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EXECUTIVE SUMMARY

This document provides optimal hardware and software specifications for various RamSoft products for **PowerServer 6.7**, applies to both **RamSoft Hosted** and **On-Premises** deployment models.

All stated requirements are based on typical workloads RamSoft has observed across its customer base. Resource requirements may vary depending on factors such as modality, retention, concurrent users, etc. Please be aware that requirements are subject to change without notice.

Note on Hardware: PowerServer 6.7 maintains the same hardware requirements as version 6.0. Customers must be on any 6.0 version before upgrading to 6.7. Some customers may require OS upgrades prior to migration due to Microsoft ending support for older Windows Server versions.

Feature Availability: Hosted vs. On-Premises

Feature	RamSoft Hosted 6.7	On-Premises 6.7
AES-256 Encryption	Included	Included
SSO / MFA (OAuth2, SAML)	Included (Hosted Only)	Paid add-on. Requires OmegaAI instance in customer region. (Add On)
Blume Share	Included (Hosted Only)	Requires OmegaAI VNA Storage + per study charge. (Add On)
Cold Storage	Available (Hosted Only)	Not available
Uptime Guarantee / SLA	Included (Hosted Only)	Customer-managed uptime. (Not Available)
Performance Gains	Included	Included
CAD 3D Navigation	Included	Included
Sub-Critical Findings	Included	Included



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Feature	RamSoft Hosted 6.7	On-Premises 6.7
Auto Key Object Insertion	Included	Included
Config Change Audit Logging	Included	Included
IP Address Audit Logging	Included	Included
Security Updates (TLS)	Included	Included
Automated Diagnostics / Golden Image	Included (Hosted Only)	Manual PRU-based deployment. (Not Available)

Customer Responsibility

Hosted Customers: All server-side infrastructure is provisioned, managed, and maintained by RamSoft. The items below do **not** apply to hosted customers. Client-side workstation and local network requirements remain the customer's responsibility.

On-Premises Customers: The following responsibilities apply to you as you manage your own infrastructure.

- **[On-Premises Only] Dedicated Resources** — Any resource outlined below, whether server or workstation, must be reserved solely for running a RamSoft product and its required components. Utilizing such resources for any other purpose can have unforeseen impacts, and RamSoft cannot guarantee functionality in such situations.
- **[On-Premises Only] Anti-Malware** — Customer is strongly advised to deploy and maintain an enterprise-grade anti-malware solution to help protect against nefarious activities.
- **[On-Premises Only] Regular Patching** — Due to the proliferation of modern exploits, it is highly recommended that a regularly occurring patching program is implemented on the host OS.
- **[On-Premises Only] Regular Backups** — Due to the high criticality of the stored information, it is highly recommended for the customer to deploy an appropriate replication or backup solution. Please see the "Backup & Hypervisor Replication" section for details.
- **[On-Premises Only] Uninterrupted Power Source (UPS)** Customer is advised to ensure product hardware is plugged into an appropriate UPS power supply. The application database or OS may become corrupt if not shut down properly during a power outage.
- **[On-Premises Only] Data/Host Encryption** — Due to the high sensitivity of the stored information,

customer is advised to utilize either full host encryption (i.e., BitLocker) or storage solution encryption;

- whichever is more appropriate.
- **[On-Premises Only] Static LAN IP** — Due to the need for external sources to connect to these devices, a Static LAN IP is required when deploying.
- **[On-Premises Only] SSL Certificate & DNS Record** — Customer will need to provide an appropriate URL and SSL certificate as per their standards. If one is not provided, a self-hosted certificate can be enabled during implementation; however, this is not advised, especially if the server is to be publicly accessible.

Technical Support

Technical support, as per the terms outlined in the RamSoft Software Agreement, is provided to end-users by RamSoft Support while under an active support contract. RamSoft's RMM, LogMeIn, will only be installed and utilized if under an active support contract. The RamSoft Support Team is reachable through www.ramsoft.com, 888-343-9146, and +1-416-674-1347.

POWERSERVER

Both Deployments: Hardware specifications below apply to both Hosted and On-Premises deployments. For Hosted customers, all server infrastructure is managed by RamSoft. For On-Premises customers, these specifications define what must be provisioned on your own hardware.

