Dolphin System Requirements

Dolphin
Imaging & Management Solutions
a Patterson Technology

This is a detailed technical document listing the minimum hardware and software requirements for running Dolphin Imaging & Management software systems.

If you are not familiar with the terminology in this document, we recommend that you contact either Dolphin or a local Information Technology (IT) specialist to assist with your implementation.

For more information, please contact one of our sales consultants at sales@dolphinimaging.com or visit us on-line at www.dolphinimaging.com. These specifications are for reference only. Your specific configuration may vary depending on your practice. This information may be subject to change.

File Server / SQL Server Requirements:

Component	Minimum	Recommended	Notes
Operating System	Window Server 2016 Standard, Windows 10 (64-bit) (Standalone or five concurrent users or less)	Windows Server 2022 Standard	Windows Server 2022 Standard and Windows 11 Professional have been validated for use with our software. *Note: We do not support Windows Server Essentials editions.*
Workgroup / Domain	Workgroup (non-server OS with 5 concurrent users or less)	Active Directory Domain	When a Server operating system is used, a Domain is required. Microsoft Client Access Licenses are required for each station accessing your server. Contact your local IT professional for more information, or see: http://download.microsoft.com/download/3/D/4/3D42BDC2-6725-4B29-B75A-A5B04179958B/Licensing_Core_CAL_and_Enterprise_Suite.pdf *Note: Dolphin software is not designed to work in a multi-domain environment.*
Remote Desktop Services (if needed)	Window Server 2016 Standard	Server 2022 Standard	If Remote Desktop Services is needed for remote locations or thin clients, in a SBS network, a separate server is recommended.
Database	Microsoft SQL Server 2016 (SP3) Express (Standalone or five concurrent users or less)	Microsoft SQL Server 2022 Standard	The performance of Dolphin software could be adversely impacted if SQL Server Express is installed due to the SQL Server limitations of only dedicating 1GB of RAM and 1 processor to SQL Server processing. SQL Express is provided with the Dolphin installers and is adequate for Imaging and Aquarium only customers.
Processor (CPU)	Intel i3 or equivalent	Intel i7 or higher	
Memory (RAM)	Minimum of 4 GB RAM	16 GB RAM or higher	Memory requirements depend on operating system configuration, database size and user load.
Hard Drive	40 GB free space on partition with Image files and SQL database	SSD RAID controller disk highly recommended	Actual requirements will vary based on your system configuration and the applications and features you choose to install. The Dolphin software performance is highly influenced by Disk I/O speeds and we recommend SSD hard drives for both Workstations and Servers.
Video/Graphics	1280x1024	1280x1024 or higher	
Archive/Backup	Required	Required	You are responsible for making proper backups of your Dolphin data, which includes database, image files, documents, letter templates, etc. Dolphin recommends implementing a proper backup protocol including offsite data backups.

File Server / SQL Server Requirements: *(continued)*

Component	Minimum	Recommended	Notes
DVD-ROM Drive	Required	Required	For initial installation. Installer can be copied to a shared folder for workstation access.
Antivirus	Required	Required	For the best software performance, we recommend adding exceptions for Dolphin application installation and data file directories on all computers where Dolphin software is installed.
3rd party software	N/A	Only antivirus, and applications that integrate with Dolphin	Dolphin cannot know how other software might interfere with Windows, your network, or with our software. We recommend you only install applications that integrate with Dolphin onto your Dolphin work stations. For example; we recommend against installing video games.

Thin Clients
Thin Client/ Remote Desktop Services is an acceptable alternative to using PCs as workstations. You can purchase thin client machines or use older PCs as terminal server clients. We do not guarantee that **Dolphin Aquarium** will run properly over any form of terminal technology (Windows Remote Desktop, Citrix, VNC, etc.), so our installer will not install the client portion on Windows Server operating systems.

Remote Office Configuration (connecting to the main office)
- Dolphin Management must be connected via Remote Desktop Services
- Dolphin Management is not supported running through a WAN directly.
- If you plan to capture images from the remote office, a local PC and a VPN is required.
- For sites with 10 or fewer simultaneous remote connections, one server running our minimum server requirements is acceptable. For best performance, a server meeting our recommended requirements is preferred. We recommend 256MB RAM dedicated to each remote connection.
- For sites with more than 10 simultaneous remote connections we recommend two servers, both meeting our recommended server requirements with 256MB RAM allocated for each remote connection.

