Step 5.					



ISP1760; ISP1761 Win CE 5.0 User Installation Guide

	Choose the	design template tha	t is most closely
Custom Device	aligned with	the purpose of your	target device.
Enterprise Terminal Enterprise Web Pad Gateway Industrial Controller Internet Appliance IP Phone Mobile Handheld Set-Top Box Tiny Kernel Windows Thin Client	Provides the Pad-based wireless net	e starting point for a devices with touch o working.	range of Web lisplay and

ew Platform Wizard - Step 5	<u>></u>
Applications & Media Select items for applications and media to include	in your OS design.
Items:	
INE I Compact Framework ActiveSync DCOM Lightweight Directory Access Protocol (LDAP) Standard SDK for Windows CE VBScript support Windows Media Audio/MP3 Windows Media Video/MPEG-4 Video Windows Messenger WordPad VordPad Internet Browser Microsoft File Viewers Windows CE Error Reporting	for the .NET Compact Framework.
	Estimated size of these items: 10063 KB
(2) < Back	Next > Finish Cancel
7. Step 7.	



ISP1760; ISP1761 Win CE 5.0 User Installation Guide

New Platform Wizard - S Networking & Commu Select items for netwo	tep 6 nications rking and communication:	s to include in you	r OS design.	×
Items: ✓ OBEX Server ✓ TCP/IPv6 Support e ✓ Local Area Networ e Personal Area Net Wide Area Networ	k (LAN) work (PAN) connection < (WAN)	The foundar Framework standard ar	tion of the OBEX Applic that provides support fo d user-defined service ize of these items: 1092	ation brboth s. 4 KB
2	< Back	Next >	Finish	Cancel

Becurity Warn	ing
Under certain ci compromise the potential securi	rcumstances, the Object Exchange Protocol (OBEX) catalog item can e security of your platform. This catalog item poses the following ty risks:
 If proper sec interferes wit 	urity and authentication techniques are not used, a service that th services.exe can be installed.
 If proper enc expose data 	ryption techniques are not used, OBEX running over Bluetooth could packets to third parties.
To learn more a using this catal	bout potential OBEX security risks, as well as the best practices for og item more securely, see the following topics:
OBEX Security	
Enhancing the s	Security of a Device
	(Back Next) Finish Cancel



New Platform Wizard - Step 8				<u>×</u>
Completing the Wizard	New Plat	form		<u> </u>
You have successfully Wizard. Microsoft	completed th	e New Platforn	n	
based platform. By def provides a Debug configuration of this O	fault, Platform figuration and S design.	n Builder I a Release	-	
Options: <u>Modify build options free configurations of your</u>	or the Debug and I OS design withou	<u>Release</u> It closing this wizard	<u>I.</u>	=
To close this wizard, clic	k Finish .			*
3	< Back	Next >	Finish	Cancel
Fig 10. Step 10.				

3. Refresh the catalog items.

SP37261HcD-Platform Builder Image: Builder		
Image: Endergy	🕹 ISP1761HCD - Platform Builder	
Fig 11. Step 11.	G 🖸 🖹 😰 🏠 DE Device	
EFC: x86_Release Image: Spi76iHD Caldege lens Image: Spi7	Eile Edit View Project Platform Target Build Project B	uild OS Tools Window Help
EEPC: x86_Release Image: SP1761HCD Catalog tens Image: SP1761HCD Catalog tens <td>📔 😅 🖬 🕼 X 🖷 📾 🇆 + 🗠 + 💽 🗖</td> <td>I 🗊 😤 🙀 error 🔽 🙀</td>	📔 😅 🖬 🕼 X 🖷 📾 🇆 + 🗠 + 💽 🗖	I 🗊 😤 🙀 error 🔽 🙀
Image: Spiritium of the sp	CEPC: x86_Release	
M Added the Minimal Input Configuration feature (SYSGEN MINUMUT) to the platform. Added the Minimal Window Manager Configuration feature (SYSGEN MINUMGR) to the platform. Fig 11. Step 11.	SP1761HCD Catalog items Source Drivers CEPC: x86 CepC: x86 Cep	Control of the second sec
Fig 11. Step 11.	Added the Minimal Input Configuratio Added the Minimal Window Manager Con	n feature (SYSGEN_MININPUT) to the platform. figuration feature (SYSGEN_MINUMGR) to the platform.
Fig 11. Step 11.		
Fig 11. Step 11.		



