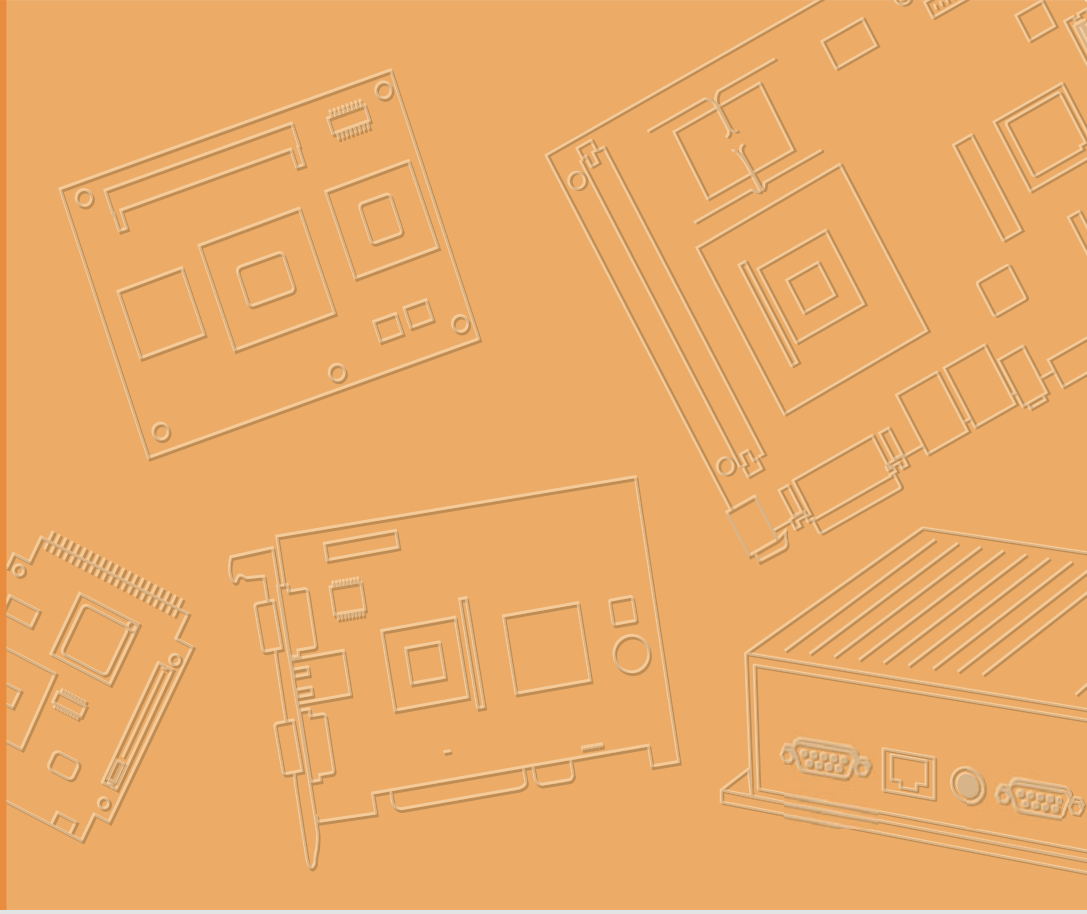
User Manual



TREK-722/723

RISC All-In-One Mobile Data Terminal

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3. If your product is diagnosed as defective, obtain an RMA (return merchandize authorization) number from your dealer. This allows us to process your return more quickly.
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5. Write the RMA number visibly on the outside of the package and ship it prepaid to your dealer.

Part No. Edition 1

Printed in Taiwan December 2012

Declaration of Conformity

CE

This product has passed the CE test for environmental specifications. Test conditions for passing included the equipment being operated within an industrial enclosure. In order to protect the product from being damaged by ESD (Electrostatic Discharge) and EMI leakage, we strongly recommend the use of CE-compliant industrial enclosure products.

FCC Class B

Note: This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

This device complies with Part 15 FCC Rules.

Operation is subject to the following two conditions:

(1) this device may not cause harmful interference, and

(2) this device must accept any interference received, including interference may cause undesired operation.

RF Exposure Information

This device meets the government's requirements for exposure to radio waves.

This device is designed and manufactured not to exceed the emission limits for exposure to radio frequency (RF) energy set by the Federal Communications Commission of the U.S. Government.

- This device complies with FCC radiation exposure limits set forth for an uncontrolled environment. In order to avoid the possibility of exceeding the FCC radio frequency exposure limits, human proximity to the antenna shall not be less than 20cm (8 inches) during normal operation.

Technical Support and Assistance

1. Visit the Advantech web site at http://support.advantech.com where you can find the latest information about the product.
2. Contact your distributor, sales representative, or Advantech's customer service center for technical support if you need additional assistance. Please have the following information ready before you call:
   - Product name and serial number
   - Description of your peripheral attachments
   - Description of your software (operating system, version, application software, etc.)
   - A complete description of the problem
   - The exact wording of any error messages

Warnings, Cautions and Notes

Warning! *Warnings indicate conditions, which if not observed, can cause personal injury!*

Caution! *Cautions are included to help you avoid damaging hardware or losing data. e.g.*

There is a danger of a new battery exploding if it is incorrectly installed. Do not attempt to recharge, force open, or heat the battery. Replace the battery only with the same or equivalent type recommended by the manufacturer. Discard used batteries according to the manufacturer's instructions.

Note! *Notes provide optional additional information.*

Document Feedback

To assist us in making improvements to this manual, we would welcome comments and constructive criticism. Please send all such - in writing to: support@advantech.com

Packing List

Before setting up the system, check that the items listed below are included and in good condition. If any item does not accord with the table, please contact your dealer immediately.

- TREK-722/ TREK-723 Mobile Data Terminal
- Warranty Card
- "Drivers, utilities, and user manual" CD-ROM
- End User License Agreement (WinCE), please download driver and relative document from http://support.advantech.com

- Power Cable

Ordering Information

Part Number	Description
TREK-722R-A0E	TREK-722 barebone
TREK-722R-CBCEA0E	TREK-722R-A0E w/ GPS, CDMA, BT, CE
TREK-722R-GBCEA0E	TREK-722R-A0E w/ GPS, GPRS, BT, CE
TREK-722R-HBCEA0E	TREK-722R-A0E w/ GPS, HSPA, BT, CE
TREK-723R-A0E	TREK-723 barebone
TREK-723R-CBCEA0E	TREK-723R-A0E w/ GPS, CDMA, BT, CE
TREK-723R-GBCEA0E	TREK-723R-A0E w/ GPS, GPRS, BT, CE
TREK-723R-HBCEA0E	TREK-723R-A0E w/ GPS, HSPA, BT, CE

Safety Instructions

1. Read these safety instructions carefully.
2. Keep this User Manual for later reference.
3. Disconnect this equipment from any AC outlet before cleaning. Use a damp cloth. Do not use liquid or spray detergents for cleaning.
4. For plug-in equipment, the power outlet socket must be located near the equipment and must be easily accessible.
5. Keep this equipment away from humidity.
6. Put this equipment on a reliable surface during installation. Dropping it or letting it fall may cause damage.
7. Do not leave this equipment in an environment unconditioned where the storage temperature under -30° C (-22° F) or above 70° C (158° F), it may damage the equipment.
8. Do not operate this equipment in an environment temperature may over 70° C (158° F). The surface temperature of metal chassis may be scorch and hot.
9. Make sure the voltage of the power source is correct before connecting the equipment to the power outlet.
10. Position the power cord so that people cannot step on it. Do not place anything over the power cord.The voltage and current rating of the cord should be greater than the voltage and current rating marked on the product.
11. All cautions and warnings on the equipment should be noted.
12. If the equipment is not used for a long time, disconnect it from the power source to avoid damage by transient overvoltage.
13. Never open the equipment. For safety reasons, the equipment should be opened only by qualified service personnel.
14. If one of the following situations arises, get the equipment checked by service personnel:
    - The power cord or plug is damaged.
    - Liquid has penetrated into the equipment.
    - The equipment has been exposed to moisture.
    - The equipment does not work well, or you cannot get it to work according to the user's manual.
    - The equipment has been dropped and damaged.
    - The equipment has obvious signs of breakage.

15. This device complies with Part 15 of the FCC rules. Operation is subject to the following two conditions:
    (1) this device may not cause harmful interference, and
    (2) this device must accept any interference received, including interference that may cause undesired operation.
16. CAUTION: Always completely disconnect the power cord from your chassis whenever you work with the hardware. Do not make connections while the power is on. Sensitive electronic components can be damaged by sudden power surges.
17. CAUTION: Always ground yourself to remove any static charge before touching the motherboard, backplane, or add-on cards. Modern electronic devices are very sensitive to static electric charges. As a safety precaution, use a grounding wrist strap at all times. Place all electronic components on a static-dissipative surface or in a static-shielded bag when they are not in the chassis.
18. CAUTION: Any unverified component could cause unexpected damage. To ensure the correct installation, please always use the components (ex. screws) provided with the accessory box.

Safety Precaution - Static Electricity

Follow these simple precautions to protect yourself from harm and the products from damage.

- To avoid electrical shock, always disconnect the power from your system chassis before you work on it. Don't touch any components on the main board or other cards while the system is on.
- Disconnect power before making any configuration changes. The sudden rush of power as you connect a jumper or install a card may damage sensitive electronic components.

Warning!

1. *Input voltage rated: 6 ~ 36 Vdc (12/24V power).*
2. *Transport: carry the unit with both hands and handle with care.*
3. *Maintenance: to properly maintain and clean the surfaces, use only approved products or clean with a dry applicator.*
4. *SD/SIM card: Turn off the power before inserting or removing the storage cards.*

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Chapter 1

General Information

This chapter gives background information on the TREK-722/723 Mobile Data Terminal.

Sections include:

- **Introduction**
- **General Specifications**
- **Dimensions**

1.1 Introduction

TREK-722/723 is a RISC platform with 5"/7" display all-in-one Mobile Data Terminal (MDT). The radio frequency options and programmable function keys make TREK-722/723 suitable for local fleet management. It is designed with vehicle power compliant to ISO7637-2 & SAE J1113 ensuring the system is stable in dirty car power system. With Suspend/Wakeup feature, TREK-722/723 supports 24/7 monitoring mechanism by periodical, digital input & WWAN wakeup.