PowerServer & PowerServer TELE/LITE

Study Volume	CPU*	RAM	Hard Drive*
<15,000	4 cores	12 GB	Equivalent resiliency to RAID 6 recommended — 2TB SATA equivalent IOPS
15,000 – 30,000	4 Cores	16 GB	Equivalent resiliency to RAID 6 recommended — 2TB SAS equivalent IOPS
30,000 – 100,000	6 Cores	24 GB	Equivalent resiliency to RAID 6 recommended — 4TB SAS equivalent IOPS
100,000 – 200,000	8/12 Cores	32/64 GB	Equivalent resiliency to RAID 6 recommended — 6TB SAS equivalent IOPS
>200,000	16 Cores	64/128 GB	Equivalent resiliency to RAID 6 recommended — 6TB SAS equivalent IOPS

- Application is programmed to run on any newer Intel, AMD, or Xeon chipset. i5 or equivalent is recommended.
- Scaling past a large single socket vCPU deployment is not recommended. A multi-node design should be preferred.
- Sizing estimates are recommendations only. Actual needs will depend on modalities, study sizes, retention, priors, etc.
- Equivalent resiliency to RAID 6 is highly recommended due to its ability to provide optimal storage resiliency.
- Due to the vastly larger sizes of tomosynthesis or mammography studies, server resources generally need to be increased to accommodate their processing.

Additional Requirements:

- **Operating System:** Up to Date Microsoft Server 2019 or 2022 (Standard or Datacenter license)
- **[Hosted Only] Storage Types:** RamSoft Hosted Cloud Storage
- **[On-Premises Only] Storage Types:** Local (SAS equivalent), SAN, or RamSoft Hosted Cloud Storage
- **Partitions:** Primary partition — 100 GB for OS & PowerServer; Partition 2 — sized accordingly for Database and Image volume needs
- **LAN Throughput:** 1,000 Mbps (1 Gbps); 10 Gbps may be optimal for large concurrent study volumes
- **Virtualized Environment:** RamSoft highly recommends deploying in a virtualized environment. Hyper-V & VMware are fully supported.
- **Static LAN IP:** Host must be provisioned with a static internal LAN IP

RamSoft Provided:

- **Remote Access & Monitoring:** RamSoft will deploy and manage its RMM solution, LogMeIn.
- **Server Setup:** Initial installation and validation of the product performed by RamSoft technicians.

PowerServer RIS/PACS

Study Volume	CPU*	RAM	Hard Drive*
<15,000	4 cores	16 GB	Equivalent resiliency to RAID 6 recommended — 1TB SATA equivalent IOPS
15,000 – 30,000	6 Cores	16 GB	Equivalent resiliency to RAID 6 recommended — 2TB SAS equivalent IOPS
30,000 – 100,000	8 Cores	32 GB	Equivalent resiliency to RAID 6 recommended — 4TB SAS equivalent IOPS
100,000 – 200,000	8/12 Cores	32/64 GB	Equivalent resiliency to RAID 6 recommended — 6TB SAS equivalent IOPS
>200,000	16 Cores	64/128 GB	Equivalent resiliency to RAID 6 recommended — 6TB SAS equivalent IOPS

- Application is programmed to run on any newer Intel, AMD, or Xeon chipset. i5 or equivalent is recommended.
- Scaling past a large single socket vCPU deployment is not recommended. A multi-node design should be preferred.
- Sizing estimates are recommendations only. Actual needs will depend on modalities, study sizes, retention, priors, etc.
- Equivalent resiliency to RAID 6 is highly recommended due to its ability to provide optimal storage resiliency.
- Due to the vastly larger sizes of tomosynthesis or mammography studies, server resources generally need to be increased to accommodate their processing.

Additional Requirements:

- **Operating System:** Up to Date Microsoft Server 2019 or 2022 (Standard or Datacenter license)
- **Storage Types:** RamSoft Hosted Cloud Storage
- **[On-Premises Only] Storage Types:** Local (SAS equivalent), SAN, or RamSoft Hosted Cloud Storage
- **Partitions:** Primary — 100 GB for OS & PowerServer; Partition 2 — sized for Database and Image volume needs
- **LAN Throughput:** 1,000 Mbps (1 Gbps); 10 Gbps may be optimal for large concurrent volumes
- **Virtualized Environment:** Hyper-V & VMware are fully supported.
- **Static LAN IP:** Host must be provisioned with a static internal LAN IP

RamSoft Provided:

- **Remote Access & Monitoring:** RamSoft will deploy and manage its RMM solution, LogMeIn.
- **Server Setup:** Initial installation and validation of product performed by RamSoft technicians.