ISP1760; ISP1761 Win CE 5.0 User Installation Guide



















ISP1760; ISP1761 Win CE 5.0 User Installation Guide















4. Adding the ISP176x project to the platform

In this section, you will learn to add the ISP176x Host Controller catalog items to the operating system design view. It is assumed that the platform is already created and the ISP176x catalog files have been imported.

If you are working on the PCI bus, you need to add the PCI bus driver to route the PCI interrupt to the ISP176x. If you are using the GPIO bus, you can ignore this step. To add the PCI bus driver, add module Catalog\ThirdParty\ST-ERICSSON \ PCIKit.

🕹 ISP1761HCD - Platform Builder	
🔇 🕑 🗷 😰 🏠 🔀 CE Device 💌 🗣 💀 🕬 🖭	
Eile Edit View Project Platform Target Build Project Build OS Iools Window Help	
) 🎽 🚅 💭 🙏 🖻 🖻 으 - 오 - 🔲 🗖 🗊 😚 🦄 error 🔽 🖍	
CEPC: x86_Release	
Added the Mininal Juput Configuration feature (SYSCEN_MININGR) to the platform. Added the Mininal Juput Configuration feature (SYSCEN_MININGR) to the platform.	Catalog Catalog Core DS Core DS Core DS Platorn Manager Third Party Third Party Core StreERICSSON ISPT7E1HoctionController ISPT7E1HoctionController ISPT7E1HoctionController ISPT7E1HoctionController ISPT7E1HoctionController Core StreERICSSON Core S
Added the Control Panel Applets feature (SYSGEN_CTIPML) to the platform. Added the Software-based Input Panel Driver feature (SYSGEN_SOFTKB) to the platform. Fig 23. Adding the component: PCI kit.	별 Progeroes

To add the ISP176x module to the platform, add module Catalog \ThirdParty ST-ERICSSON 1761HostController.





5. Interfacing routines

The ISP176x Host Controller module is located below Microsoft defined USBD. The ISP176x Host Controller module interacts with the ISP176x hardware located at the bottom level and with the USBD located above this module.

Fig 25 shows interfacing the blocks of the ISP176x to an operating system.





6. Customizing the software

The software architecture supports PCI and GPIO modes. In PCI and GPIO modes, read and write registers of the ISP176x can be memory mapped. You can configure the interrupt for the ISP176x as either edge-triggered or level-triggered using the Hardware Mode Control register. To customize the ISP176x, refer to the ISP176xHCDConfig.h file, located under the 'WINCE500\3rdparty\ST-ERICSSON\phISP176xHCD\phISP176xCOM' directory.



6.1 PCI bus mode

The software is tested and proven on the PLX9054 bridge. PCI bridge chip PLX9054 in the ISP176x PCI kit is used for the PCI host to transparently access the ISP176x. PLX9054 requests PCI bus resources, such as I/O ports, interrupt line, on behalf of the ISP176x. PLX9054, however, can only request one interrupt line for the ISP176x.

If required, customize file P1761bus.reg under WINCE500\3rdparty\ST-ERICSSON\PhISP176xbus\.

Change the following, depending on your PCI bridge settings:

- VendorID
- DeviceID
- SubVendorID
- SubsystemID
- Class
- SubClass
- ProgIF

For example, the P1761bus.reg file looks as follows:

```
; USB - P1761 Bus PCI Bus Driver for PCI kit only
; HC : 1: support Host Controller. 0: none
; DC : 1: support Device Controller. 0: none
[HKEY LOCAL MACHINE\Drivers\BuiltIn\PCI\Template\P1761BUS]
  "Dll"="p1761bus.dll"
  "Order"=dword:0
  "Class"=dword:06
  "SubClass"=dword: 80
  "ProgIF"=dword:00
  "VendorID"=multi sz:"10b5"
  "DeviceID"=multi sz:"5406"
  "SubVendorID"=multi sz:"10b5"
  "SubsystemID"=multi sz:"9054"
  "HC"=dword:1
 "DC"=dword:0
  ; USB - ST-ERICSSON ISP17161 driver Instance to create DCD or HCD
; Used to create P1761HCD instance
```



```
[HKEY LOCAL MACHINE\Drivers\ISP176x\Instance]
```

"Dll"="RegEnum.dll"

```
; USB - ST-ERICSSON ISP176xHCD driver template
```

```
; ------
```

[HKEY LOCAL MACHINE\Drivers\ISP176x\Template]

"InstanceIndex"=dword:0

The driver will not be loaded, if these parameters do not match bridge settings.