1.2 General Specifications

Key features

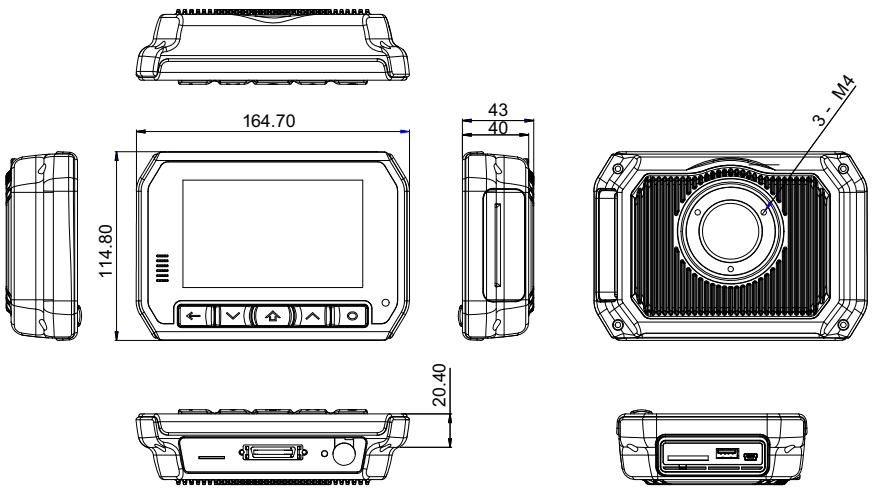
- 5" & 7" LCD (800 x 480) with resistive touchscreen
- 24/7 monitoring & reporting
- Cortex-A8 TI AM3703 800 MHz
- WinCE6.0 & optional Android 2.3.4
- Built-in CAN bus with J1939 protocol
- Built-in GPS with AGPS feature, BT, CDMA/GPRS/HSPA+
- Operating temperature: -20 ~ 60° C (5") & -30 ~ 70° C (7")
- Storage temperature: -30 ~ 80° C

Specifications

- **Dimensions:** 165 x 115 x 43 mm (TREK-722) / 213 x 145 x 43 mm (TREK-723)
- **Weight:** 650 gram (TREK-722) / 850 gram (TREK-723)
- **Power feature:**
  - Input Voltage: 6~36Vdc
  - Supports power on delay (default 2 seconds)
  - Supports power off delay (default 5 seconds)
  - Supports hardware power off delay (default 30 seconds)
  - Supports WWAN wake up
- **SoC:** TI ARM Cortex-A8 AM3703 800 MHz
- **OS:** WinCE 6.0 R3 core version / Android 2.3.4 Gingerbread
- **RAM:** On board 256MB Mobile LPDDR
- **Storage:**
  - On board NAND type 2GB for boot loader, OS & customer's APs
  - 1 x push-push type SD slot
- **LCD:** 5" industrial grade wide screen TFT LCD, 800 x 480 resolution (TREK-722)/ 7" industrial grade wide screen TFT LCD, 800 x 480 resolution (TREK-723)
- **Touch Screen:** 4-wire resistive with flat panel design

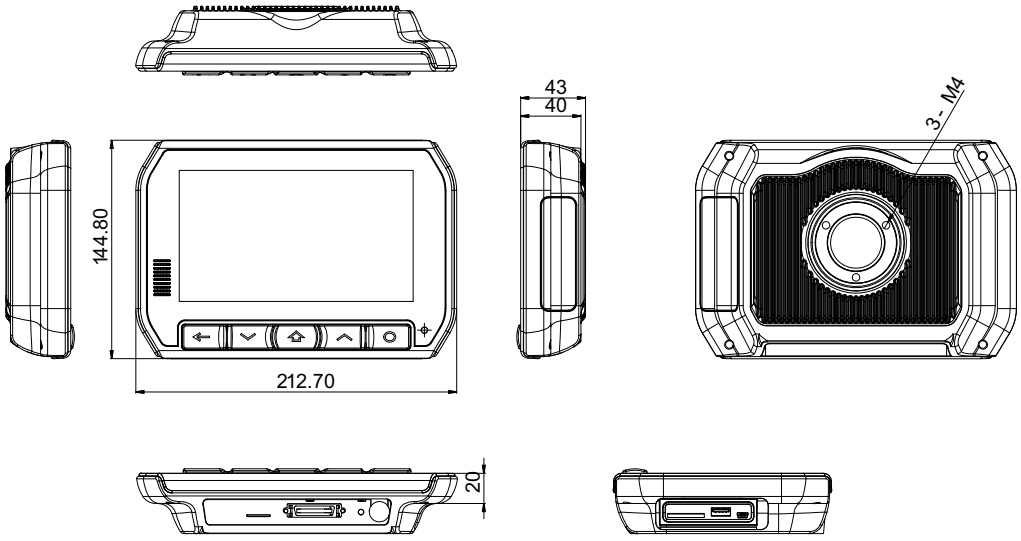
- **IO Function:**
  - Audio:
    1 x built-in 2 W mono speaker
    1 x MIC input, 1 x mono line-in, 1 x stereo line-out via high density cable
  - Video:
    1 x CVBS input via high density cable
    1 x Y/C input via high density cable
  - USB Client: 1 x USB client I/F via USB mini-B connector with rubber door protection
  - USB Host:
    1 x USB host I/F via USB A-type connector (500 mA) with rubber door protection
    1 x USB host I/F via high density cable with USB A-type connector (500 mA)
  - Serial Port: 2 x 4-wire RS-232 via high density cable
  - GPIO:
    2 x isolated digital input (DI) which can wake up system via high density cable
    2 x isolated digital output (DO) via high density cable
  - CAN bus: 1 x CAN bus 2.0a/b with J1939 protocol via high density cable
  - Function Key: 5 x programmable function keys with green LED
- **RF Function:**
  - GPS (Optional): Built-in 50 channel u-blox LEA-6S with internal antenna
  - Bluetooth (Optional): Built-in Class 2 Bluetooth V2.1+EDR with internal antenna
  - WWAN (Optional)
    Built-in Quad-band GPRS module Cinterion TC63i with internal antenna
    Built-in UMTS/HSPA+ module Cinterion PH8 with internal antenna
    Built-in CDMA/EV-DO module Qualcomm Gobi3000 with internal antenna
  - WLAN (Optional): External WLAN dongle via USB host
- **Environmental Specifications:**
  - Operating Temperature : -20° C ~ 60° C & -30 ~ 70° C (7")
  - Relative Humidity: 10 ~ 90% @ 40° C (non-condensing)
  - Shock/Vibration MIL-STD-810G, SAE J1455, Class 5M3 according DIN EN 60721-3-5
  - Certificate CE, FCC, CCC, UL, CUL, CB, E-mark

1.3 Dimensions



Unit: mm

Figure 1.1 TREK-722 dimensions



Unit: mm

Figure 1.2 TREK-723 dimensions

Chapter 2

System Setup

This chapter details system setup on TREK-722/723.

Sections include:

- A Quick Tour of the Mobile Data Terminal
- Installation Procedures
- Running the BIOS Setup Program
- Installing the Drivers for Win XP

2.1 A Quick Tour of the TREK-722/723

Mobile Data Terminal

Before starting to set up the Mobile Data Terminal, take a moment to become familiar with the locations and functions of the controls, drives, connectors and ports, which are illustrated in the figures below. When the Mobile Data Terminal is placed inside truck glove cabinet or under the passenger's seat next to the driver, its front appears as shown in Figure 2.1.

Figure 2.1 Front view of TREK-722/723

Figure 2.2 Rear view of TREK-722/723

Figure 2.3 Bottom view of TREK-722/723

2.2 Installation Procedures

When you installing TREK-722/723, the first step will be connect the power and ignition correctly. TREK-722/723 power cable is designed to connect battery directly. TREK-722/723 can be switched ON/OFF by the ignition signal or its power button both.

2.2.1 Connecting the Power Cord

Connect the three pin waterproof power cord to the DC inlet of TREK-722/723. On the open-wire end, one pin is reserved for positive voltage and is marked "+" which needs to be connected to the power "+" side; one pin is reserved for ground and is marked "-"; which needs to be connected to the power "-" side. And, one pin is reserved for the ignition signal with an “ignition” mark. There's independent "Shield" pin in power cable, please fixed its O-ring which besides of power connecter of TREK-722/723.

Figure 2.4 Power connector photo

Table 2.1: Pin Definition of Power Cord

Pin	Definition	Color
1	+	Blue
2	Shield	Black
3	-	Black
4	Ignition	White

2.3 WinCE Satrtup Procedure

Windows CE image can be loaded by two methods, first way is by SD storage card, and second way is by system on-board chip. Storage card is higher boot priority than on-board system flash chip. In BOOTLOADER criteria, it will first read the Windows CE image from external storage card. After download image done, booloader will burn image to on-board flash chip automatically. If external storage card is unavailable or no Windows CE image inside, BOOTLOADER will load the Windows CE image from on-board system flash chip. BOOTLOADER copy Windows CE image to DRAM and launch WinCE from DRAM, whenever loaded by external storage card or system on-board flash chip.

Chapter 3

Hardware & Peripheral Installation

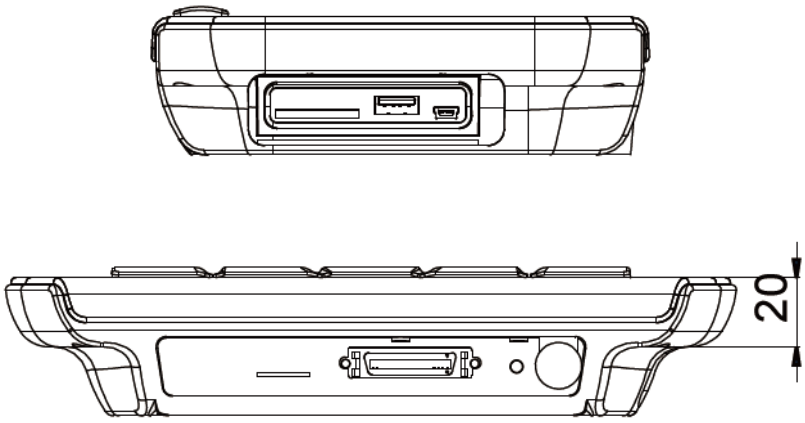
This chapter details the installation of hardware for TREK-722/723.

Sections include:

- Installing the Storage Device and SIM Card
- Installing Optional Accessories

3.1 Installing the Storage Device and SIM Card

Users can install SIM card and storages (SD card) easily on TREK-722. SD card is the main bootable storage which has OS pre-installed from Advantech.



3.2 Installing Optional Accessories

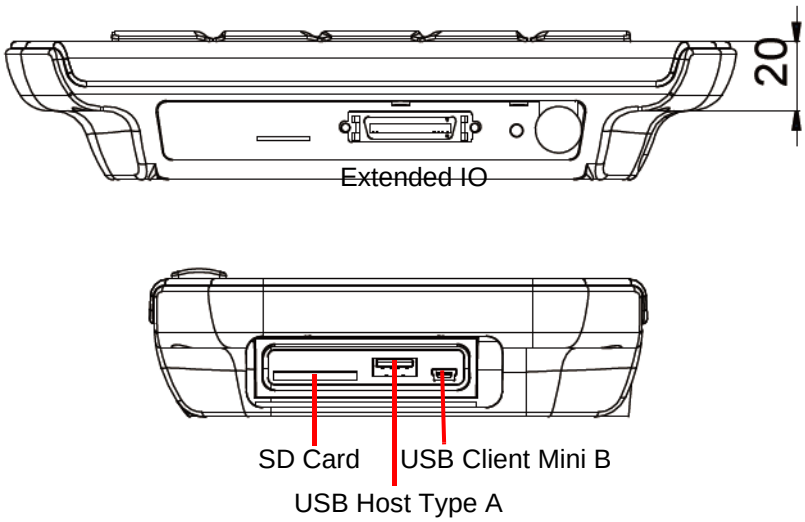
Optional accessories, like RAM mount kits or other functional modules are available for purchase to complement TREK-722/723. All of standard 75mm type mounting with M5 type screws only.

Chapter 4

Pin Assignments

This chapter explains pin assignments on the TREK-722/723.

4.1 Rear Side Connectors



4.2 Extended IO

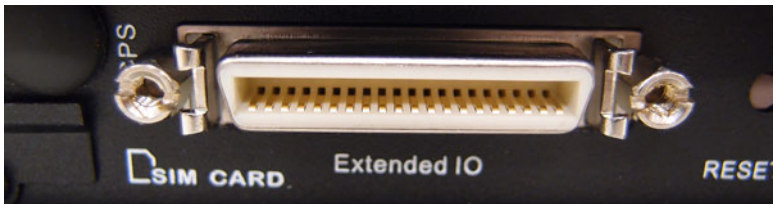


Table 4.1: Extended IO

Pin	Signal	Pin	Signal
1	USB_G	21	USB_5V
2	USB_G	22	USB_5V
3	TX-A	23	USB_DP
4	RTS-A	24	USB_DM
5	RX-A	25	ISOD_GND
6	CTS-A	26	DO1
7	TX-B	27	DO2
8	RTS-B	28	DI-1_N
9	RX-B	29	DI-1_L
10	CTS-B	30	DI-2_N
11	DGND	31	DI-2_L
12	DGND	32	MIC-LINE_IN
13	J1850_P	33	AUDIO_GND
14	J1850_N	34	LINE-OUT_R
15	CAN-H	35	AUDIO_GND
16	CAN-L	36	LINE-OUT_L
17	ISO-L	37	VIDEO_GND
18	ISO-K	38	VIDEO_GND
19	S-Y	39	VIDEO_GND
20	S-C	40	CVBS

Chapter 5

Software Functionality

This chapter details the Windows® 6.0 operating system on the TREK72x platform.

