

Spb Kiosk Engine/Explorer/Terminal User Manual

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Overview

One common use for Pocket PCs is as a specialized device, where access to specific functions is restricted or disabled, and only a few applications are available - this is called kiosk mode. Several vertical market applications require a Pocket PC to be in kiosk mode. For example, kiosk mode can be used to disable all games and other entertainment features on a Pocket PC.

Spb Kiosk Engine comes in three editions, each providing kiosk mode for different applications.

- Spb Kiosk Explorer provides kiosk mode for Pocket Internet Explorer. With Kiosk Explorer, enterprises can create kiosk-driven solutions based on web applications.
- Spb Kiosk Terminal provides kiosk mode for Terminal Services Client. Kiosk Terminal allows creating kiosks that run an application from a Windows Terminal Server.
- Spb Kiosk Engine is the most flexible version. It can be used to run one or more applications in kiosk mode, and provides the means to switch between those applications.

Spb Kiosk Features

Kiosk Builder

All Spb Kiosk editions (Engine, Explorer and Terminal) come with a desktop-side Kiosk Builder. This utility allows you to configure Spb Kiosk according to your specific needs.

Kiosk Builder works on a desktop PC and generates Pocket PC installations. These installations can then be deployed to as many devices as required.

Kiosk mode

The primary function of Spb Kiosk is to run one or more applications, configured by a device administrator, in kiosk mode. Any other program not included will be unavailable to the user. Spb Kiosk also prevents the user from changing any of the settings by using Control Panel applets.

The most important mechanism used to enforce kiosk mode on a device is a kernel-level process block. Spb Kiosk's block consists of an internal list of allowed processes. Any time the system tries to create a new process, Spb Kiosk checks the list to decide if this is allowed or not. If not, the new process is blocked—not executing a single instruction from an restricted *.exe file.

By default, the allowed process list contains only the vital system processes required for normal device operation. You can add additional processes specific to your needs using Kiosk Builder. This blocks any other processes from running. Here are a few examples of how this simple yet powerful mechanism protects your device.

- There are many ways to start a program on a Pocket PC. Some of them are obvious (e.g. hardware buttons) and others use non-conventional methods. For example, it is possible to create a link to an *.EXE file in Pocket Word and then click this link to start any program. Spb Kiosk prevents such activation of any program. Thus you are free to give your users access to any programs you actually do need, even File Explorer. But you can also be sure that these programs will not be used to run something undesired.
- Pocket PC devices support the autorun function from a memory card. When a memory card is inserted into a device, the system starts autorun.exe from this card automatically. With Spb Kiosk an application will not start this way unless explicitly allowed.
- There are many remote tools available which allow the user to manipulate a Pocket PC from a desktop computer (to copy files, browse the device Registry, terminate any processes, etc.). Tools like this require a small executable running on the Pocket PC. With Spb Kiosk these executables cannot run, and so remote tools will fail to connect to the device.

Besides kernel-level process blocking, Spb Kiosk employs several other techniques to keep a device under complete control, including:

- Control Panel applet block. By default, Spb Kiosk prevents the user from using any applets on the device. For example, many Internet-enabled programs (like Inbox and Pocket Internet Explorer) provide a means to go to the Connections section of the Control Panel and change the Internet settings. Spb Kiosk will not allow this, unless these applets are explicitly allowed in Kiosk Builder.
- Taskbar block. With Spb Kiosk it is possible to completely disable the taskbar on a device. Taskbar block works on the touch screen driver level, and so cannot be bypassed.

Admin Mode

Spb Kiosk allows a device administrator to gain unrestricted access to the device. This is useful to fix problems or to change settings after Spb Kiosk is already deployed.

To enter admin mode, just tap and hold the stylus for 10 seconds anywhere on the screen and then enter the unlock code (specified in Kiosk Builder).

Pocket Internet Explorer customization (Kiosk Explorer only)

Spb Kiosk Explorer provides additional control over Pocket Internet Explorer's appearance and behavior. You can lock it into full screen mode, remove the address bar, configure the start page and Favorites list, and choose which menu commands will be available to the user and which will not. Also, Spb Kiosk Explorer supports URL Filtering, to control which sites the user is allowed to visit.

Terminal Services Client customization (Kiosk Terminal only)

Spb Kiosk Terminal provides two very useful enhancements for the standard Terminal Services Client application:

- Full screen. With Spb Kiosk Terminal, the client is able to use the entire screen to display remote desktop.
- Autoconnect. You can configure terminal client to connect to the Internet and login to the terminal server automatically.

Together with Kiosk Mode, the autoconnect feature dramatically simplifies system support. A Pocket PC with Spb Kiosk Terminal installed is a system that is always connected to the Terminal Server. This allows for easier support and maintenance compared to a normal Pocket PC with Terminal Service Client.