6.2 GPIO bus mode

If working in GPIO mode, change registry settings of P1761HCD.dll.

Open registry file P1761HCPDD.reg under WINCE500\3rdparty\ST-ERICSSON\phISP176xHCD\phISP176xPDD.

For example, the registry should look as follows, if you are working in GPIO mode. Change 'SysIntr', 'Irq' and 'MemBase', according to your platform.

```
[HKEY LOCAL MACHINE\Drivers\BuiltIn\P1761HCD]
```

```
; "Prefix"="PEHCD"
"Dll"="P1761HCD.dll"
"Order"=dword: 2
"Class"=dword:0c
"SubClass"=dword:03
"ProgIF"=dword: 20
"IsrDll"="giisr.dll"
"IsrHandler"="ISRHandler"
"HcdCapability"=dword:4 ;HCD_SUSPEND_ON_REQUEST
"SysIntr"=dword:1f ; decimal 31 ; you change your interrupt line here
"MemBase"=dword:08000000 ;you change your Memory Base Address here
"MemLen"=dword:100000
"InterfaceType"=dword:0 ; Internal
"Irq"=dword:3 ;you change your IRQ number here
```

6.3 Driver loading sequence in Windows CE Ver. 5.0

After switching on the Windows CE system with the ISP176x PCI kit, PCI BIOS initializes the PCI kit and assigns I/O resource and PCI interrupt lines as requested by PLX9054.

Windows CE Ver. 5.0 PCI bus driver PCIbus.dll is then invoked. PCIbus.dll gets I/O resource and PCI interrupt line of the ISP176x PCI kit and obtains an interrupt ID. PCIbus.dll searches the registry, finds the ISP176x registry template by matching registry key 'Class', 'Subclass', 'VendorID', 'DeviceID', 'SubsystemID' and 'SubvendorID', then loads P1761Bus.dll.



To ensure that PCI bus driver PCIBus.dll loads P1761 bus driver P1761Bus.dll, porting engineer should verify that the above-mentioned registry key matches with the PLX9054 setting in the P1761bus.reg file located under directory ST-ERICSSON\PhISP176xBus.

Once P1761Bus.dll is loaded and the system loads Host Controller stack P1761hcd.dll by checking registry setting in P1761bus.reg under directory ST-ERICSSON\PhISP176xbus.

This loading sequence will be different if you are working in GPIO mode. P1761Bus.dll will not be loaded in GPIO mode.

6.4 I/O address translation in Windows CE Ver. 5.0

To build an image, select BuildOS -> Build and Sysgen.

As soon as Host Controller stack p1761hcd.dll is loaded, its platform dependent PDD code, system.c, (under ST-ERICSSON\PhISP176xHCD\PhISP176xPDD) gets the hardware resources, I/O port and interrupt ID, from the registry. These I/O port addresses are in the form of physical address.

Direct hardware accesses by using the physical address from user mode device drivers or applications are prohibited by Windows. Physical addresses must be translated into virtual addresses using either MemMaploSpace () or VirtualAlloc () / Virtual Copy. The translation can also be done by new Windows CE Ver. 5.0 function BusTransBusAddrToVirtual ().

7. Building an image

lSP1761HCD - Platform Builder F G 🖯 🗵 🗟 🏠 CE Device 💌 🗫 💀 🗫 Eile Edit View Project Platform Target Build Project Build OS Tools Window Help 🎦 😅 🖬 🗊 🐰 🖻 💼 🗠 🗸 🗠 🖌 💽 🏥 Sysgen ✓ ²H Build and Sysger CEPC: x86, Belease Build and Systen Current BSP ∃ ⊾ × Clean Before Building A X Notification LED APIs Copy Files to Release Directory After Build 🗾 Catalog PNP Notifications Power Management (Full) Serial Port Support 🗿 📄 BSPs 🖃 🧰 Core OS ✓ Make Run-Time Image After Build Ore Cole Cole
 Device Drivers
 Platform Manager Copy Files to Release Directory UI based Notification USB Host Support File Systems and Data Store Make Run-Time Image 🛓 🧰 Third Party 🔏 st + E Fonts Batch Build.. Den Release Directory Set Active Configuration. 🦲 Security - 🛅 Shell and User Interface Configurations. - Colects ÷ Fig 26. Building an image.