Sections include:

- Introduction
- Windows® CE Startup Procedure
- Upgrade Procedure
- Utilities
- Network
- Application Program Development
- Windows® Embedded CE 6.0 Require Components

5.1 Introduction

The TREK72x platform is one embedded system with Windows® Embedded CE 6.0. The Windows® Embedded CE 6.0 is a compact OS that occupies less storage space or system resources compared with other operating systems such as Windows® XP. By its modular nature, it is possible to choose those functions that are useful for specific application. Not only reducing the system resources required, but also reduces start-up time. In the field of embedded applications, this is an appealing feature because the impact of downtime would be minimized.

Furthermore, the small storage space it needs makes OS on solid-state disk possible, which implies higher robustness to harsh environments.

Figure 5.1 Windows® Embedded CE 6.0 on the TREK72x platform

5.2 Windows CE Startup Procedure

Windows CE image can be loaded by two methods, first way is by SD / MMC storage card, and second way is by system on-board chip. Storage card is higher boot priority than on-board system flash chip. In BOOTLOADER criteria, it will first read the Windows CE image from external storage card. After download image done.If external storage card is unavailable or no Windows CE image inside, BOOTLOADER will load the Windows CE image from on-board system flash chip. BOOTLOADER copy Windows CE image to DRAM and launch WinCE from DRAM, whenever loaded by external storage card or system on-board flash chip.

5.3 Upgrade Procedure

Advantech release three files for TREK72x platform. MLO&EBOOT.NB0 is boot-loader and NK.BIN is WinCE6.0 image.

5.3.1 Prepare SD card for bootloader

a) Disk format with HPUSBFW.EXE.

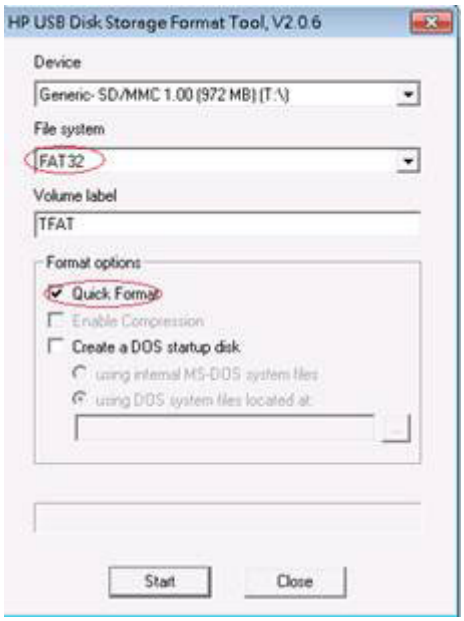


Figure 5.2 Storage format tool

b) Copy file for upgrade image:

1. Copy MLO to sd card for TI CPU boot code.
2. Copy other file to sd card(refer to Section 5.3.2).

5.3.2 Upgrade image:

a) Auto Upgrade:

1. Copy MLO to sd card first.
2. Copy Figure 5.3 file to sd card for TREK72x.

Figure 5.3 Boot files

3. Plug sd card to TREK72x and power on.

4. The screen will show like next picture. It is will pass through some steps about format disk and copy file °¦etc. which automatically to finish upgrade except incorrect conditions.

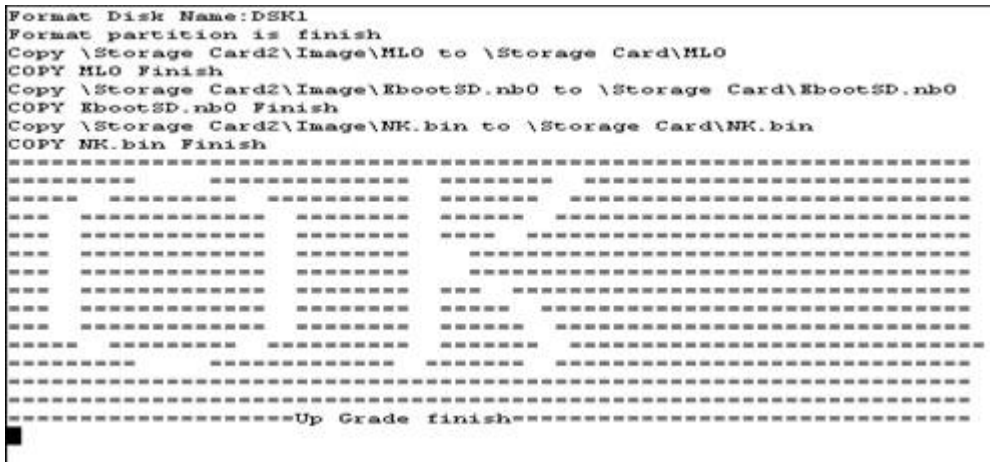


Figure 5.4 Upgrade finish

b) Manual:

If want to upgrade by manual must follow some steps.

1. Format disk with wince tools Storage Manager on the Control panel like Figure 5.4.
2. Copy files to Storage card that include MLO/EbootSD.nb0/NK.bin but MLO must be copied first. Relation files on the "Image" folder like a) Auto Upgrade.

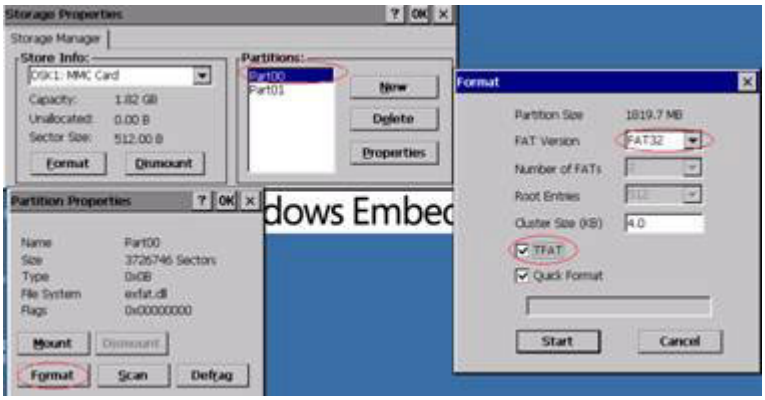


Figure 5.5 Format disk

5.4 Utilities

There are several useful utilities added in the standard Windows® Embedded CE 6.0

5.4.1 Test Utility

The utility "AdvDiag.exe" is one integrated test tool, which includes the function validation for peripheral. You can use this tool to verify whether the peripheral function work or not. You just copy this utility to storage card and then launch from WinCE by double click it.

Main Function :

Item	Function Description
COMx (LOOPBACK)	Lookback test for COM3 & COM8
COMx <=> COMy	Two COM ports RS232 transmission
TOUCH SCREEN	Touch Screen function validation
Audio Play	Audio play function validation
Audio Record	Audio record function validation
USB Keyboard	USB Keyboard function validation
USB Mouse	USB Mouse function validation
Backlight Test	Backlight function validation
DIO Control	DIO function validation
PAUSE	Pause test process
REPEAT TEST	Repeat test process
Etc...	

5.4.2 Test Procedure

You should see a lot of test items in left zone after launch this utility. You can insert enough test items you want to right zone by pressing "Add" button. The test items in right zone will be executed. Also, you can remove test items from right zone by pressing "Remove" button.

After you add test items done, you can go function test by pressing "EXE ALL" button. To press "View Rpt" button, you will see the test result.

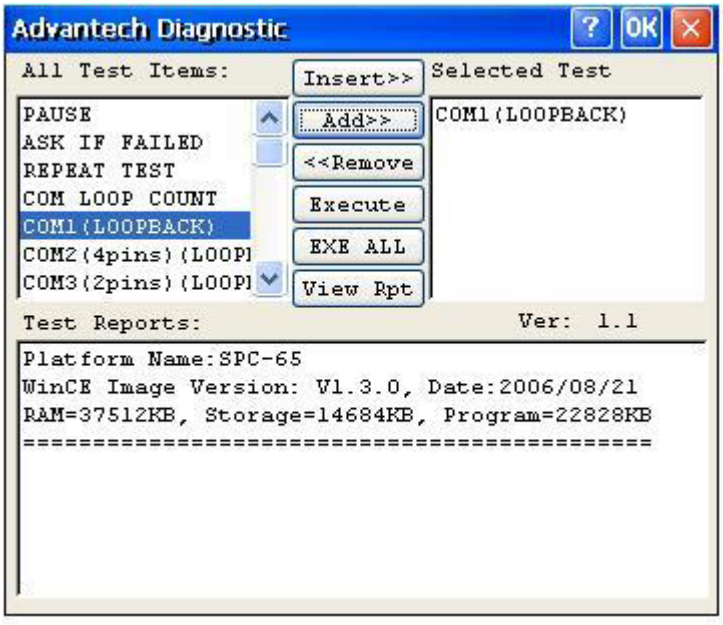


Figure 5.6 Test Utility

5.4.3 Startup execution

The TREK72x platform has a useful function call "Startup execution". After the system boot up, the startup execution function would automatically perform. This function is useful for control system to do the initialization processes or some other procedures. In TREK72x platform, there are two ways to perform "Startup" function.

Method 1:

1. Create "startup" directory in SD/MMC storage card, USB disk.
2. Copy executable files to "startup" directory that is created by Step 1.

Example:

We copy two executable files "softreset.exe" and "Notepad.exe" in "Startup", and then reboot the system. After the system boot up, the two executable file would automatically execute.

Method 2:

1. Create "startup" directory in SD/MMC storage card, USB disk(Hard Disk).
2. Create a file called "startup.ini" in "startup" directory. Type in the commands you want to execute after boot up in that file.

Example:

Create "Startup.ini" in "\DiskOnChip\Startup" directory and reboot the system. The content of startup.ini was listed below:

\windows\tty.exe

\windows\registry.exe

After the system reboot, "\windows\ tty.exe" and "\windows\ registry.exe" would automatically execute. Be sure that the two methods are independent. It means they can be used simultaneously.

5.4.4 Platform Setting

Platform Setting utility is an outstanding utility designed by Advantech Windows? CE software team. It is an integrated environment where user can get useful system information as well as configure favorite system settings and apply system control function on demand. Double click the icon of Platform Setting on the desktop. Platform Setting is also put on Control Panel. Following sections illustrate the functions of Platform Setting.

5.4.4.1 General

It shows the memory information including DRAM and on board MMC. Platform name and version control are also put here.

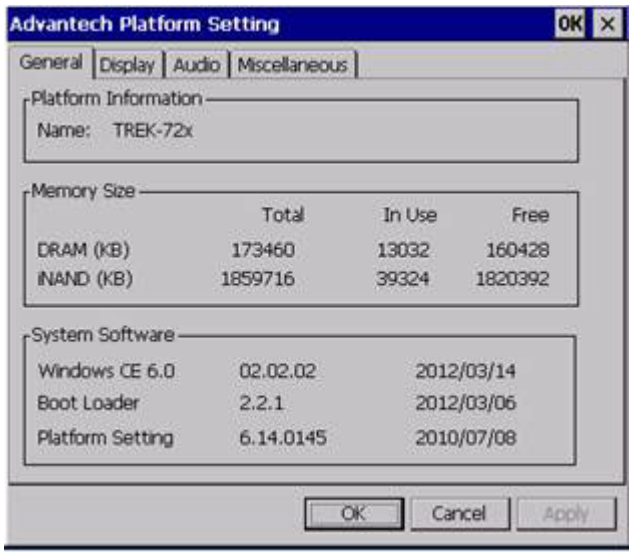


Figure 5.7 General information

5.4.4.2 Audio

The Audio page is setting recorder that include "Microphone" and "Line In". The record function default select is "Line In".

