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With CARAT, you have chosen for a sophisticated graphic program, which provides kitchen planning at the highest technical level, with brilliant picture and colour quality. Where comparable systems conduct long calculation operations, CARAT only needs a few seconds, for example to walk in real time through the kitchen planned by you. To have real fun using CARAT Kitchen software, we recommend you to use powerful and high quality hardware.



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Server Operation

CARAT has been developed with Microsoft® products, to be operated on Microsoft® server and client operating systems, and is optimised for these systems. Program functions are coordinated to and tested on the Microsoft® application interface, for functionality with the current Windows® versions, based on the operating system. In a company network can a CARAT installation via a central windows clearance be used by individual work station PC's and notebooks. If a client operating system or a server operating system is necessary for this clearance server depends on the number of work stations that have access. Current Windows client operating systems are limited to 10 network accesses (work station accesses). The following operating systems are supported.

Client operating systems

- Windows 7® (Professional, Ultimate, Enterprise)
- Windows 8® (Pro, Enterprise) and Windows 8.1 (Pro, Enterprise)
- Windows 10® (Pro, Enterprise)

Server operating systems

- Windows® Server 2008
- Windows Server 2008 R2
- Windows Server 2012
- Windows Server 2012 R2
- Windows Small Business Server 2008
- Windows Small Business Server 2011
- Windows Server 2016/2019

Terminal server und NAS/NDAS-storage systems

These special server systems use different approaches to make centralised resources available to a group of users. Theoretically can these centralised resources be used to centrally provide this user group with an application like CARAT.

Experience shows however, that the performance of the graphical application of CARAT is very limited when using a terminal server, and does not come near to the necessary local graphical performance of a PC. The other approach, to want to use a NAS/NDAS storage system, to replace a Window server (regardless of whether a Windows client or a Windows server is used) is also not recommended. This can lead to performance and access problems in network operation.

Both technologies are not suited for a high performance and faultless productive use of CARAT.

Email-clients:

- Outlook®
- Windows Live Mail®

Information about different operating systems and email clients

CARAT has not been tested on other operating systems like for example Linux-Server or with alternative email clients. If a problem arises with such a system, at this time our support will be limited to a description of the CARAT functionality. The necessary steps for solving your problem must then be taken by your responsible system administrator.

Please note that, we can only recommend the use of the new Windows 10® operating system with new up-to-date hardware. The conversion of existing, older hardware to Windows 10® should be made only after careful consideration, since problems can occur with older hardware and software, because of drivers that have not been adapted for Windows 10®. Please note that Windows 10® can only reach its full capability on a current computer system with current hardware and software support (drivers).

Today's PC operating systems, and this is even more true for those from Microsoft, have a quasi expiration date. As of this date, Microsoft will no longer supply the affected operating system with security updates and is thus virtually "expired". Software producers, like us, that always work with current Microsoft development environments, so we can always offer the best possible support of current Windows operating systems, enter technically specific dependencies with regard to the timely discontinuation of support for "expired" operating systems.

If you are still using older hardware that was designed to run on an older Windows, your system administrator can check whether an upgrade to a current Windows is technically possible or sensible.

If you are still using older hardware that was designed to run on Windows XP, your system administrator must check whether an upgrade to Windows 7 is technically possible or sensible, because CARAT can no longer be run under Windows XP since 2014.

Available Hardware

If you already have a computer system and would like to make sure that CARAT can be run properly on your existing system, we offer you a temporary test licence, with which you can test a CARAT installation on this hardware.

Graphic cards replacement

Because of the diversity of today's graphics cards and the still very unclear and often confusing labelling of individual graphics card types, it is not possible for us to generally release certain series of graphics cards for the use with CARAT. Because there exist, despite almost identical type designations, significant differences in performance. Based on our experiences with computer systems tested by us and on customer testimonials, we can give you some examples of graphics cards (see last page), that have proven themselves in use with CARAT! Please keep in mind however, that we have not tested every variant of an graphic card type. Rather, you should orientate yourself to our specified performance features, such as memory.

In case you plan a conversion to a follow-up model, please check carefully whether they have at least the same performance features. For our tests, with graphics cards, we always use, as reference systems, devices from the business line of HP, ACER and Dell.

