Windows 64-bit FAQ & Support

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Contents

1. Introduction

This document explains Oki's plans to support 64-bit versions of Microsoft Windows. It contains details of printer drivers & utilities that will be supported and provides a release schedule.

As 64-bit Windows is still relatively new, I've included some background information to explain what it is, who is likely to be using it, and future directions.

If you'd like to skip this background information and just see supported printer models and schedule, please see sections 18 and 19.

2. What is 64-bit Windows?

Over the past few years, AMD and Intel have released 64-bit processors (CPUs) such as the Athlon 64 and the Pentium Extreme Edition. These new CPUs are finding their way into more and more desktop PCs.

These processors are equipped for running future 64-bit software, and are fully compatible with the 32-bit software that we all use today.

Microsoft have responded to these new processors by launching 64-bit version of Windows XP and Server 2003. Using a 64-compatible version Windows and a 64-bit processor allows you to take advantage of support for very large amounts of RAM and gives better software performance.

Windows XP Professional x64:
http://www.microsoft.com/windowsxp/64bit/default.mspx

Windows Server 2003 for x64:
http://www.microsoft.com/windowsserver2003/64bit/x64/default.mspx

3. 32-bit Windows is the mainstream today

Although 64-bit may be the future of desktop computing, 32-bit is dominant right now.

- Most Intel and AMD processors manufactured over the past 15 years are 32-bit.

- Windows 95, 98, Me, NT 4.0, 2000 and XP are 32-bit operating systems

- All application software written for these versions of Windows is 32-bit

The legacy of 32-bit software and hardware will be with us for some time into the future. Microsoft expect that the large-scale migration to 64-bit will start after Vista has been release (see section 4).

4. Will Windows Vista (a.k.a. Longhorn) be 64-bit?

Microsoft is producing 32-bit and 64-bit versions of Windows Vista.

It is expected that most of the computer-buying public will switch to 64-bit within Vista's lifetime – from 2007 onwards. Initially many people will still use the 32-bit version of Vista (or even stick with XP) as they have older computers that won't have 64-bit processors.

5. What are the advantages to 64-bit processors and software?

There are 2 advantages of 64-bit computing:

1. You are no longer limited by 4GB memory (RAM)
32-bit computers and software are limited to a maximum of 4 gigabytes (GB) of RAM. In fact, due to some limitations of Windows it may only be possible to use 2GB or 3GB. 64-bit computers and software can use much

more memory. This is important for applications such as very large databases or scientific computing.

2. Better performance
In theory, 64-bit software should run faster and be more stable than 32-bit software. At the moment it's hard to judge this because there is so little 64-bit software available.

6. Itanium and x64: 2 different 64-bit architectures

There are two different types of 64-bit processors: Itanium and x86-64. This means software written for specifically for Itanium processors won't run on x86-64 processors and vice versa.

Itanium

The Itanium 64-bit processor was co-developed by Intel and HP. It was initially developed for the technical computer and server market. It has not been very successful.

The Itanium was not designed to be fully backward compatible with existing 32-bit processors and software. The processor runs in an "emulation" mode for 32-bit, resulting in relatively poor performance. The Itanium has frequently been criticised in the IT press for being slow and expensive.

There is no version of Windows that supports Itanium. Microsoft apparently started work on a version of XP for Itanium but the project was abandoned. Windows Vista will only partially support the Itanium processor.

x86-64

Instead of inventing a completely new architecture like the Itanium, AMD decided to extend the current one. They added 64-bit extensions to the current x86 processor architecture and created AMD64. This has proven to be successful - AMD64 processors offer 64 bit support and maintain full backward compatibility with current 32-bit software. Most importantly, there is no speed penalty when running 32-bit software.

In response to AMD's success with these processors, Intel also adopted the same strategy and released similar processors. Intel markets these as processors with "EM64T" technology.

As these AMD and Intel chips are both based on x86 with 64-bit extensions, they are popularly known as x86-64. These processors have been much more successful than Itanium and are supported by special 64-bit versions of Microsoft Windows XP and Server 2003.

7. What x86-64 processors are available?

x86-64 processors include the Athlon 64, Athlon 64 FX, Mobile Athlon 64, Turion 64, and Opteron processors from AMD, and the Xeon with EM64T and Pentium 4 with EM64T from Intel.

8. Are Oki supporting both Itanium and x86-64?

No - we will only support x86-64. Itanium is poorly supported by the IT industry and is considered something of a failure. There are no Itanium-compatible versions of Windows.