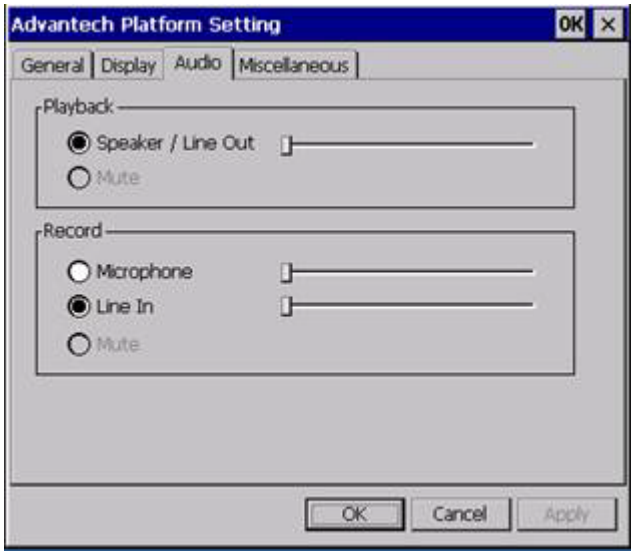
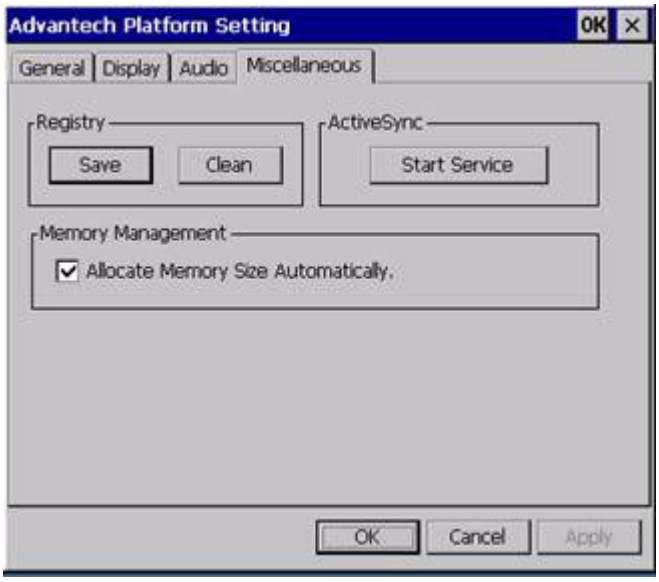


Figure 5.8 Audio

5.4.4.3 Miscellaneous

The Misc page provides several functions as described below. The "Registry" block provides registry save and registry clean function. Pressing "Save" button, the registry settings will be saved to persistent storage as DISKONCHIP. Pressing "Clean" button, the registry setting will return to default settings. The "A.Sync" button invokes ActiveSync to the host computer. The Memory Management block will check if memory size needs to be allocated automatically during boot. Once this is checked, program memory will be allocated half size of memory, and storage memory will occupy the rest.



Miscellaneous settings

5.5 Network

5.5.1 Setup for HSPA and GPRS

TREK72x build in one 3G controller. It appears at "Control Panel/Network and Dial-up Connections". User can configure its 3G support as follows:

a) Manual

1. Click "Start/Settings/Control Panel"
2. Double click "Network and Dial-up Connections"
3. If the TREK72x is a node of the LAN with 3G servers, it is now available.
4. Support Module have Tc63i/PH8/SierraWireless

Figure 5.9 3G via Ethernet

b) Auto connect

Trek72x provide a "RF Module manager" for easy use 3G via Ethernet. About "auto dial up" is dial up from system startup. Next select item "auto connect" is dial up every condition of disconnect automatically.

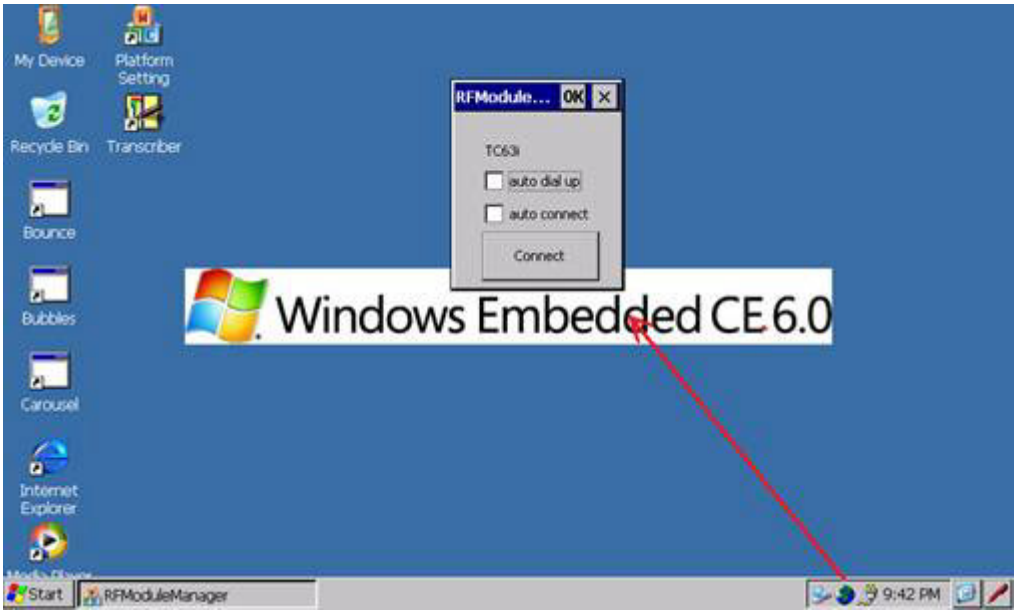


Figure 5.10 RF module manager

Note! *In order to fit every area to connect ISP(Internet Service Provider) must change content of "Extra Settings" like Figure 5.11.*

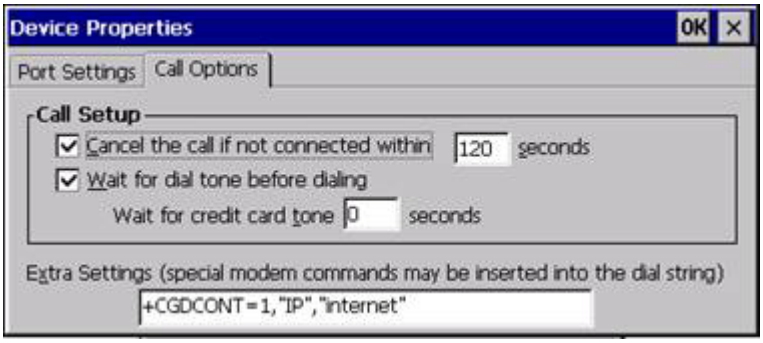
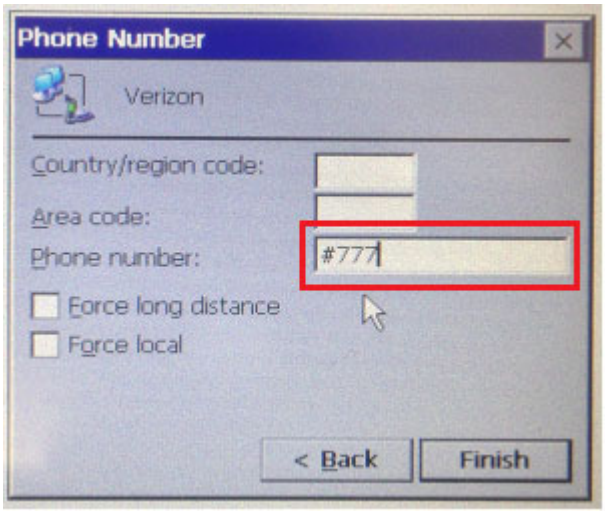


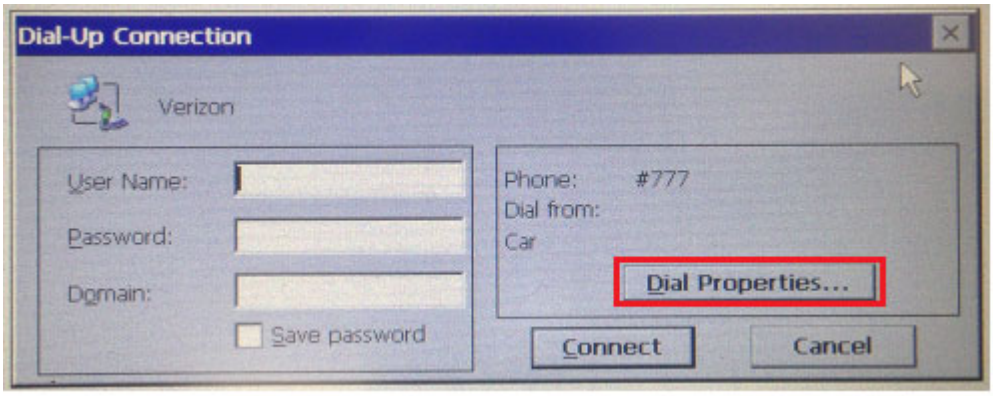
Figure 5.11 ISP modern setting

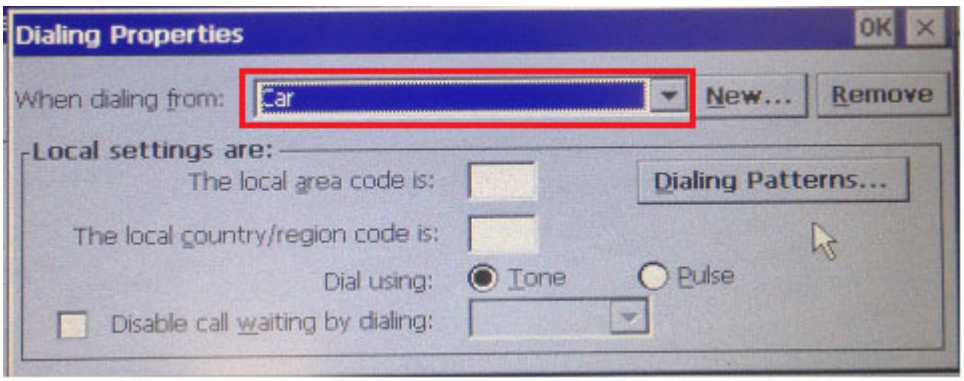
5.5.2 Example for Verizon CDMA Setup

1. On the next screen set the phone number to “#777” and click finish.



2. Double click on the Verizon icon.
3. Tap the dial properties, and use the drop down to select “CAR” and tap OK.

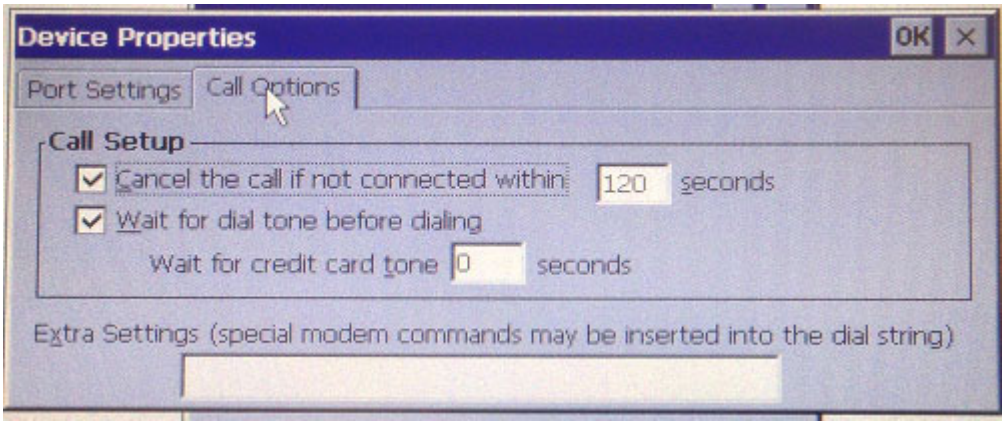




4. Tap Connect
5. The next window will say “Dialing #777”

6. If everything is OK, after a short time, you will hear a connect sound, and the Verizon status window will say “Connected”

Note! *Fill in the “extra settings” field. Picture below for reference.*



5.6 Touch Calibration

Want to calibrate touch panel that can be searched on "stylus property". Press recalibrate button and follow guide to finish recalibrate touch. If finish recalibrate suggest you to save registry with "5.4.4.3 Miscellaneous" keep result of touch panel calibration

Figure 5.12 Touch panel calibration

5.7 Application Program Development

The TREK72x is bundled with built-in Windows® Embedded CE 6.0 operating system. In real applications users need to execute various application programs on it. However, unlike its other family, the Windows® Embedded CE 6.0 is a hardware-dependent operating system. That is to say, Windows? Embedded CE 6.0 application programs are only portable in the source code level. Users must rebuild the runtime file for a different Windows® Embedded CE 6.0 platform even though the source code may not be changed at all.