8. Creating boot disk for x86 SDB

To create a boot floppy disk for an x86 SDB:

- Navigate to the %ProgramFiles%\Windows CE Platform Builder\5.00\CEPB\Utilities directory, and then run WebSetup.exe to install utility programs to the default Microsoft Windows directory on your PC. You only need to install WebSetup.exe once.
- 2. On your PC, insert a blank 3.5-inch floppy disk in the floppy disk drive.



- 3. From the %ProgramFiles%\Windows CE Platform Builder\5.00\CEPB\Utilities directory, run CEPCBoot.144. You can also run CEPCBoot.144 from the command line.
- 4. If your floppy disk is not blank and formatted, check format before making disk box in the Web Image NT window. This causes WebSetup.exe to format the boot floppy disk with MS-DOS 6.22 before copying the CEPCBoot.144 disk image to the boot floppy disk.
- 5. In the Web Image NT window, choose the A: drive. This copies the CEPCBoot.144 disk image to the boot floppy disk.
- 6. Choose Cancel to close the Web Image NT window.

9. Connecting to x86 SDB target

1. On the Target menu, select Connectivity Options.



2. If you want to download the image through Ethernet and want the debugger to be KdStub, set Debugger to KdStub, Download and Transport to Ethernet.



SP1761HCD - Platform Builder		R m		
		7 0 <u>P</u>		
File Edit View Project Platform Target	Build Project Build OS Tools Window			
1 🖉 🖻 🖬 🖉 1 X 🖻 🖻 1 🗁 -		ee 🖌 🔽 no		
CEPC: x86_Release	💌 😫 🔛	≚ Dt 🐵		
		0.11		- AX
GPT761HCD Catalog items ⊕	Target Device Connectivity Device Configuration Add Device Delete Device Service Configuration Kernel Service Max Core Service Status Service Status	Options Target Device: CE Device Download: Ethernet (CEPC60844) Transport Ethernet (CEPC60844)	Settings	og SPs ore OS evice DYtvers Haform Manager hird Party ST-ERICSSON ISP1761FunctionController ISP1761FunctionController ISP1761HostCOntroller ISP1761PowerMgmtApplication PIKR
OSDesi. Derame. Classvi. Added the Minimal Input Co Added the Minimal Window H Added the AYGShell API Set Added the Common Dialog S Added the Control Panel A Added the Software-based Added the Common Control I Completed the feature and		Debugger: KdStub	Settings	A
Fig 28. Step 2.				

3. Choose your device boot name or IP address.

ISP1761HCD - Platfo ISP1761HCD - Platfo ISP2	rm Builder E Device V Pa Ngtform Target Build Project Build OS Iools W Pa Pa V V Pa	5a %a (⊡) ndow ∐elp error ♥ 34		
CEPC: x86_Release	EE 📉		1	
ISP1761HCD Ca Carlos Carlos Carlos Carlos Carlos Carlos Carlos Carlos Carlos Carlos Carlos Carlos Carlos Carlos Carlos Carlos Carlos Carlos Carlos Carlos Carlos Carlos Carlos Carlos Carlos Carlos Carlos Carlos Carlos Carlos Carlos Carlos Carlos Carlos Carlos Carlos Carlos Carlos Carlos Carlos Carlos Carlos Carlos Carlos Carlos Carlos Carlos Carlos Carlos Carlos Carlos Carlos Carlos Carlos Carlos Carlos Carlos Carlos Carlos Carlos Carlos Carlos Carlos Carlos Carlos Carlos Carlos Carlos Carlos Carlos Carlos Carlos Carlos Carlos Carlos Carlos Carlos Carlos Carlos Carlos Carlos Carlos Carlos Carlos Carlos Carlos Carlos Carlos Carlos Carlos Carlos Carlos Carlos Carlos Carlos Carlos Carlos Carlos Carlos Carlos Carlos Carlos Carlos Carlos Carlos Carlos Carlos Carlos Carlos Carlos Carlos Carlos Carlos Carlos Carlos Carlos Carlos Carlos Carlos Carlos Carlos Carlos Carlos Carlos Carlos Carlos Carlos Carlos Carlos Carlos Carlos Carlos Carlos Carlos Carlos Carlos Carlos Carlos Carlos Carlos Carlos Carlos Carlos Carlos Carlos Carlos Carlos Carlos Carlos Carlos Carlos Carlos Carlos Carlos Carlos Carlos Carlos Carlos Carlos Carlos Carlos Carlos Carlos Carlos Carlos Carlos Carlos Carlos Carlos Carlos Ca	Device Boot Name: IP Address: 0.0.0.0 Bootloader: 0.0 Active Devices: OK Cancel II API See Dialog So D Panel A pre-based i control i	Coptions Target Device: CE Device Download: Ethernet Transport: Ethernet (CEPC60844) Debugger: KdStub Apply Close	Settings Settings Settings	og SPs ore DS tevice Drivers Halform Manager hid Party ST-ERICSSON ISP1751FunctionController ISP1761HostCoPericeApplication ISP1751PowerMgmtApplication PCIKit
Fig 29 Stop	2			