Please contact Dolphin Technical Support for details on configuring your system to use Thin Client technology or Remote Office Configuration.

LAN Connectivity:
Dolphin requires a minimum of Fast Ethernet (100 Mbps). **Note:** *Dolphin recommends 1 Gigabit (1000 Mbps)*

Local PC Workstation Requirements:

Component	Minimum	Recommended	Notes
Computer	PC or Mac	PC or Mac	For Macintosh, we require either Bootcamp, Parallels or VMware Fusion, configured such that Windows environment meets all the requirements below. We currently support Macs that have Intel Core chips. Macs with Apple M1 chips have not been validated for use with our software. For details, see *http://www.dolphinimaging.com/mac.html*.
Operating System	Windows 10 (64-bit)	Windows 11 (64 Bit)	For all supported operating system generations, Dolphin supports Business\Professional, Enterprise, and Ultimate 64-Bit versions..
Processor (CPU)	4 core Intel i3 or equivalent	8 core Intel i7 or higher	*Note: Several operations in 3D and 3D surgery will now run faster the more cores your CPU has.*
Storage	20GB free space	SSD 500GB or higher	Actual requirements will vary based on your system configuration and the applications and features you choose to install.
Memory (RAM)	4GB	8GB or higher	Additional memory may be required, depending on operating system requirements.
DVD-ROM Drive	Required	Required	For initial installation. Installer can be copied to a shared folder for workstation access.

Local PC Workstation Requirements: *(continued)*

Component	Minimum	Recommended	Notes
Monitor / Video/Graphic	17" / 1280x1024	19" / 1920x1080 or higher	Screen resolution divided by Windows scaling percentage setting must result in an **effective** screen resolution of at least 1280x1024.
Accelerated 3D Graphics	3D only: 2GB RAM graphics card with DirectX 11.0 support.	3D only: 4GB discrete (NVIDIA or AMD) graphics card with DirectX 11.0 support.	Accelerated card is only used if you are viewing or editing 3D data (ConeBeam, digital study models, 3D photos, etc.) Our 3D software can run without such a card, but some of the advanced rendering modes will be disabled. Built-in Intel graphics can handle some 3D data, but larger 3D data sets and full resolution translucent rendering require discrete graphics from NVIDIA or AMD.
Word Processor	Microsoft Word 2016 Professional (32-bit)	Microsoft Word 2019 (64-bit)	Microsoft Word is required if you use the Dolphin Letter System. We are compatible with Microsoft Office 2019, 2016, 365 ProPlus in the Professional and Professional Plus editions. If you are running a 64-bit edition of the Windows Operating System, you may still use Microsoft Office 32-bit edition. NOTES: *Office 365 subscriptions require desktop versions of MS Word installed. Installation of Office in a Terminal Server configuration may require volume licensing. See Microsoft for details.*
Presentation Software	Microsoft PowerPoint 2016 Professional (32-bit)	Microsoft PowerPoint 2019 Professional (64-bit)	Patient Sign In and Super Questionnaire can be integrated with Microsoft PowerPoint. We are compatible with Microsoft PowerPoint 2019, 2016, 365 ProPlus in the Professional and Professional Plus editions. The PowerPoint Viewer is not supported. NOTES: *Office 365 subscriptions require installation of the desktop version of Microsoft PowerPoint. Digital Persona One Touch software must be installed to support fingerprint scanning via Terminal Services. Installation of Office in a Terminal Server configuration may require volume licensing. See Microsoft for details.*
Printer/General	Windows Supported Printer	Windows Supported Printer Laser Printer	Minimum 8MB RAM required for statement, insurance claim and graphic scheduling printer. For satellite locations we require printers to connect to a Print Server.
Sound	None	Recommended	Our voice-prompt digitizing guide walks you through each landmark. This is very useful in staff training and speeds up the digitizing process.
Internet Connection (No dial-up or satellite connections allowed.)	Broadband connection	**Main:** Download/Upload 1.5MB/512K or faster	We recommend 128 KB of dedicated upload speed per user session at the main office.
		1-5 Remote Workstations: Download/Upload 768K/768K or faster	We recommend 128KB of dedicated download speed per user session at the remote office.
		5-12 Remote Workstations: Download/Upload 2.0MB/2.0MB or faster	We recommend 128KB of dedicated download speed per user session at the remote office.
3rd party software	N/A	Only antivirus, and applications that integrate with Dolphin	Since Dolphin cannot know how various other software might interfere with Windows, with your network, or with Dolphin, we recommend that you only install applications that integrate with Dolphin onto your Dolphin stations. For example, we recommend against installing video games.