5.7.1 PC System requirements

- Intel® Pentium-90 CPU or more advanced
- Microsoft® Windows® 2000 Professional or Windows® XP
- Microsoft® eMbedded Visual C++ 4.0 or Virtual Studio 2005
- Platform SDK for TREK72x
- 64MB DRAM
- CD-ROM drive
- Monitor with VGA resolution at least
- Mouse
- 200MB free hard disk space at least
- TREK72x platform
- Let the host PC and TREK72x connect on the same USB1.1 to do kernel debugging if necessary
- USB cable (bundled in the standard TREK72x)

5.7.2 Building Windows CE program

By the platform SDK bundled with the standard TREK72x, users can build the Windows CE runtime application program by the eMbedded Visual Tools.

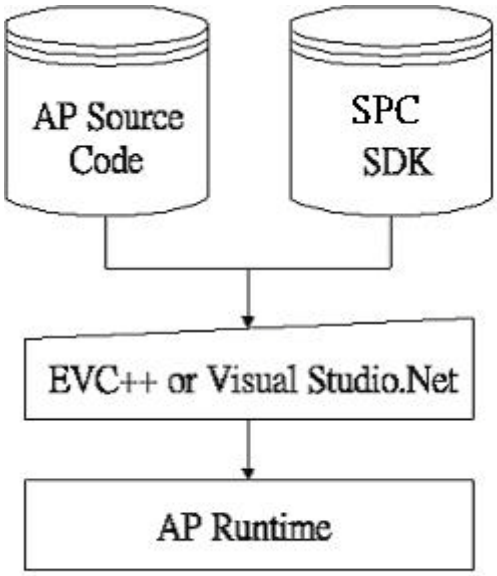
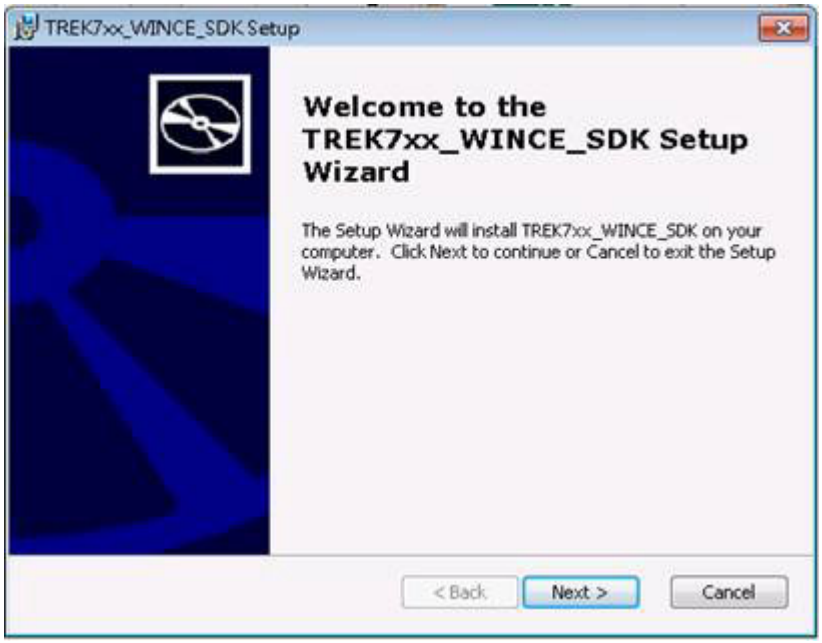


Figure 5.13 Flow-chart of Building Windows® Embedded CE 6.0 runtime

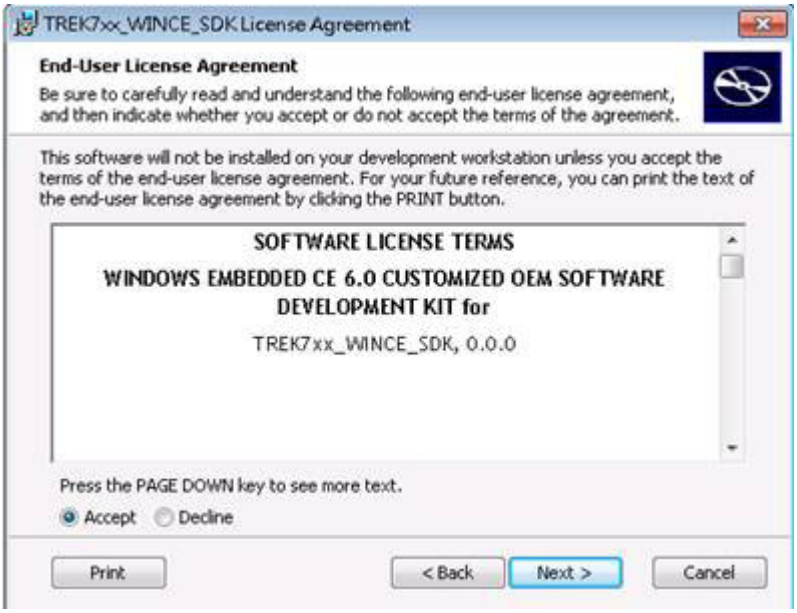
5.7.3 How to install SDK

For example copy Platform SDK file "**.msi" to your PC, and launch it. You can install SDK by steps.

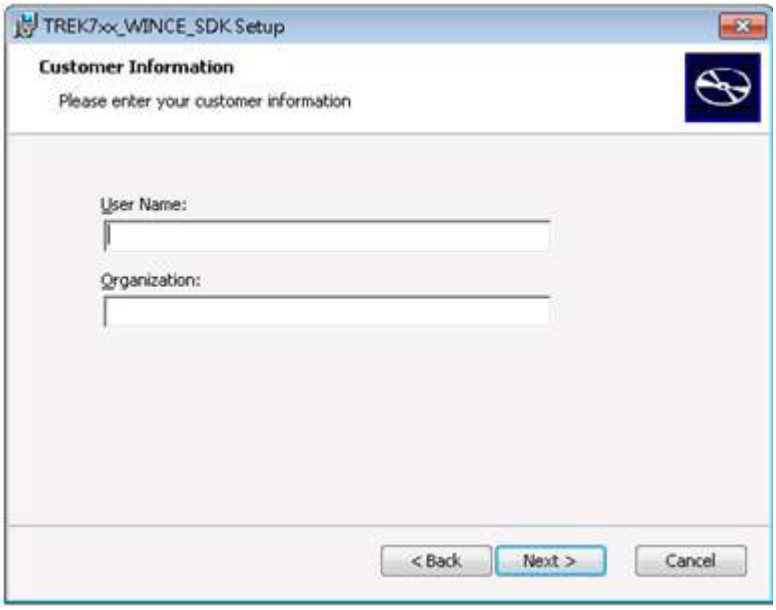
1. Launch Platform SDK file, and then tap Next button.



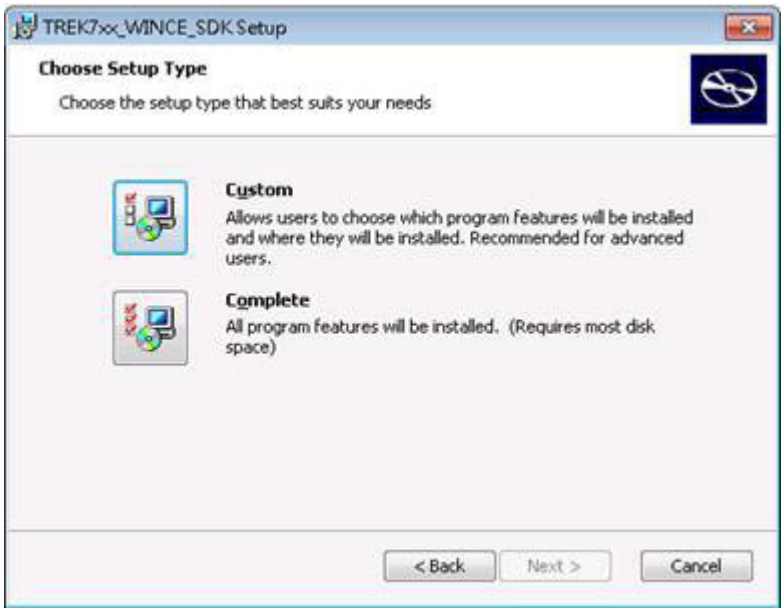
2. Accept License Agreement and go next.