ROUTERS AND GATEWAY

Gateway Router

Study Volume	Deployment	CPU*	RAM	Hard Drive*
<30,000	Small form factor PC (Windows 11)	4 cores	16 GB	256 GB SATA equivalent IOPS
>30,000	Server grade (Windows Server)	4 Cores	16 GB	Equivalent resiliency to RAID 6 recommended — 2TB SAS equivalent IOPS

- *Processor: 8-core processor with AVX2 support. Minimum recommended: Intel Core i7-12700 or AMD Ryzen 7 7700X (or equivalent newer).*
- *Memory: 32 GB RAM (64 GB recommended for large CT/PET studies).*
- *GPU: DirectX 9/10/11 capable with 4GB+ VRAM. Note: Some AMD Ryzen APUs include integrated graphics and may not require a separate GPU.*
- *Sizing estimates are recommendations only. Actual needs will depend on modalities, study sizes, retention, priors, etc.*
- *Equivalent resiliency to RAID 6 is highly recommended due to its ability to provide optimal storage resiliency.*

Additional Requirements:

- **Operating System:**
 - (<30,000) up-to-date Microsoft Windows 11 (64-bit)
 - (>30,000) up-to-date Microsoft Server 2019 or 2022 (Standard or Datacenter license)
- **Storage Types:** Local or SAN storage
- **Partitions:** Primary — 100 GB for OS & Router Software; Partition 2 — sized for Database and Image volume
- **LAN Throughput:** 1,000 Mbps (1 Gbps)
- **Static LAN IP:** Host must be provisioned with a static internal LAN IP

RamSoft Provided:

- **Remote Access & Monitoring:** RamSoft will deploy and manage its RMM solution, LogMeIn.

Gateway Router with PowerCache/Gateway or only PowerCache

Study Volume	Deployment	CPU*	RAM	Hard Drive*
<30,000	Small form factor PC (Windows 11)	4 cores	16 GB	256 GB SATA Equivalent IOPS + 1 TB Caching
>30,000	Server grade (Windows Server)	4 Cores	16 GB	Equivalent resiliency to RAID 6 recommended — 2TB SAS equivalent IOPS

- *Processor: 8-core processor with AVX2 support. Minimum recommended: Intel Core i7-12700 or AMD Ryzen 7 7700X (or equivalent newer).*
- *Memory: 32 GB RAM (64 GB recommended for large CT/PET studies).*
- *GPU: DirectX 9/10/11 capable with 4GB+ VRAM. Note: Some AMD Ryzen APUs include integrated graphics and may not require a separate GPU.*
- *Sizing estimates are recommendations only. Actual needs will depend on modalities, study sizes, retention, priors, etc.*
- *Equivalent resiliency to RAID 6 is highly recommended due to its ability to provide optimal storage resiliency.*

Additional Requirements:

- **Operating System:**
 - (<30,000) up-to-date Microsoft Windows 11 (64-bit)
 - (>30,000) up-to-date Microsoft Server 2019 or 2022
- **Storage Types:** Local or SAN storage
- **Partitions:** Primary — 100 GB for OS & Router Software; 2 additional partitions for gateway router image volume and PowerCache image volume sized accordingly
- **LAN Throughput:** 1,000 Mbps (1 Gbps)
- **Static LAN IP:** Host must be provisioned with a static internal LAN IP

RamSoft Provided:

- **Remote Access & Monitoring:** RamSoft will deploy and manage its RMM solution, LogMeIn.

- Application is programmed to run on any newer Intel, AMD, or Xeon chipset. i5 or equivalent is recommended.
- 32 GB RAM is recommended for tomosynthesis or mammography studies.