Monitor / Video/Graphic — Notes table:

Screen Resolution	Windows Display Scaling	Effective Resolution	Meets Min Requirements?
3200 x 1800	100%	3200 x 1800	Yes
3200 x 1800	150%	2133 x 1200	Yes
3200 x 1800	200%	1600 x 900	No
1920 x 1080	100%	1920 x 1080	Yes
1920 x 1080	125%	1536 x 720	No
1680 x 1050	150%	1120 x 700	No

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Optional Accessories:

Component	Minimum	Recommended	Notes
Partner Integrations Credit Card Processing		OpenEdge or OrthoBanc Breeze	
Partner Integrations Electronic Signatures		Topaz Signature Pad Model Family T-L462	For signature pads connected locally: Model T-LBK-462. For signature pads connected via Terminal Services\Citrix\Dolphin Cloud: Model T-LBK-462-BSB*. *Requires specific setup instructions we can provide*
Printer/ Appointment Slip	Windows Supported Printer	HP LaserJet Pro M402DW or N	Okidata 18x or 19x series are not supported. Windows supported dot matrix printers not recommended. For shared printers and satellite locations we require printers to connect to a Print Server. IP printing is recommeded with a hardwire connection.
Printer/Label Printer	Windows Supported Printer	DYMO 400 Series	For multiple labels, we support the Avery 5160 Label – this can be printed on the "general" printer.
Document Scanner	Windows Supported Scanner	TWAIN Driver Compatible	Fujitsu, Xerox and Canon all offer TWAIN compatible scanners. Dolphin cannot guarantee full compatibility with all TWAIN compatible scanners. Be aware the resolution of documents scanned greatly affects disk space used. Scan as JPG or PDF rather than BMP or TIFF.
Fingerprint Scanner	Digital Persona U. are. U Platinum 4000B (Model Number: 82142-001) and 4500 (Model Number: 88003-001) are the supported finger print scanner.	www.hidglobal.com	
Stationery Supplier	A Wait Business Systems Co 1197 Raleigh Way Lawrenceville, GA 30043, Phone: 1-800-333-9248		
Camera Card Reader	Depending on camera	Depending on camera	SD or CF card reader, as appropriate for your camera. Most new cameras also use USB port to transfer images, so card reader may not be necessary. Many laptops and desktop have built-in SD card readers. Additionally, Dolphin supports wireless SD cards.
Digital Camera	A minimum 3 mega pixel (MP)	A minimum 3 mega pixel (MP)	Due to the large number of acceptable cameras available, Dolphin does not endorse any specific model or vendor. Practitioners should research the market and choose a camera appropriate to the needs of the practice. Cameras should be set to no higher than 5 megapixels. *Since computer monitors have approx. 2 megapixels, and since monitors must downsize images to display them, there is absolutely nothing to be gained by taking your images at very high resolution. Doing so simply makes the software run more slowly and takes more hard drive space, without providing better images. We strongly recommend setting your camera to a maximum of 5 megapixels.*
Photo/X-ray Scanner	150dpi for x-rays, 300dpi for photos	1,600dpi if slides will be scanned	A transparency adapter (TA) is required for scanning x-rays or slides. NOTE: *Not all scanners offer this option and not all TA's can scan full-size x-rays.*
Photo Printer/ Output	720dpi color inkjet printer	1440dpi color inkjet	

Dolphin System Requirements

Workstations for using Dolphin Cloud generally have a lower performance requirement as the processing and thinking are done in the 'Cloud'. Unless noted otherwise the requirements for a Cloud workstation are the same as a Local workstation.

An X-Ray capture workstation for Dolphin Cloud has the same requirements as a Local Workstations if Dolphin Imaging will be ran locally. This is sometimes necessary for non-TWAIN compliant X-ray machines or CBCT acquisition.