Kiosk Start menu and Kiosk Switcher (Kiosk Engine only)

Spb Kiosk Engine is able to replace the standard Start menu with a custom menu consisting of approved programs only. This provides the user with a convenient method to switch between several allowed applications. Besides the Start Menu, Spb Kiosk Engine provides a Kiosk Switcher application, which can be used to replace the standard Today screen. If enabled, it is the first application the user sees after reboot. You can configure it to show any background image, as well as use custom large icons for programs.

Installing Spb Kiosk

After you download the Spb Kiosk product distribution file you should install it to your PC. For successful installation you will need Windows NT/2000/XP.

The following paragraphs describe the installation process, step by step.

- Step 1. Choose the Spb Kiosk default language. This language will be used not only by the installation wizard, but also by Kiosk Builder and other Kiosk components on the device side.
- Step 2. Review recommendations made by the setup program. Click Next.
- Step 3. Read and accept End-user license agreement. Click Next.
- Step 4. Choose the installation folder for Spb Kiosk. By default, the program is installed to %Program Files%\Spb Software House\Spb Kiosk Engine (Explorer, Terminal). Click Next.
- Step 5. Choose a folder for the Spb Kiosk shortcut in the Start Menu. By default, the folder Spb Software House\Kiosk Engine (Explorer, Terminal) is used. Click Next.
- Step 6. Choose if you want to create a Desktop Spb Kiosk icon. Click Next.
- Step 7. Review the installation settings configured by the previous steps. Click Install. Spb Kiosk will be installed on your PC.
- Step 8. If you do not want to start working with Spb Kiosk right away, uncheck the "Launch Kiosk Builder" checkbox. Click Finish.

Using Kiosk Builder

Kiosk Builder is a desktop-side application used to configure Spb Kiosk according to your needs. When configuration is finished, Kiosk Builder generates a Kiosk runtime package which can be installed to as many devices as you require.

The main screen of Kiosk Builder is divided into several sections: Settings, Device Unlock Code and Full Version License Key. These sections are the same across all 3 editions. Other sections contain options specific to each edition of Spb Kiosk. All sections of Kiosk Builder are described below.

“Settings”

Here you can configure options common to all Spb Kiosk editions.

- **Disable taskbar.** When this option is selected, neither Start Menu nor status icons on a device’s task bar can be used. The [OK] button in the top-right corner of the screen remains operational, so navigation inside applications is not affected.
- **Processes.** This button is used to configure the allowed process list. See the “Configuring allowed process list” section for further details.
- **Advanced.** This button brings up a screen with additional options:
 - **Write log file.** When selected, Spb Kiosk writes information on every process it blocks to the \SpbKioskLog.txt log file within the device. This feature is useful for troubleshooting purposes. If Spb Kiosk blocks any functionality that is desired, checking this log file for the blocked process and adding it to the approved process list will restore blocked functionality.
 - **Show battery indicator.** When selected, Spb Kiosk shows the battery level bar at the top of the screen.
 - **Disable ActiveSync connectivity.** Select this option to prevent the device from connecting to any desktop PC via Microsoft® ActiveSync™.
 - **Disable Phone.** Select this option to prevent the user from using the device’s phone.
 - **Disable autorun from memory card.** Select this option to prevent the system from starting the autorun.exe file from a memory card, when one is inserted into the device.
 - **Disable Help.** Use this option to disable the Help subsystem on the device.

“Device unlock code”

From here the unlock code is established, using the digit buttons. Without the correct unlock code, the only way to unlock a device is to perform a hard-reset.

“Full version license key”

When Spb Kiosk is purchased, the License Key received is entered here.

“Program to run in kiosk mode” (Engine edition)

This section allows you to configure one or several applications which will run in kiosk mode.

- **Custom program (.exe).** Select this option if you need to run only one application in kiosk mode. You must specify the application name and full path on the device. Both native and managed executables are supported with this option.

- Use Kiosk Switcher. Select this option if you need to run several applications in kiosk mode. Spb Kiosk will start a special Kiosk Switcher application after reboot. Kiosk Switcher provides an entry point to any other applications you select. Also, in this mode you can configure the links which will be allowed in the Start Menu.
 - Background. Use this button to configure a background image and text color for Kiosk Switcher.
 - Links. Use this button to configure links which will be allowed in Start Menu and in Kiosk Switcher. For each link, you can specify if it will be visible in Start Menu, in Kiosk Switcher, or both. You can also move links up and down to re-order them according to your needs (the same order will be used on the device).
- Install CAB together with Kiosk. Use this option if you need to install a custom CAB file together with the Spb Kiosk CAB. For example, this option is useful to install your custom application together with kiosk runtime.