4. Select Attach Device to download the image to the target.





10. References

- [1] Universal Serial Bus Specification Rev. 2.0
- [2] ISP1760 Hi-Speed USB host controller for embedded applications data sheet
- [3] ISP1761 Hi-Speed USB On-The-Go controller data sheet
- [4] Enhanced Host Controller Interface Specification for Universal Serial Bus Rev. 1.0.

11. Glossary

Table 1.	Abbreviations
Acronym	Description
API	Application Programming Interface
BIOS	Basic Input Output System
BSP	Board Support Package
GPIO	General Purpose Input/Output
HAL	Hardware Abstraction Layer
HCD	Host Controller Driver
IP	Internet Protocol
MSI	Microsoft Installer
PC	Personal Computer
PCI	Peripheral Component Interconnect
USB	Universal Serial Bus
USBD	Universal Serial Bus Driver

User manual

23 of 25



12. Legal information

Please Read Carefully:

The contents of this document are subject to change without prior notice. ST-Ericsson makes no representation or warranty of any nature whatsoever (neither expressed nor implied) with respect to the matters addressed in this document, including but not limited to warranties of merchantability or fitness for a particular purpose, interpretability or interoperability or, against infringement of third party intellectual property rights, and in no event shall ST-Ericsson be liable to any party for any direct, indirect, incidental and or consequential damages and or loss whatsoever (including but not limited to monetary losses or loss of data), that might arise from the use of this document or the information in it.

ST-Ericsson and the ST-Ericsson logo are trademarks of the ST-Ericsson group of companies or used under a license from STMicroelectronics NV or Telefonaktiebolaget LM Ericsson.

All other names are the property of their respective owners.

© ST-Ericsson, 2009 - All rights reserved

Contact information at www.stericsson.com under Contacts

www.stericsson.com



13. Contents

1.	Introduction	3
2.	Installing the ISP176x host software	3
3.	ISP176x HCD Windows CE Ver. 5.0 opera system design	ting 3
4.	Adding the ISP176x project to the platfor	m15
5.	Interfacing routines	16
6.	Customizing the software	17
6.1	PCI bus mode	
6.2	GPIO bus mode	
6.3	Driver loading sequence in Windows CE Ver. 5.0	
6.4	I/O address translation in Windows CE Ver. 5.0	20
7.	Building an image	20
8.	Creating boot disk for x86 SDB	20
9.	Connecting to x86 SDB target	21
10.	References	23
11.	Glossary	23
12.	Legal information	24
13.	Contents	25

© ST-Ericsson 2009. All rights reserved.

For more information, please visit: <u>http://www.stericsson.com</u> For document related queries, email to: wired.support@stericsson.com

> Date of release: 12 October 2009 Document identifier: UM10067_3

Free Manuals Download Website <u>http://myh66.com</u> <u>http://usermanuals.us</u> <u>http://www.somanuals.com</u> <u>http://www.4manuals.cc</u> <u>http://www.4manuals.cc</u> <u>http://www.4manuals.cc</u> <u>http://www.4manuals.com</u> <u>http://www.404manual.com</u> <u>http://www.luxmanual.com</u> <u>http://aubethermostatmanual.com</u> Golf course search by state

http://golfingnear.com Email search by domain

http://emailbydomain.com Auto manuals search

http://auto.somanuals.com TV manuals search

http://tv.somanuals.com