Dolphin Cloud Workstation Requirements:

Component	Minimum	Recommended	Notes
Computer	PC or Mac	PC or Mac	For Macintosh the native Mac OS can be used with Dolphin Cloud. This is done using the freely available Microsoft Remote Desktop application.
Operating System	PC – Windows 10 Home or Pro, Mac – 12.0 Monterey	PC – Windows 11 Home or Pro, Mac – 14.0 Sonoma	Updating your local workstation to the latest build of either operating system is highly recommended. This generally provides the fastest and most secure Dolphin Cloud experience. Windows 11 has been validated for use with Dolphin Cloud. Ensure that fully compatible Windows 11 drivers are available for your peripherals (printers, scanners, X-ray systems, etc.) before upgrading.
Processor (CPU)	Intel i3 or equivalent	Intel i5 or equivalent	The speed of Dolphin Cloud is not all that sensitive to the local PC's performance. A computer that runs Windows 10 locally well will run Dolphin Cloud well. Increasing the performance beyond that point will not make Dolphin Cloud run faster. A computer struggling to run Windows 10 locally may not work well for Dolphin Cloud.
Storage	20GB of free space	20GB of free space on SSD	Dolphin Cloud requires minimal to no local storage
Memory	4GB	8GB	Dolphin Cloud requires very little RAM memory beyond the requirement for the OS.
DVD-ROM Drive	Not required	Not required	
Monitor	Same as local requirement	Same as local requirement	The requirements are the same as for a Local workstation, but a word of caution with ultra high resolution displays like 4K or UHD or Quad HD. Normal HD is 1920x1080 pixels and is terrific for all aspects of Dolphin. A 4K display may be 3840x2160 pixels and this is 4x the amount of pixels over full HD. Running at this resolution will noticably slow your Dolphin Cloud experience with minimal if any gain. We recommend reducing the resolution of a monitor like this to Full HD (1920x1080) or similar.
Accelerated 3D Graphics	Not required	Not required	With Dolphin Cloud 3D, the local GPU performance is not a significant factor. You may choose to have a better GPU if you plan to utilize 3D data on the local workstation, and in those cases the Local Workstation requirements apply.
Word Processor	See notes	See Notes	Dolphin Cloud includes Microsoft Word as needed for the Cloud session. You may still desire a local license of Word for other purposes on the local computer. No local licensing is included.
Presentation Software	Not required	See Notes	Dolphin Cloud includes Microsoft PowerPoint only for a designated Sign In station for Cloud Sessions (in lieu of Microsoft Word). If you require a PowerPoint license in the Cloud Session at another workstation for a different feature within Dolphin, an additional license can be provided for a fee on a per login basis (please contact your Dolphin sales rep). You may still desire a local license of Powerpoint for other purposes on the local computer. No local licensing is included.
Spreadsheet Software	Not required	See Notes	Dolphin Cloud does not include Microsoft Excel. If you require an Excel license in the Cloud Session for a feature within Dolphin, a license can be provided for a fee on a per login basis (please contact your Dolphin sales rep). You may still desire a local license of Excel for other purposes on the local computer. No local licensing is included.
Antivirus Software	Required	Required	It is strongly advised to have a good quality antivirus software running on all PCs/Macs that access Dolphin Cloud.

Dolphin Cloud Workstation Requirements (Continue):

