

R A D I O N I C S

READYKEY® K6100 Readykey for Windows™

PC Specification Datasheet

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Introduction

This datasheet contains the recommended PC specification for running Readykey for Windows. If you already have a PC, that is of a lower specification, then you **must** contact Radionics' Customer Service Department for advice before using it for Readykey for Windows.

Always refer to the latest issue of this PC Specification document before specifying a PC to be used with Readykey for Windows.

PC Specification

This is the PC specification that Radionics recommend you use for each workstation including the Readykey Server on a Readykey for Windows system.

Note: No information is provided here regarding specifying a file server. Setting up a file server based network requires specialist knowledge from a qualified computer professional.

If you have an existing PC of a lower specification contact Radionics' Customer Service Department for advice on suitability before using it for Readykey for Windows.

Processor:	IBM compatible Pentium 166MHz or better
RAM:	minimum 32 Mbytes (64 Mb for Windows NT4)
Hard Disk:	1 Gbyte (see section below) or better
Floppy Disk:	3½" High Density
CD Disk Drive:	Standard CD ROM Drive, 2x speed or greater
Display:	Color SuperVGA (800x600) with: 256 colors, no Photo ID module. 32,767 colors, with Photo ID module.
Sounds:	PC sound card and speakers, if sound support required
Ports:	1 parallel, 2 serial (plus, if necessary, extra ports for an ID card printer, a digital camera and a Serial interface).
Mouse:	*Windows supported
Printer:	*Windows supported
MS-DOS:	Version 5.0 or later
Windows:	‡ Version 3.1, 3.11, Windows 95, Windows 98, or Windows NT Version 4.0
Network Card:	*Windows supported (only required for multi-pc sites)

* **Windows supported** means any device that is compatible with Windows. When Windows is installed you will be required to tell it what types of printer and mouse are connected. If your make or model is not listed by Windows then the printer or mouse will normally be compatible with one of the standard types, e.g. Microsoft Serial for the mouse; Epson, IBM or Hewlett Packard for printers.

‡ **Windows Version:** All your workstations **MUST** be running Windows 3.1 (not compatible for multi-pc applications), Windows for Workgroups 3.11, Windows 95, Windows 98, or Windows NT4.0. The Readykey Server must be running Windows 95, Windows 98, or Windows NT4 **not** Windows for Workgroups 3.11.

Readykey for Windows will operate on PCs running Windows 95, Windows 98, or Windows NT4. If Windows 95 or Windows 98 is being used, then the PC should have at least 32 Mbytes of RAM. If Windows NT is being used, then it must be version 4.0, build 1381 or later, it should have at least 64Mb of RAM and the specification should meet the Microsoft requirements for NT.

Hard Disk Space

A number of factors will affect the size of hard disk you require on your Readykey for Windows workstation:

- **Database Size** - this is mainly determined by the total number of personnel in the system.
- **Transaction Storage** - number of transactions you need to store on the hard disk.
- **Free Space** - required on your hard disk after the installation.

The above list is now described below in more detail:

Database Size

All the information that forms part of the Readykey for Windows system is stored in a database on the hard disk of a PC. The main factors that affect the size of the database are the volume of keyholder information stored and whether you are using the Photo ID option.

Readykey for Windows can support as many as 18,000 keyholders in each of up to 128 divisions. As the number of keyholders in the system database expands, then so does the amount of disk space required.

If the Photo-ID module is also being used to store photos of keyholders, then the amount of disk space required increases significantly (see table).

Table 1. Disk space required per division for typical database sizes with and without ID Photos.

Number of Personnel	Disk Space Required Per Division		
	Normal	50% of Photos	All Photos (100%)
4000	15 Mb	124 Mb	234 Mb
8000	30 Mb	248 Mb	468 Mb
10000	38 Mb	311 Mb	585 Mb
18000	68 Mb	560 Mb	1.0 Gb

Note: 1Gb (Gigabyte) = 1024 x 1Mb (Megabytes).

Transaction Storage

Every event (transaction) that occurs on a Readykey for Windows system will be stored on the PC hard disk (only the PC which stores the system database).

All transactions are stored in files, which are usually 1.2 Mb in size, although this value can be changed. The number of transactions stored in each file will vary between 18,000 and 40,000 ; dependent on how busy the system is - more transactions can be stored in a file on a system with a higher transaction rate.

When a transaction file is full, Readykey for Windows will automatically create a new one. A number of completed transaction files are stored on the hard disk of the PC (usually six), after which the oldest will be automatically deleted to conserve disk space. Completed transaction files can and should be copied ('archived') to floppy disk, network or tape, to allow operators to perform a transaction search at a future date of past system activity.

The more transaction files required to be stored on the hard disk of the PC, the more disk space will be required.

Free Space

Readykey for Windows has a recommended free space requirement. We recommend that you have twice the size of the database available on your disk as free space at all times. For example if you have 18,000 personnel without photos then, referring to the table above, you will have a database size of 68Mb. This means that you require 2 X 68Mb = 136Mb of free space minimum.

Serial Ports

Most PCs are now supplied with two **Serial Ports**. Possibly one will have a 25-pin male connector, the other will have a 9-pin male connector, although sometimes both connectors will be of the same type. One of the ports will be assigned by MS-DOS as **COM1**: the other will be assigned as **COM2**:. It is possible that there will be no external markings on the PC indicating what the port assignments are. Refer to the documentation that came with the PC system for identification.