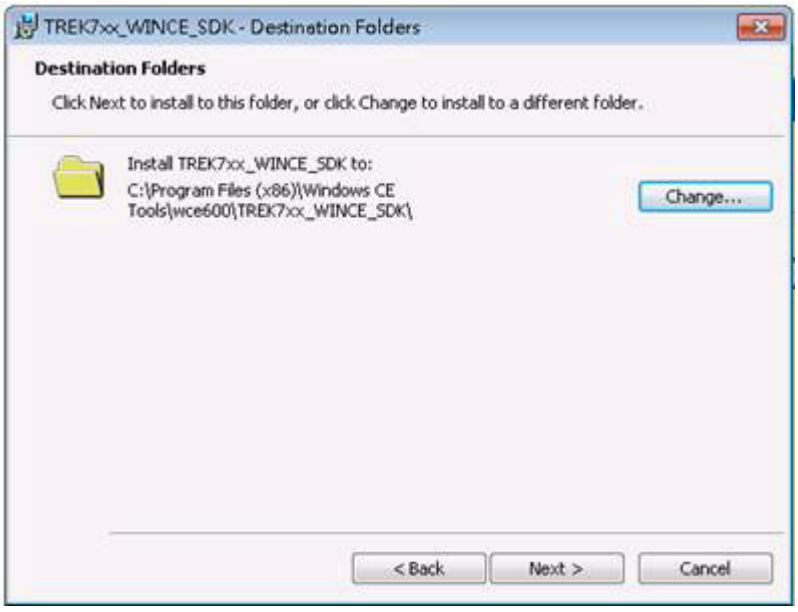


3. Key in your information and go next.

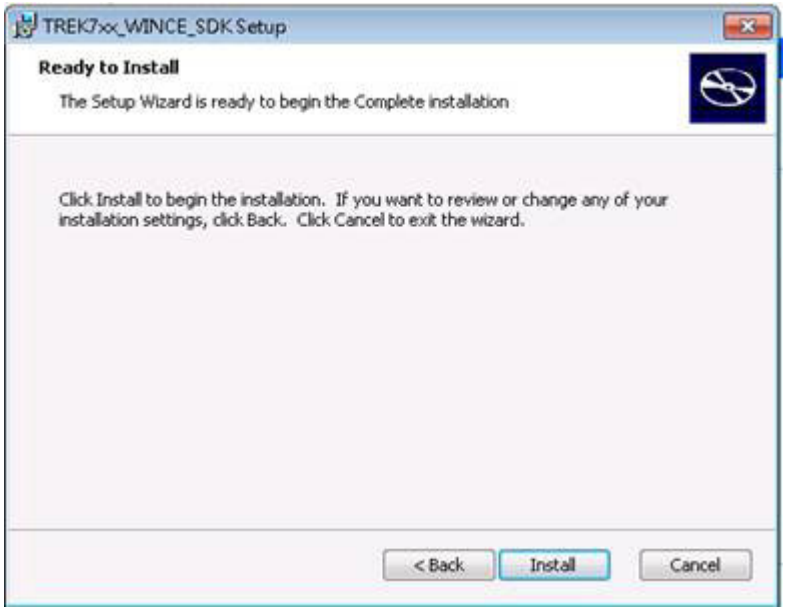


4. Choose setup type.

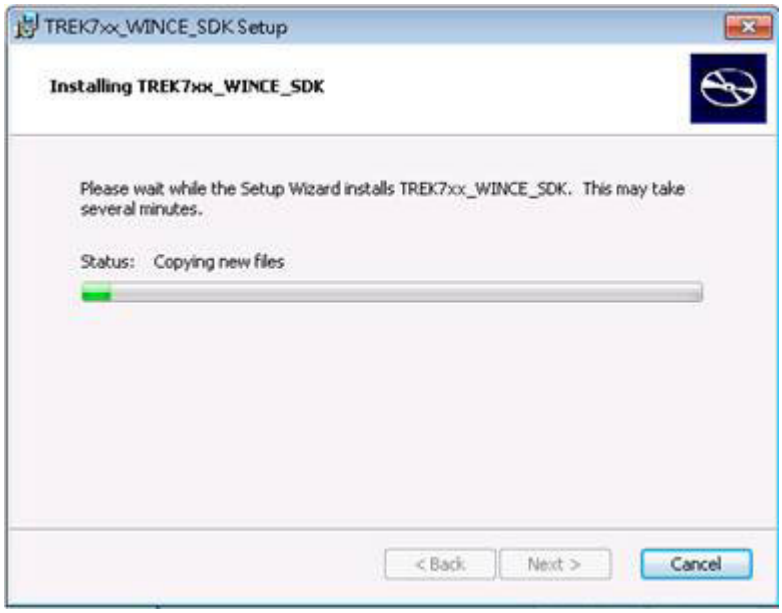




5. Tap "Install" button to install SDK.



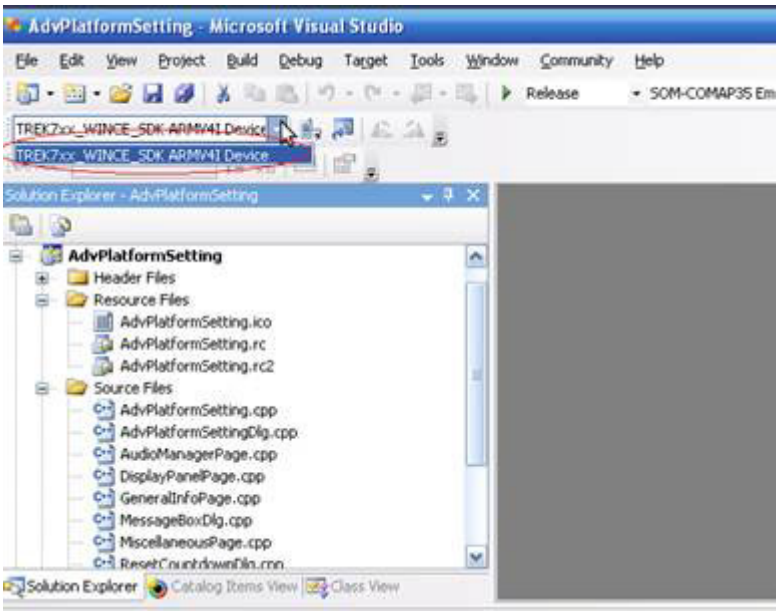
Install SDK....



6. Finish installing.

5.7.4 Running your application programs

After you implement application code, you should choose Advantech SDK to compile.



5.7.5 SUSI library for application program

TREK72x is targeted to be the embedded device for system integrator. System integrator usually access platform relative IO, like backlight control, brightness control, etc. Advantech especially provide one SUSI static library to system integrator. SUSI library includes some useful APIs. System integrator just adds it to their application project, and then they can use SUSI library functions.

Note: about SUSI library detail was showed in [SUSIV3.0RISC User Manual.doc]

5.8 Windows® Embedded CE 6.0 Component List

APPLICATIONS AND SERVICES DEVELOPMENT	**Core**	Advantech Core	**Pro.**	Advantech Pro.	**Pro.Plus**	Advantech Pro. Plus
Active Template Library (ATL)	x	x	x	x	x	x
C Libraries and Runtimes	x	x	x	x	x	x
C++ Runtime Support for Exception Handling and Runtime Type Information	x	x	x	x	x	x
Full C Runtime	x	x	x	x	x	x
Standard I/O (STDIO)	x	x	x	x	x	x
Standard I/O ASCII (STDIOA)	x	x	x	x	x	x
String Safe Utility Functions	x	x	x	x	x	x
Standard String Functions - ASCII (corestra)	x	x	x	x	x	x
Component Services (COM and DCOM)	x	x	x	x	x	x
Component Object Model	x	x	x	x	x	x
COM	x	x	x	x	x	x
CoCreateGuid functionality for OLE32	x	x	x	x	x	x
COM Storage	x	x	x	x	x	x
DCOM	x	x	x	x	x	x
COM Storage	x	x	x	x	x	x

DCOM Remote Access	x	x	x	x	x	x
Minimal COM (No OLE Support)	x	x	x	x	x	x
CoCreateGuid functionality for OLE32	x	x	x	x	x	x
COM Storage	x	x	x	x	x	x
Speech Interface	x		x		x	
Speech API (SAPI) 5.0	x		x		x	
Microsoft English (US) Windows CE Speech Recognizer (available in 4.2 only)*			x		x	
Lightweight Directory Access Protocol (LDAP) Client	x	x	x	x	x	x
Message Queuing (MSMQ)	x	x	x	x	x	x
SOAP Reliable Messaging Protocol (SRMP)	x	x	x	x	x	x
MSMQ ActiveX Wrappers	x	x	x	x	x	x
Microsoft Foundation Classes (MFC)	x	x	x	x	x	x
Object Exchange Protocol (OBEX)	x	x	x	x	x	x
OBEX Server	x	x	x	x	x	x
OBEX Inbox	x	x	x	x	x	x
OBEX File Browser	x	x	x	x	x	x
OBEX Client	x	x	x	x	x	x
Pocket Outlook Object Model (POOM) API			x		x	
SOAP Toolkit	x	x	x	x	x	x
Client	x	x	x	x	x	x
Server	x	x	x	x	x	x
Standard SDK for Windows CE			x	x	x	x
.NET Compact Framework	x	x	x	x	x	x
OS Dependencies for .NET Compact Framework 2.0	x	x	x	x	x	x
Smart Device Authentication Utility	x	x	x	x	x	x
.NET Compact Framework 2.0	x	x	x	x	x	x
SQL Server CE 2.0 .NET Data Provider	x	x	x	x	x	x
SQL Server 2000 .NET Data Provider	x	x	x	x	x	x
SQL Server CE 2.0	x	x	x	x	x	x
XML	x	x	x	x	x	x
MSXML 3.0	x	x	x	x	x	x
XML Core Services and Document Object Model (DOM)	x	x	x	x	x	x
XML HTTP	x	x	x	x	x	x
XML Query Languages (XQL)	x	x	x	x	x	x
XML Stylesheet Language Transformations (XSLT)	x	x	x	x	x	x
XML SAX	x	x	x	x	x	x
XML Error Strings	x	x	x	x	x	x
XML Minimal Parser	x	x	x	x	x	x
Exchange Client	x		x		x	
APPLICATIONS - END USER						
ActiveSync			x		x	
File Sync	x	x	x	x	x	x
Inbox Sync			x		x	
Pocket Outlook Database Sync			x		x	
CAB File Installer/Uninstaller	x	x	x	x	x	x

File Viewers*					x	x
Microsoft Excel Viewer*					x	x
Microsoft Image Viewer*					x	x
Microsoft PDF Viewer*					x	x
Microsoft PowerPoint Viewer*					x	x
Microsoft Word Viewer*					x	x
FLASH Update Sample Application	x		x		x	
Games	x		x		x	
Freecell	x		x		x	
Solitaire	x		x		x	
Help*			x	x	x	x
Inbox			x		x	
Remote Desktop Connection			x	x	x	x
Remote Desktop Protocol (RDP)			x	x	x	x
User Interface Dialog Boxes			x	x	x	x
Smart Card Redirection			x	x	x	x
File Storage Redirection			x	x	x	x
Filtered File Storage Redirection			x	x	x	x
Cut/Copy/Paste Clipboard Redirection			x	x	x	x
Serial and Parallel Port Redirection			x	x	x	x
Audio Playback Redirection			x	x	x	x
Printer Redirection			x	x	x	x
Terminal Emulator	x	x	x	x	x	x
Windows Messenger			x		x	
WordPad			x		x	
CORE OS SERVICES						
Battery Driver	x	x	x	x	x	x
Display Support	x	x	x	x	x	x
Serial Port Support	x	x	x	x	x	x
Parallel Port Support	x	x	x	x	x	x
Internet Appliance (IABASE) Support	x		x		x	
Notification LED Support	x		x		x	
PNP Notifications	x	x	x	x	x	x
USB Host Support	x	x	x	x	x	x
USB Human Input Device (HID) Class Driver	x	x	x	x	x	x
USB HID Keyboard and Mouse	x	x	x	x	x	x
USB HID Keyboard Only	x	x	x	x	x	x
USB HID Mouse Only	x	x	x	x	x	x
USB Printer Class Driver	x	x	x	x	x	x
USB Storage Class Driver	x	x	x	x	x	x
USB Remote NDIS Class Driver	x	x	x	x	x	x
Debugging Tools	x		x		x	
Keyboard Test Application	x		x		x	
Touch Driver Test Application	x		x		x	
Remote Display Application	x		x		x	
Tiny Kernel Test Sample Application	x		x		x	
Toolhelp API	x	x	x	x	x	x
LMemDebug Memory Debugging Hooks	x		x		x	
Notification (Choose 1)	x		x		x	
UI based Notification	x		x		x	
Non UI based Notification	x		x		x	

Power Management (Choose 1)	x		x		x	
Power Management (Full)	x	x	x	x	x	x
Power Management (Minimal)	x		x		x	
Device Manager	x	x	x	x	x	x
Kernel Features	x	x	x	x	x	x
Target Control Support (Shell.exe)	x	x	x	x	x	x
Fiber API	x	x	x	x	x	x
FormatMessage API	x	x	x	x	x	x
Memory Mapped Files	x	x	x	x	x	x
Message Queue - Point-to-Point	x	x	x	x	x	x
COMMUNICATIONS SERVICES AND NETWORKING						
Networking Features	x	x	x	x	x	x
Domain Discovery	x	x	x	x	x	x
Extended DNS Querying and Update (DNSAPI)	x	x	x	x	x	x
Secure DDNS	x	x	x	x	x	x
Extensible Authentication Protocol	x	x	x	x	x	x
Firewall	x		x		x	
Internet Connection Sharing (ICS)	x	x	x	x	x	x
Gateway Logging	x	x	x	x	x	x
IPSec v4	x	x	x	x	x	x
NDIS Packet Capturing DLL	x		x		x	
NDIS User-mode I/O Driver	x	x	x	x	x	x
Network Bridging	x	x	x	x	x	x
Network Driver Architecture (NDIS)	x	x	x	x	x	x
Network Utilities (IpConfig, Ping, Route)	x	x	x	x	x	x
Reference Gateway User Interface	x		x		x	
Remote Configuration Framework	x		x		x	
TCP/IP	x	x	x	x	x	x
IP Helper API	x	x	x	x	x	x
TCP/IPv6	x	x	x	x	x	x
Universal Plug and Play (UPnP)	x	x	x	x	x	x
Control Point API	x	x	x	x	x	x
Device Host API	x	x	x	x	x	x
Device Host API (Minimal Subset)	x	x	x	x	x	x
Sample UPnP IGD Schema Implementation	x	x	x	x	x	x
UPnP Tools	x	x	x	x	x	x
UPnP Audio-Video DCP	x		x	x	x	x
AV Control Point API	x		x	x	x	x
AV Device API	x		x	x	x	x
AV Renderer Sample			x		x	
USB Flash Config Tool	x		x		x	
Windows Networking API/Redirector (SMB/CIFS)	x	x	x	x	x	x
Winsock Support	x	x	x	x	x	x
Networking - Local Area Network (LAN)	x	x	x	x	x	x
Native Wi-Fi WLAN Access Point Components	x	x	x	x	x	x
Native Wi-Fi WLAN STA	x	x	x	x	x	x
Wired Local Area Network (802.3, 802.5)	x	x	x	x	x	x