Component	Minimum	Recommended	Notes
Printers	Not required	See Notes	Dolphin Cloud requirement generally follow the Local requirements. It is recommended to avoid low quality 'consumer' grade printers and to select printers that are business grade. Generally a good business printer will have printer drivers available for Microsoft Server 2016/19 and be connected by wired ethernet to the office LAN so all workstations can directly communicate with it. A good example of a Color Laser printer is an HP Color LaserJet Pro M454dw. A good example of a small black and white laser printer for use as an appointment slip printer would be HP LaserJet Pro M203dw. Multifuncion Printers (Print/Copy/Scan/Fax) should be compatible as printers, but network scanning may not work with Dolphin Cloud. Use the latest available printer driver supplied directly from the manufacturer. Very long printer names may experience issues so a modest length printer name (<20 characters) is recommended like 'ConsultColorLaser' or 'ApptSlip'. Do not use parenthesis in printer names.
Sound	Not required	Optional	Some Dolphin modules offer and enhanced experience using sound.
Internet Connection	Offices with just 5 Dolphin Cloud Logins or less require internet service at 25 Mbps download x 5 Mbps upload (25x5) Important: While the speeds for Internet are listed here, these are meant to be always available for Dolphin Cloud use and do not account for any other needs in the office.	For a network with 5 to 15 workstation we recommend at least a 50Mbps down x 10Mbps upload connection. For a larger 15+ workstation network a 100Mbps download x 20Mbps upload connection may be ideal.	Dolphin Cloud relies on a stable, fast, reliable Internet connection. Many other applications and services and devices in an Office consume the Internet bandwidth, and can adversely affect the performance of Dolphin Cloud. A single Ring Video Camera in highest resolution can consume nearly all the upload bandwidth from a Practice without them even realizing it. While the speeds for Internet are listed here, these are meant to be always available for Dolphin Cloud use. You may need substantially more speed when you consider all the Internet use at the office. A Broadband Internet connection is required. Dialup and Satellite based Interent are not supported. Use of wireless based connections is supported but not recommended - hard wire connections whenever possible for best reliability. Internet services like Cable Modem and Fiber are often most desirable based on costs and speeds available, but may not be available at all locations. Keeping in mind the competing needs of other services, for a small office with just 5 Dolphin Cloud Logins or less a basic Internet service like 25 Mbps download x 5 Mbps upload (25x5) is typically sufficient. For a network with 5 to 15 workstation we recommend at least a 50x10Mbps connection. For a larger 15+ workstation network a 100x20Mbps connection may be ideal. Once there is 'enough' bandwidth for Dolphin Cloud sessions, more will not change the speed. A Cloud session that is working properly on a 50x10 connection will not run faster on a 300x10 connection. Increasing the Upload speed does help decrease the time required to upload photos and x-rays. It is also recommended that you contact your IT person about the benefits of having Dual Internet connections from two different Internet providers in case of an outage with one. This requires an Internet firewall device able to manage two connections. Your IT person should tune/restrict traffic flow of other bandwidth consuming services through the firewall to always leave ample bandwidth for Dolphin Cloud connections. Network 'latency' on the connection from the PC/Mac to Dolphin cloud is important. It should be below 85 msec ideally at all times.
3rd Party Integrations	Not required	See Notes	Software written by other companies that properly integrates with Dolphin via the API may be supported. Software not integrated through the API is **NOT** supported. Please contact Dolphin support about any third party software to confirm compatibility.
Electronic Signatures	Not required	Topaz T-LBK-462-BSB	Only this specific model is tested and supported. Only supported on Windows OS.
Document Scanners	Not required	TWAIN Compatible	Dolphin Cloud generally follows the requirements of Local Workstation. The Xerox Documate 3125 is known to be a good option as well as many others. A small TWAIN software agent called TSSCan will be provided and must be installed and running on the workstation with the TWAIN device attached. Supported in Windows. Mac OS may require testing to confirm compatibility with your specific hardware.

Dolphin Cloud Workstation Requirements (Continue):

Component	Minimum	Recommended	Notes
Fingerprint Scanners	Not required	Digital Persona U.r.U. 4500	Dolphin Cloud generally follows the requirement of Local Workstations. Only supported on Windows OS.
X-Ray Machines	Not required	TWAIN Compatible	2D imaging devices like Pan/Ceph X-ray machines that are fully TWAIN compliant generally work very well. A small TWAIN software agent called TSSCan will be provided and must be installed and running on the workstation with the TWAIN device attached. Only supported on the Windows OS.
Credit Card Processing	Not required	See Notes	OpenEdge, Orthobanc, and Vanco.
Digital Camera	Not required	Image resolution should only be 3 Megapixels (2000 x 1500). In many modern cameras this is called the 'Small (S)' resolution.	Dolphin Cloud recommendations generally follow the Local Workstations. It is highly recommended to review the file sizes for images save by the camera. Out of the box most modern cameras are set for very, very high resolutions (as much as 18 Megapixels) far in excess of what is necessary for dental photography. The image resolution should be modified to save files of approximately 3 Megapixels (2000 x 1500) which will dramatically reduce the resultant file sizes. In many modern cameras this is called the 'Small (S)' resolution. This will dramatically improve the photo upload time capturing records. This step is often overlooked.

Dolphin Blue Requirements:

Component	Minimum	Recommended	Notes
Internet Connection	Download/Upload 10Mbps/5Mbps or higher	Download/Upload 50Mbps/10Mbps or higher	
Browser	Google Chrome (latest version)	Google Chrome (latest version)	Safari, Mozilla Firefox and Microsoft Edge may be used, but Google Chrome is the supported and recommended browser
Screen Resolution	1280 x 1024	3840 x 2160	

Optional Accessories:

Component	Minimum	Recommended	Notes
Credit Card and ACH Processing		Global Payments Integrated	
Document Scanner		TWAIN Driver Compatible	Dolphin cannot guarantee full compatibility with all TWAIN compatible scanners
Image Capture	Blue Capture Agent	TWAIN Driver Compatible	Dolphin cannot guarantee full compatibility with all TWAIN compatible image capture devices