“Internet Explorer” (Explorer edition)

This section allows you to configure Pocket Internet Explorer.

- Default web page. Here you can specify the home page for PIE. This page will be displayed after the device reboots and PIE is initially started. It is recommended to use a local web page (available in device memory) as the default web page because it will be shown instantly after device reboots.
- Full screen. Specify this option to lock PIE into full screen mode. In this mode, the taskbar, address bar and menu bar will be hidden and the web page will occupy the entire screen.
- Show address bar. Use this option to control if the weather address bar in PIE is visible or not. This is useful when you do not want to use full screen mode, but still want to prevent the users from entering arbitrary addresses in PIE.
- Show context menu. This option controls whether the context menu in PIE is available or not. Using this together with full screen will effectively prevent the user from using any commands in PIE, including “Back”, “Forward” and “Home”. If you need to provide some navigation between pages in this mode, you would need to include navigation commands within HTML code.
- Show pictures. Use this option to disable inline pictures in web pages.
- Favorites. This button brings up a dialog which allows you to customize the Favorites list. This custom list replaces any existing one when kiosk runtime is installed on the device.
- Commands. This button opens a dialog that allows you to control access to individual commands in PIE. Each command has a corresponding checkbox. Unchecking it will disable the command everywhere (in the main menu, context menu, Favorites dialog etc.).
- URL Filter. This button is used to configure URL filtering rules. Whenever the user navigates to a custom web site, Spb Kiosk checks the URL against the list within the URL Filter rules. If the site is forbidden, navigation will be stopped and a message is displayed to the user. URL Filter can work in 3 different modes:
 - Do not use filter. URL filter is disabled. The user is free to visit any web site (note that this is possible only if full screen mode is not used and the address bar is not hidden).

- o Allow only URLs from the list. Use this option to lock PIE to a certain set of web sites (e.g. web sites used for work). Any other sites will be forbidden.
- o Block URLs from the list. In this mode you can disallow URLs containing a certain character string (e.g. "game", "warez", "porn") and allow all others.

“Terminal Services client” (Terminal edition)

This section allows you to configure the Terminal Services Client (TSC).

- Full screen. Specify this option to lock TSC in full screen mode. In this mode, the taskbar and menu bar will be hidden and remote desktop will occupy the entire screen.
- Autoconnect to server. When this option is enabled, TSC will automatically log in to the terminal server after device reboot. You need to specify the server address, port (optional), username and password. Also, 2 additional options are available:
 - o Connect to Internet automatically. If this option is selected, Spb Kiosk will automatically connect to the Internet before initiating autoconnect to terminal server. If this option is not selected, Spb Kiosk will wait until an Internet connection is established by the user and then will start autoconnect.
 - o Fit desktop size to device screen. If this option is selected, the size of remote desktop will be equal to the size of device screen. This means that you will see the entire desktop viewed on the device, and will not have to scroll. This is especially useful on high resolution (VGA) devices which have large enough screens.

Configuring allowed process list

By default, Spb Kiosk blocks all executables and Control Panel applets on a device. Exceptions to this rule are system processes critical for normal device operation:

\Windows\ciphase2.exe	\Windows\coldinit.exe
\Windows\connmgr.exe	\Windows\ctlpnl.exe
\Windows\device.exe	\Windows\filesys.exe
\Windows\gwes.exe	\Windows\nk.exe
\Windows\remnet.exe	\Windows\services.exe
\Windows\shell.exe	\Windows\shell32.exe
\Windows\srvttrust.exe	

You can allow any other executables and Control Panel applets using the allowed process list (Processes button in Kiosk Builder).

- To allow an executable, add its full path to the list.
- To allow a Control Panel applet, add it using the following format (without spaces!):

`<CPL file name>,<applet index>`

For example, the following entry allows the Today applet:

`cplmain.cpl,13`

If you add a link to an application in Kiosk Switcher, it is not necessary to add this application to the allowed process list—Spb Kiosk will add it automatically. This is also true for shortcut files (*.lnk) and document files (*.doc, *.jpg etc.). However you do need to explicitly allow any Control Panel applets—they are not done automatically.

Generating and installing kiosk runtime on the device

Use the Generate button to build kiosk runtime packages using current settings. Kiosk Builder will open a corresponding result folder automatically. In this folder you will find a new CAB file and PC-side installation program.

The CAB file should be installed on the device side. To do this, copy it to the Pocket PC manually and then use File Explorer to initiate installation.

The PC-side installation program automates this entire process. Running it on your desktop PC will copy the CAB to the device and install it there automatically. To use this method you need Microsoft® ActiveSync™ running on your PC. It can be downloaded free of charge from the Microsoft web site:

<http://www.microsoft.com/windowsmobile/activesync/default.mspx>