Wireless LAN (802.11) STA - Automatic Configuration and 802.1x	x	x	x	x	x	x
Networking - Personal Area Network (PAN)	x		x		x	
Bluetooth	x		x		x	
Bluetooth Protocol Stack with Transport Driver Support	x		x		x	
Bluetooth Stack with Integrated CSR Chipset Driver	x		x		x	
Bluetooth Stack with Universal Loadable Driver	x		x		x	
Bluetooth Stack with Integrated SDIO Driver	x		x		x	
Bluetooth Stack with Integrated USB Driver	x		x		x	
Bluetooth Stack with Integrated UART Driver	x		x		x	
Bluetooth Profiles Support	x		x		x	
Bluetooth HS/HF and Audio Gateway Service	x		x		x	
Bluetooth LAP and Configuration Utility			x		x	
Bluetooth DUN Gateway	x		x		x	
Bluetooth PAN	x		x		x	
Bluetooth HID Device Support	x		x		x	
Bluetooth HID – Keyboard	x		x		x	
Bluetooth HID – Mouse	x		x		x	
IrDA	x		x		x	
Networking - Wide Area Network (WAN)	x	x	x	x	x	x
Dial Up Networking (RAS/PPP)	x	x	x	x	x	x
AutoDial	x	x	x	x	x	x
Standard Modem Support for Dial Up Networking	x	x	x	x	x	x
Point-to-Point Protocol over Ethernet (PPPoE)	x	x	x	x	x	x
Telephony API (TAPI 2.0)	x	x	x	x	x	x
Unimodem support	x	x	x	x	x	x
Virtual Private Networking	x	x	x	x	x	x
PPTP	x	x	x	x	x	x
L2TP/IPSec	x	x	x	x	x	x
Servers	x	x	x	x	x	x
Core Server Support	x	x	x	x	x	x
FTP Server	x		x		x	
File Server	x		x		x	
File Server Customizable UI	x		x		x	
Windows Peer-to-Peer Networking	x		x		x	
Peer Name Resolution Protocol (PNRP)	x		x		x	
Identity Manager	x		x		x	
Print Server	x		x		x	
RAS Server/PPTP Server (Incoming)			x		x	
Telnet Server	x		x		x	
Web Server (HTTPD)	x	x	x	x	x	x
Active Server Pages (ASP) Support	x	x	x	x	x	x
JScript 5.6	x	x	x	x	x	x

VBScript 5.6	x	x	x	x	x	x
Device Management ISAPI Extension	x	x	x	x	x	x
WebDAV Support	x	x	x	x	x	x
Web Server Administration ISAPI	x	x	x	x	x	x
Web Proxy	x		x		x	
Parental Controls	x		x		x	
Simple Network Time Protocol (SNTP)	x		x		x	
SNTP Server	x		x		x	
SNTP Client with DST	x		x		x	
SNTP Automatic Updates and Server Synchronization	x		x		x	
DEVICE MANAGEMENT						
Device Management Client	x		x		x	
Simple Network Management Protocol (SNMP)	x		x		x	
FILE SYSTEMS AND DATA STORE						
Compression	x	x	x	x	x	x
Database Support	x	x	x	x	x	x
File and Database Replication (Choose 1)	x		x		x	
Bit-based	x	x	x	x	x	x
Count-Based	x		x		x	
File System - Internal (Choose 1)	x		x		x	
RAM and ROM File System	x	x	x	x	x	x
ROM-only File System	x		x		x	
Registry Storage (Choose 1)	x		x		x	
Hive-based Registry	x	x	x	x	x	x
RAM-based Registry	x		x		x	
Storage Manager	x		x		x	
Binary Rom Image File System	x		x		x	
Storage Manager Control Panel Applet	x	x	x	x	x	x
EDB Database Engine	x		x		x	
Partition Driver	x	x	x	x	x	x
CD/UDFS File System	x	x	x	x	x	x
FAT File System	x	x	x	x	x	x
Transaction-Safe FAT File System (TFAT)	x		x		x	
System Password	x	x	x	x	x	x
FONTS						
Arial	x		x		x	
Arial (Subset 1_30)	x		x		x	
Arial Black	x		x		x	
Arial Bold	x		x		x	
Arial Bold Italic	x		x		x	
Arial Italic	x		x		x	
Comic Sans MS	x		x		x	
Comic Sans MS	x		x		x	
Comic Sans MS Bold	x		x		x	
Courier New	x		x		x	
Courier New (Subset 1_30)	x	x	x	x	x	x
Courier New Bold	x		x		x	
Courier New Bold Italic	x		x		x	
Courier New Italic	x		x		x	
Georgia	x		x		x	

Georgia	x		x		x	
Georgia Bold	x		x		x	
Georgia Bold Italic	x		x		x	
Georgia Italic	x		x		x	
Impact	x		x		x	
Kino	x		x		x	
MSLogo	x		x		x	
Symbol	x		x		x	
Tahoma	x		x		x	
Tahoma (Subset 1_07)	x	x	x	x	x	x
Tahoma Bold	x		x		x	
Times New Roman	x		x		x	
Times New Roman (Subset 1_30)	x		x		x	
Times New Roman Bold	x		x		x	
Times New Roman Bold Italic	x		x		x	
Times New Roman Italic	x		x		x	
Trebuchet MS	x		x		x	
Trebuchet MS	x		x		x	
Trebuchet MS Bold	x		x		x	
Trebuchet MS Bold Italic	x		x		x	
Trebuchet MS Italic	x		x		x	
Verdana	x		x		x	
Verdana	x		x		x	
Verdana Bold	x		x		x	
Verdana Bold Italic	x		x		x	
Verdana Italic	x		x		x	
Webdings	x		x		x	
Wingding	x	x	x	x	x	x
INTERNATIONAL						
Input Method Manager (IMM)	x	x	x	x	x	x
Locale Services (Choose 1)	x		x		x	
National Language Support (NLS)	x	x	x	x	x	x
English (US) National Language Support only	x		x		x	
Locale Specific Support	x		x		x	
Arabic	x		x		x	
Fonts	x		x		x	
Tahoma (subset 1_08)	x		x		x	
Tahoma Bold (subset 1_08)	x		x		x	
Arial (subset 1_08)	x		x		x	
Arial Bold (subset 1_08)	x		x		x	
Courier New (subset 1_08)	x		x		x	
Keyboard	x		x		x	
Arabic Keyboard (101)	x		x		x	
Chinese (Simplified)	x		x		x	
Agfa AC3 Font Compression	x		x		x	
Fonts	x		x		x	
SimSun & NSimSun (Choose 1)	x		x		x	
SimSun & NSimSun	x		x		x	
SimSun & NSimSun (Subset 2_20)	x		x		x	

SimSun & NSimSun (Subset 2_50)	x		x		x	
SimSun & NSimSun (Subset 2_60)	x		x		x	
SimSun & NSimSun (Subset 2_70)	x		x		x	
SimSun & NSimSun (Subset 2_80)	x		x		x	
SimSun & NSimSun (Subset 2_90)	x		x		x	
SC_Song	x		x		x	
GB18030 Data Converter	x		x		x	
Input Method Editor (Choose 1)	x		x		x	
MSPY 3.0 for Windows CE	x		x		x	
MSPY 3.0 for Windows CE Data-base (Choose 1)	x		x		x	
1.1 MB - Minimal Database	x		x		x	
1.3 MB - Compact Database	x		x		x	
1.7 MB - Standard Database	x		x		x	
Double Spelling (Shuang Pin) soft keyboard – Large	x		x		x	
Double Spelling (Shuang Pin) soft keyboard – Small	x		x		x	
Pocket IME	x		x		x	
Double Spelling (Shuang Pin) soft keyboard – Small	x		x		x	
Chinese (Traditional)	x		x		x	
Agfa AC3 Font Compression	x		x		x	
Fonts	x		x		x	
MingLiU & PMingLiU (Choose 1)	x		x		x	
MingLiU & PMingLiU	x		x		x	
MingLiU & PMingLiU (Subset 2_70)	x		x		x	
MingLiU & PMingLiU (Subset 2_80)	x		x		x	
MingLiU & PMingLiU (Subset 2_90)	x		x		x	
MS Ming	x		x		x	
Input Method Editor	x		x		x	
Pocket IME	x		x		x	
Input Methods	x		x		x	
Input by Radical (Chang Jei)	x		x		x	
Handwriting Recognizer Engine (HWX)			x		x	
MboxCHT HWX Sample UI			x		x	
Phonetic Input (Bopomofo)	x		x		x	
English (Worldwide)	x		x		x	
Input Methods	x		x		x	
Handwriting Recognizer Engine (HWX)			x		x	
English (U.S.)	x		x		x	
Input Methods	x		x		x	
Transcriber Handwriting Recogni-tion Application			x		x	
French	x		x		x	

Input Methods	x		x		x	
Transcriber Handwriting Recognition Application			x		x	
German	x		x		x	
Input Methods	x		x		x	
Transcriber Handwriting Recognition Application			x		x	
Hebrew	x		x		x	
Fonts	x		x		x	
Tahoma (subset 1_08)	x		x		x	
Arial (subset 1_08)	x		x		x	
Tahoma Bold (subset 1_08)	x		x		x	
Arial Bold (subset 1_08)	x		x		x	
Courier New (subset 1_08)	x		x		x	
Keyboard	x		x		x	
Hebrew Keyboard	x		x		x	
Indic	x		x		x	
Hindi	x		x		x	
Fonts	x		x		x	
Mangal	x		x		x	
Keyboard	x		x		x	
Hindi Traditional Keyboard	x		x		x	
Marathi	x		x		x	
Fonts	x		x		x	
Mangal	x		x		x	
Keyboard	x		x		x	
Marathi Keyboard	x		x		x	
Punjabi	x		x		x	
Fonts	x		x		x	
Raavi	x		x		x	
Keyboard	x		x		x	
Punjabi Keyboard	x		x		x	
Telugu	x		x		x	
Fonts	x		x		x	
Gautami	x		x		x	
Keyboard	x		x		x	
Telugu Keyboard	x		x		x	
Gujarati	x		x		x	
Fonts	x		x		x	
Shruti	x		x		x	
Keyboard	x		x		x	
Gujarati Keyboard	x		x		x	
Kannada	x		x		x	
Fonts	x		x		x	
Tunga	x		x		x	
Keyboard	x		x		x	
Kannada Keyboard	x		x		x	
Tamil	x		x		x	
Fonts	x		x		x	
Latha	x		x		x	
Keyboard	x		x		x	
Tamil Keyboard	x		x		x	