Some PCs have a special port, usually a small DIN connector, for a **Bus Mouse**. This is a normal mouse that connects directly to the PC's internal bus without using a serial port. This type of mouse is ideal if you need to use the two serial ports for Readykey Interfaces or other purposes.

It is recommended that you install the mouse on COM2:, or use the special bus mouse port, and install the PC Interface Kit, or CNC, on COM1:.

All the serial and parallel ports on your system must use different IRQ levels. If you have problems with the serial ports then ensure, using diagnostic software, that the mouse, network card, PC Interface Kits or CNCs are not sharing the same IRQ number.

Normally the COM1: serial port is assigned IRQ4, COM2: is assigned IRQ3. Network cards can usually be safely assigned to IRQ 5 or IRQ 10. Extra ports can be assigned other IRQ numbers but avoid IRQ numbers used for sound cards etc.

To use the Photo ID module and the Serial Interface module you may need more serial and parallel ports. Table 2 gives a quick guide to help you assess how many ports you will need on your PC. Please contact your computer supplier if you have questions installing ports on your PC, and not Radionics.

Table 2. Add the number of ports in the table to find how many ports you will need.

Reason port is required:	Serial Ports (COM n)	Parallel Ports (LPT n)
Serial Interface Module	1	
Up to 4 Central Network Controllers (CNCs)	max 4 (on COM1 to COM4)	
Up to 4 PC Interface Kits	max 4 (on COM1 to COM4)	
Line Printer (transaction printing)		1
Laser or Bubble Jet Printer (report printing)		1
Card Printer (Photo ID Module)		1
Mouse (when not a bus mouse)	1	
Digital Camera (Photo ID Module)	Consult manufacturer's literature	

Note: Where n = the port number, serial and parallel ports have separate numbering systems.

Software

All the multi-pc workstations must have Windows for Workgroups 3.11, Windows 95, Windows 98, or Windows NT4 installed. The Readykey Server on a multi-PC system must be running Windows 95, Windows 98, or Windows NT4, and not Windows for Workgroups 3.11. We also recommend that all the workstations on a multi-PC system have the same version of Windows installed.

Ensure that all network PCs' clocks are within 5 minutes of each other.

The Borland Database Engine

Readykey for Windows is supplied with the Borland Database Engine. It needs the engine to be installed with our settings for it to run correctly. If the PC already has the Borland Database Engine installed then installing Readykey for Windows will possibly affect operation of the application which originally used the engine.

To see if the Borland Database Engine is installed:

1. Open the Windows Explorer (Windows 95 or Windows NT4) or the File Manager (Windows for Workgroups 3.11).
2. Look for a directory called `\IDAPI` in the root directory of your hard drive.

If you find `\IDAPI` then the Borland Database Engine is already installed. Check with the system supervisor to find out which programs are using it.

CAUTION: do not install any programs which use the Borland Database Engine after installing Readykey for Windows. Doing this, may stop Readykey for Windows from working.

Multiple PC Systems

All the multi-pc workstations should meet the specification given earlier. **ALL** the multi-pc workstations must have **Windows for Workgroups 3.11, Windows 95, Windows 98, or Windows NT4** installed. It is recommended that all the workstations on a single Readykey for Windows system should have the same version of Windows installed (with the exception of a dedicated network server which could have Windows NT Server installed).

Other Software Conflicts

If you install Microsoft Access on a Readykey Workstation it will install its own settings over vital Readykey for Windows settings. Avoid installing Microsoft Access on any PC which is running Readykey for Windows.

Printers

Any Windows supported printer may be used. However you **must** use a dot-matrix type printer for current on-line transaction printing, a laser printer will give one line per page. This is true unless the Readykey for Windows system is running on Windows NT. Windows NT uses different drivers that may allow the use of a laser printer for current on-line printing.

A laser printer is best suited for producing reports on request. However, unless the best quality output is required, a good quality dot-matrix printer is most suitable. The transaction printer must be exclusive to Readykey for Windows. When buying a printer, ensure that the **PC to Printer Cables** have been supplied.

For a printer connected to the Readykey Server, the Security Block is installed between the PC's parallel port and the printer cable. This will have no effect on the normal operation of the printer.

You will need a specific ID Card card printer for ID card printing directly on to Readykey proximity cards. The printer used for testing and determined the best suited for direct ID Card printing is the DataCard®, Model ImageCard Express, p/n 709683, offered in addition by Radionics.

Using Other Applications with Readykey for Windows

Windows is a multi-tasking operating system. This means you may have several different applications running at the same time such as Word Processing, Spreadsheet, Diary etc. Provided that Readykey for Windows has been started up, then the operator should be able to switch from one task, such as Word Processing, to Readykey for Windows and back again. Any alarms that may occur that require acceptance will cause a message to appear over most other Windows applications.

Note: An Alarm screen cannot automatically appear over a screen saver. It is recommended to disable screen saving applications for automatically initiating.

If you intend to use your PC for other applications then consider the following:

- Your PC should be installed with the maximum possible RAM, at least 64 Mb.
- If you use 'full screen' DOS applications then alarms will not be reported until you return to a Windows screen.
- If you have a busy system, processing many transactions, then for maximum efficiency at reporting alarms, you should consider dedicating the PC to operating Readykey for Windows only.
- It is recommended that the Readykey Server on a peer to peer network is not used for running other applications.
- The other applications cannot also use the Borland Database Engine otherwise conflicts can prevent either Readykey for Windows or the other application (whichever is installed first) to fail.