9. How many people are using 64-bit Windows?

Not many people are using 64-bit versions of Windows right now. Situations where 64-bit Windows are likely to be used include:

- "Early adopters"; people who like to be on the cutting edge of technology
- Servers
- Large databases or scientific computing where large amounts of memory are required

Adoption of 64-bit Windows has been relatively slow so far. This is probably because:

- Only newer PCs have 64-bit processors
- Lack of 64-bit drivers
- Most software programs are still 32-bit

10. Will most customers be moving to 64-bit any time soon?

Probably not until after Windows Vista is launched in 2006/7. Even then, many people will probably use Vista 32-bit version; this is the direct successor of XP Home & Professional.

11. Is 64-bit software is required for 64-bit Windows?

The answer to this question is "it depends".

- 64-bit drivers are required for 64-bit Windows.

- Most 32-bit application software will run no problem under 64-bit Windows; this is because x86-64 processors are fully backwards compatible.

- Software that interfaces with hardware or drivers may need to be changed.

12. What Oki software needs to be updated for 64-bit Windows?

Drivers

64-bit Windows requires 64-bit printer drivers. This means we'll have to release new drivers for each printer model we need to support.

Software Utilities

Some Oki software utilities need to be updated to support 64-bit Windows. For example, Oki LPR uses a port monitor, so this will need to be modified extensively.

Some software utilities should work without any modification.

However, we will actually need to update all utilities regardless because of the installer program InstallShield. The very latest version of InstallShield supports 64-bit Windows, so all utilities need at least a new installer.

13. Will 64-bit drivers be digitally signed?

Yes, Microsoft has a WHQL certification program for 64-bit drivers. As we do currently for Windows XP, we plan to submit our Oki printer drivers to be digitally signed by Microsoft.

14. Will there be separate 32-bit and 64-bit installers?

No, we aim to provide a single installer that will be compatible with all supported versions of Windows (e.g. Windows 98, NT4, 2000, XP, XP x86-64)

15. Do you plan to release the 64-bit printer drivers on CD-ROM?

Our plan is to release the drivers to the Oki website. We currently have no plan to include drivers on CD.

16. Will the Oki 64-bit printer drivers be localised?

No. The current plan is to release 64-bit drivers in English only.

17. Is Apple Mac affected by this?

No – this affects Windows only.

Tiger (OS X 10.4) already supports 64-bit.
The G5 processor found in PowerMacs and new iMacs is a 64-bit chip.

18. What printer models will be supported?

	PCL	PS	PCLXL	GDI	Release Plan	Comments
C9800 **&** **ES3640**MFP	Yes	?	No	n/a		Discussing with EFI about PS driver
C9600	Yes	Yes	No	n/a		
C9500	Yes	Yes	No	n/a		
C9300	Yes	Yes	No	n/a		
C7500	Yes	Yes	No	n/a		
C7350	Yes	Yes	No	n/a		
C7300	Yes	Yes	No	n/a		
C7100	Yes	Yes	No	n/a		
C6100	Yes	Yes	No	n/a		
C5800	n/a	n/a	n/a	Yes		
C5**5**00	n/a	n/a	n/a	Yes		
C5**4**00	Yes	Yes	No	n/a		
C5300	Yes	Yes	No	n/a		
C52**0**0	n/a	n/a	n/a	Yes		
C51**5**0	n/a	n/a	n/a	Yes		
C3200	n/a	n/a	n/a	Yes		
ES1624 MFP	Yes	Yes	No	n/a		
C5510 MFP	n/a	n/a	n/a	Yes		
B4350	Yes	Yes	n/a	Yes		
B4300	Yes	Yes	n/a	Yes		
B4250	Yes	n/a	n/a	n/a		
B4200	Yes	n/a	n/a	n/a		
B4100	n/a	n/a	n/a	Yes		Will be released without Status Monitor
B8300	No	No	n/a	n/a	No plan	Discussing with Sharp
B6300	No	No	n/a	n/a	No plan	Discussing with XIP
B6200	No	No	n/a	n/a	No plan	Discussing with XIP
B6100	No	No	n/a	n/a	No plan	Discussing with XIP
C7200	Yes	Yes	n/a	n/a		
C7400	Yes	Yes	n/a	n/a		
C9200	Yes	Yes	n/a	n/a		
C9400	Yes	Yes	n/a	n/a		

Yes = 64-bit driver will be release
No = 64-bit driver not release
n/a = Not applicable for this printer model

19. What is the release plan for software utilities?

Utility		Comments
CD Installer		
Color Swatch		
Network Extension		
Color Correct		
Job Accounting Client		
Gamma Utility		
PrintSuperVision.net		
OkiLPR		
Profile Assistant		
Status Monitor (for GDI)		Under investigation
Storage Device Manager		
PDF Direct Print		
Job Accounting Server		
Web Driver Installer		
OEM Utilities	Discussing with OEM partners	Includes EFI, Avision, Sharp, XIP etc
Admin Mgr		
PrintSuperVision.Java		