Japanese	x		x		x	
Agfa AC3 Font Compression	x		x		x	
Fonts	x		x		x	
MS Gothic (Choose 1)	x		x		x	
MS Gothic & MS PGothic & MS UI Gothic	x		x		x	
MS Gothic & MS PGothic & MS UI Gothic (Subset 1_50)	x		x		x	
MS Gothic & MS PGothic & MS UI Gothic (Subset 1_60)	x		x		x	
MS Gothic & MS PGothic & MS UI Gothic (Subset 1_80)	x		x		x	
MS Gothic & MS PGothic & MS UI Gothic (Subset 1_90)	x		x		x	
MS Gothic & MS PGothic & MS UI Gothic (Subset 1_70)	x		x		x	
MS Gothic & MS PGothic (Subset 30)	x		x		x	
MS Gothic & MS PGothic (Subset 30_1_19)	x		x		x	
MS Mincho & MS PMincho	x		x		x	
Input Method Editor (Choose 1)	x		x		x	
IME 3.1	x		x		x	
IME 3.1 Database (Choose 1)	x		x		x	
Standard Database	x		x		x	
Compact Database	x		x		x	
Optional UI Components	x		x		x	
Dictionary Tool	x		x		x	
Properties Dialog Box	x		x		x	
Advanced Settings Dialog Box (Landscape mode only)	x		x		x	
System Tray Icon Manager	x		x		x	
Pocket IME (Choose Additional Databases)	x		x		x	
Name/Place Database	x		x		x	
Supplemental Database	x		x		x	
Test IME	x		x		x	
Input Methods	x		x		x	
All Characters List	x		x		x	
Handwriting Recognizer Engine (HWX)			x		x	
Character Auto Com plete -HWX Sample UI			x		x	
Multibox HWX Sample UI			x		x	
Kana Soft Keyboard	x		x		x	
Romaji/English Soft Keyboard	x		x		x	
Search by Radical	x		x		x	
Search by Stroke	x		x		x	
Korean	x		x		x	
Agfa AC3 Font Compression	x		x		x	
Fonts	x		x		x	
Gulim (GL_CE)	x		x		x	
Gulim & GulimChe (Choose 1)	x		x		x	

Gulim & GulimChe (Subset 1_30)	x		x		x	
Gulim & GulimChe (Subset 1_40)	x		x		x	
Gulim & GulimChe (Subset 1_50)	x		x		x	
Gulim & GulimChe (Subset 1_60)	x		x		x	
Input Method Editor	x		x		x	
IME 97	x		x		x	
Input Methods	x		x		x	
Handwriting Recognizer Engine (HWX)			x		x	
MboxKOR HWX Sample UI			x		x	
Korean Soft Keyboard Sample	x		x		x	
Thai	x		x		x	
Fonts	x		x		x	
Tahoma (subset 1_08)	x		x		x	
Keyboard	x		x		x	
Thai Kedmanee Keyboard	x		x		x	
Multilingual User Interface (MUI)	x		x		x	
Unicode Script Processor for Complex Scripts	x		x		x	
Internet Client Services						
Browser Application			x	x	x	x
Internet Explorer 6.0 for Windows CE - Standard Components			x	x	x	x
Internet Explorer 6.0 Sample Browser			x	x	x	x
TV-Style Navigation Components			x		x	
Pocket Internet Explorer			x		x	
Internet Explorer 6.0 for Windows CE Components				x		x
Internet Explorer Browser Control Host			x	x	x	x
Internet Explorer HTML/DHTML API			x	x	x	x
Internet Explorer HTML Application			x	x	x	x
Filter and Translation			x	x	x	x
Internet Explorer Plug-in Image Decoder API			x	x	x	x
Internet Explorer PNG Image Decoder			x	x	x	x
Internet Explorer Theme Library			x	x	x	x
Internet Explorer Multiple-Language Base API	x		x	x	x	x
Internet Explorer Multiple-Language Full API			x	x	x	x
Optional Charset/Encoding in registry			x	x	x	x
Internet Explorer RPC Support			x	x	x	x
Internet Explorer TV-Style Navigation			x		x	
Fixed-Width Layout			x		x	
Directional Tabbing			x		x	
Disable Vertical Scroll Bar and Events			x		x	
Customizable Font Range			x		x	
URL Moniker Services	x		x	x	x	x
Windows Internet Services	x		x	x	x	x

Passport SSI 1.4 Authentication	x		x	x	x	x
Platform for Privacy Preferences (P3P)	x		x	x	x	x
XML Data Islands	x		x	x	x	x
XML MIME Viewer	x		x	x	x	x
Pocket Internet Explorer HTML View (WEB-VIEW)			x		x	
Internet Options Control Panel			x	x	x	x
Scripting	x	x	x	x	x	x
JScript 5.6	x	x	x	x	x	x
Script Authoring (Jscript)	x	x	x	x	x	x
Script Encode (Jscript)	x	x	x	x	x	x
VBScript 5.6	x	x	x	x	x	x
Script Authoring (VBScript)	x	x	x	x	x	x
Script Encode (VBScript)	x	x	x	x	x	x
MsgBox and InputBox support	x	x	x	x	x	x
GRAPHICS AND MULTIMEDIA TECHNOL-OGIES						
Graphics	x		x		x	
Raster Fonts Support	x		x		x	
V1 Font Compatibility	x		x		x	
Alphablend API (GDI version)	x		x		x	
Gradient Fill Support	x	x	x	x	x	x
Multiple Monitor Support	x		x		x	
Imaging	x	x	x	x	x	x
Still Image Codec Support (Encode and Decode)	x	x	x	x	x	x
Still Image Decoders	x	x	x	x	x	x
PNG Decoder	x	x	x	x	x	x
BMP Decoder	x	x	x	x	x	x
GIF Decoder	x	x	x	x	x	x
ICO Decoder	x	x	x	x	x	x
JPG Decoder	x	x	x	x	x	x
Still Image Encoders	x	x	x	x	x	x
GIF Encoder	x	x	x	x	x	x
BMP Encoder	x	x	x	x	x	x
JPG Encoder	x	x	x	x	x	x
PNG Encoder	x	x	x	x	x	x
Direct3D Mobile	x	x	x	x	x	x
DirectDraw	x	x	x	x	x	x
Audio	x	x	x	x	x	x
Audio Compression Manager	x	x	x	x	x	x
GSM 6.10 Codec	x	x	x	x	x	x
MSFilter Codec	x	x	x	x	x	x
Waveform Audio	x	x	x	x	x	x
Media	x		x		x	
Streaming Media Playback (requires WMP application)			x		x	
WMA and MP3 Local Playback	x		x		x	
WMA and MP3 Streaming (requires WMP application)			x		x	
Digital Rights Management	x		x		x	
Digital Rights Management (DRM)	x		x		x	

DRM for Portable Devices	x		x		x	
DRM License Acquisition OCX	x		x		x	
DirectShow	x	x	x	x	x	x
DirectShow Core	x	x	x	x	x	x
DirectShow Display	x	x	x	x	x	x
DirectShow Error Messages	x	x	x	x	x	x
DMO Wrapper Filter	x	x	x	x	x	x
ACM Wrapper Filter	x	x	x	x	x	x
Media Formats	x	x	x	x	x	x
AVI Filter	x	x	x	x	x	x
MPEG-1 Parser/Splitter	x	x	x	x	x	x
Audio Codecs and Renderers	x		x		x	
G.711 Audio Codec	x	x	x	x	x	x
GSM 6.10 Audio Codec	x	x	x	x	x	x
IMA ADPCM Audio Codec	x	x	x	x	x	x
MP3 Codec	x		x		x	
MPEG-1 Layer 1 and 2 Audio Codec	x	x	x	x	x	x
MS ADPCM Audio Codec	x	x	x	x	x	x
Waveform Audio Renderer	x	x	x	x	x	x
WMA Codec	x	x	x	x	x	x
WMA Voice Codec	x	x	x	x	x	x
Wave/AIFF/au/snd File Parser	x	x	x	x	x	x
Video Codecs and Renderers	x	x	x	x	x	x
DirectShow Video Renderer	x	x	x	x	x	x
MPEG-1 Video Codec	x	x	x	x	x	x
MS RLE Video Codec	x	x	x	x	x	x
Overlay Mixer	x	x	x	x	x	x
Video/Image Compression Manager	x	x	x	x	x	x
WMV/MPEG-4 Video Codec	x	x	x	x	x	x
DVD-Video	x		x		x	
DVD-Video	x		x		x	
DVD-Video Samples	x		x		x	
Windows Media Player			x	x	x	x
Windows Media Player			x	x	x	x
Windows Media Player OCX			x	x	x	x
Windows Media Technologies	x		x	x	x	x
ASX v1 and M3U File Support	x		x	x	x	x
ASX v2 File Support	x		x	x	x	x
ASX v3 File Support	x		x	x	x	x
Windows Media Multicast and Multi-Bit Rate	x		x	x	x	x
NSC File Support	x		x	x	x	x
Windows Media Streaming from Local Storage	x		x	x	x	x
Windows Media Streaming over HTTP	x		x	x	x	x
Windows Media Streaming over MMS	x		x	x	x	x
SECURITY						
Authentication Services (SSPI)	x	x	x	x	x	x
NTLM	x	x	x	x	x	x

Kerberos	x	x	x	x	x	x
Schannel (SSL/TLS)	x	x	x	x	x	x
Cryptography Services (CryptoAPI 1.0) with High Encryption Provider	x	x	x	x	x	x
Certificates (CryptoAPI 2.0)	x	x	x	x	x	x
Cryptographic Messaging (PKCS#7)	x	x	x	x	x	x
Personal Information Exchange Standard (PKCS #12)	x	x	x	x	x	x
Diffie-Hellman/DSS Provider	x		x		x	
Smart Card Encryption Provider	x		x		x	
Local Authentication Sub-System	x		x		x	
Password Local Authentication Plug-in	x		x		x	
Microsoft Certificate Enrollment Tool Sample	x		x		x	
Credential Manager	x	x	x	x	x	x
SHELL AND USER INTERFACE						
Graphics, Windowing and Events	x	x	x	x	x	x
Minimal GWES Configuration	x	x	x	x	x	x
Minimal GDI Configuration	x	x	x	x	x	x
Minimal Input Configuration	x	x	x	x	x	x
Minimal Window Manager Configuration	x	x	x	x	x	x
Shell			x		x	
Graphical Shell (Choose 1)			x		x	
Standard Shell	x	x	x	x	x	x
Windows Thin Client Shell			x		x	
AYGShell API Set			x	x	x	x
Command Shell	x	x	x	x	x	x
Console Window	x	x	x	x	x	x
Command Processor	x	x	x	x	x	x
User Interface	x	x	x	x	x	x
Accessibility	x	x	x	x	x	x
Common Dialog Support	x	x	x	x	x	x
Controls Option B	x		x		x	
Control Panel Applets	x	x	x	x	x	x
Customizable UI	x	x	x	x	x	x
Windows XP-like Sample Skin	x	x	x	x	x	x
Menu Tool Tip	x	x	x	x	x	x
Mouse	x	x	x	x	x	x
Network User Interface	x	x	x	x	x	x
Overlapping Menus	x	x	x	x	x	x
Software Input Panel	x	x	x	x	x	x
Software-based Input Panel Driver	x	x	x	x	x	x
Software-based Input Panel (SIP) (Choose 1 or more)	x	x	x	x	x	x
SIP for Small Screens	x	x	x	x	x	x
SIP for Large Screens	x	x	x	x	x	x
Touch Screen (Stylus)	x	x	x	x	x	x
Quarter VGA Resources - Portrait Mode	x		x		x	
Common Controls	x	x	x	x	x	x
Animation Control	x	x	x	x	x	x
Common Control	x	x	x	x	x	x
Windows CE Error Reporting	x		x		x	
Error Report Generator	x		x		x	

Report Upload Client	x		x		x	
Report Upload Client User Interface	x		x		x	
Error Report Transfer Driver	x		x		x	
Error Reporting Control Panel	x		x		x	
VOICE OVER IP PHONE SERVICES						
Phone IME	x		x		x	
PC Authentication	x		x		x	
Telephony User Interface	x		x		x	
VoIP Application Interface Layer (VAIL)	x		x		x	
VAIL Database Store	x		x		x	
Phone Provisioner	x		x		x	
Reference Media Manager	x		x		x	
Real-time Communications (RTC) Client API	x		x		x	
SIREN/G.722.1 Codecs	x		x		x	

Trusted ePlatform Services

ADVANTECH

www.advantech.com

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