Please do not use professional CAD-graphics cards, that are often offered in Business PC's. Please, have a "game graphics card" (see last page) installed. Since CARAT behaves like a computer game from the graphics requirements, we do not recommend CAD graphics cards. In addition, driver updates for game graphics cards are provided more frequently than those for CAD professional cards because CAD graphics card drivers also need to be certified by CAD software manufacturers. Hence your CARAT benefits from the fact that the fast moving computer game industry accelerates the driver development of these graphics cards, and thus eliminates errors more quickly.

Please also note that the flawless functioning of a graphics card can only be ensured when also all other components (motherboard, power supply, drivers) work properly. Because a computer system can only be evaluated as a total, we can only give a global recommendation without obligations for the graphics cards mentioned below.

Apple Computer

A few words about Apple computers. By default are all Apple devices delivered and operated with an Apple operating system.

What the Apple operating system iOS is for small mobile devices, is OS X the operating system for the larger siblings such as iMac.

Because the larger Apple computers are based on an Intel X86 architecture, just like PC', a Microsoft Windows operating system can also be installed and operated directly on these devices.

Although much in use up till now, however not recommended any more for the new CARATvision, is the alternative to emulate a Windows PC under OS X with virtualisation software such as Parallels Desktop, which then runs parallel to OS X at the same time.

There is only one possibility if you are planning on using CARAT on an Apple computer, the direct installation of Microsoft Windows on the Apple computer using the Apple Boot Camp program. Here you decide, when starting the computer, with which operating system you want to work. If you start Windows, you can operate CARAT there.

So much for the theory. However, the practice shows obstacles. Working with an Apple keyboard under Windows requires a "getting used to" with obstacles, please talk about this with your IT adviser before buying an Apple computer.

Another point: Running the Windows operating system directly on an Apple computer requires Windows drivers provided by Boot Camp. How up-to-date and error-free these drivers are depends on Apple's provision of newer versions of Boot Camp support software. Experience shows that these driver levels lag behind the PC counterparts, and this can cause problems when a more up-to-date driver is required.

All in all, running a Windows operating system on an Apple computer is not the best solution to operate CARAT. We do not test CARAT with Apple hardware, in case of problems, our support will therefore be limited to a description of the CARAT functionality, as is by Linux. The necessary steps for solving your problem must then be taken by your responsible system administrator, at your own expenses.

CARAT Hardware Recommendation Overview - for initial hardware purchase

Processor	Starting at Intel© Core i7 (from 3 GHz, 4 Cores) For the quickest recalculation of 3D-perspectives (Raytracing): Intel© Core i9 (from 6 Cores) or AMD Ryzen Threadripper
Memory	Starting at 8 GB, better 16 GB random access memory
Graphics card	Full OpenGL support from Version 3.3 Current driver version Attributes For a monitor with 1080p HD-resolution: Starting at 4 GB memory Starting at 128 Bit Interface Memory Starting at 600 shade processors, better starting at 1000 Example: Starting at NVIDIA GTX 1050 Ti, AMD RX Series For multi-monitor use with 1080p HD or single monitor use from 4K UHD-resolution: Starting at 6 GB memory Starting at 192 Bit interface memory Starting at 1200 shade processors Examples: Starting at NVIDIA Geforce GTX 1060, 1070, 1080, respectively the new NIVIDIA Geforce RTX series starting at 2060, AMD RX Vega Series We advise against the following graphic cards: NVIDIA Quadro, AMD FirePro und <u>all</u> Intel HD Onboard-graphic chips
VR Glasses	Oculus Rift S, for this please also note the hardware recommendations on: www.oculus.com/rift-s/
Monitor	Minimum resolution: 1280 x 1024 Pixel with screen size 19“(Inch) Recommendation: 1080p HD (1920 x 1080 Pixel) with 27“(Inch) screen size
HDD/SSD	Recommendation: HDD: min. 500 GB access time under 10 ms SSD: min. 500 GB with release for database systems
DVD Drive	
Operating system	Windows 7 Professional and Windows 8, 8.1, 10 (Pro, Enterprise) current service packs and updates assumed Do not use a “Home” Version!
Printer	Colour printer starting at 2400 x 1200 dpi b/w printer starting at 600 dpi
Internet	DSL connection or wired internet
Data transfer	USB flash drive or similar removable mediums
Recommendation	DATA backup on RDX-drive, hard drive, or similar