Additional Requirements:

Deployment	CPU*	RAM	Hard Drive
Standalone PC	4 cores	16 GB*	256 GB SSD

- **Operating System:** Up to date version of Microsoft Windows 11 (64-bit)
- **Storage Types:** Local (SAS equivalent)
- **Partitions:**
 - Primary partition — 100 GB for OS & Router Software
 - Secondary Partition — sized accordingly for Database and Image volume
- **LAN Throughput:** 1,000 Mbps (1 Gbps)
- **Static LAN IP:** Host must be provisioned with a static internal LAN IP
- **Medical Grade Image Rendering:** See supported graphic cards in Peripherals section
- **Medical Grade Image Display:** See supported monitors in Peripherals section

WORKSTATION – RADIOLOGIST SCHEDULER, TECH, ETC.

Deployment	CPU*	RAM	Hard Drive
Standalone PC	4 cores	16 GB*	256 GB SSD

- *Processor: 8-core processor with AVX2 support. Minimum recommended: Intel Core i7-12700 or AMD Ryzen 7 7700X (or equivalent newer).*
- *Memory: 32 GB RAM (64 GB recommended for large CT/PET studies).*
- *GPU: DirectX 9/10/11 capable with 4GB+ VRAM. Note: Some AMD Ryzen APUs include integrated graphics and may not require a separate GPU.*
- 32 GB RAM is recommended for tomosynthesis or mammography studies.

Additional Requirements:

- **Operating System:** up-to-date Microsoft Windows 11 (64-bit)
- **Storage Types:** Local SSD
- **Partitions:** All storage assigned to a single partition
- **LAN Throughput:** 1,000 Mbps (1 Gbps)
- **Medical Grade Image Rendering:** See supported graphic cards in Peripherals section
- **Medical Grade Image Display:** See supported monitors in Peripherals section

Supported Platforms for Speech Recognition Software

Speech Recognition	Operating System (Win 11)	Microsoft Edge (2021 Release)	Microsoft Word – Office 365
Speech Understanding™	X	X	X
Dragon Medical Practice Edition 4.3 (or later)	X	X	X

Workstation Peripherals (Optional)

Type of Peripheral	Supported Devices/Models
RapidKeys	RamSoft RapidKeys
Dictation Microphones	Philips SpeechMike: LFH-3000, LFH-3010, LFH-3200, LFH-3210, LFH-3300, LFH-3310, LFH-5274, LFH-5276, LFH-5262, LFH-5272, LFH-5282, LFH-5284 Nuance: PowerMic II

Type of Peripheral	Supported Devices/Models
Transcription Foot Pedals	Philips: LFH-2310 Infinity: IN-USB2
Scanners	Any WIA Compliant Scanner
CD Printers	Primera: Bravo SE Disc Publisher
Label Printers	DYMO: LabelWriter 450
Barcode Scanners	Metrologic: VoyagerCS MS9540
Film Digitizer	Any Vidar Film Digitizer
Monitors	Eizo, Totoku, LG, WIDE
Graphic Cards	ATI FirePro W5100 (4GB)
Signature Pads	IDGem 1x5 Backlit RF
Tablet Displays	Any Windows 11 Touch Display

BANDWIDTH GUIDELINES

Single Location Deployment

If deploying PowerServer and all stations in a single location, a LAN of 1 Gbps throughput throughout will suffice in the majority of situations. For extremely high-volume study counts and high concurrent sessions, PowerServer solutions utilizing 10 Gbps at the server are fully supported.

Dispersed or Teleradiologist Deployment

RamSoft has various products available (i.e., PowerCache) to optimize a dispersed model deployment. RamSoft PowerServer is fully compatible with a dispersed workforce. There are two main deployment options:

- Deploy PowerServer on the internal network and utilize a remote access VPN technology for remote staff to access the solution.
- Deploy PowerServer in a DMZ and securely expose to the public internet. Remote staff can access the PowerServer directly without requiring a VPN. By default, PowerServer and PowerReader communication is encrypted.

Generally, WAN throughputs of at least **100 Mbps** are required for the best user experience. WAN traffic and congestion from other sources must also be taken into consideration.

BACKUP & HYPERVISOR REPLICATION

Hosted Customers: All server-level backup and replication is managed by RamSoft. This section is provided for reference and transparency. Client-side Gateway Router DB backups remain applicable where relevant.

On-Premises Customers: You are responsible for implementing and maintaining all backup and replication strategies described in this section.

Whole VM Backups & Replication (PowerServer)

RamSoft's PowerServer product is best deployed in a virtualized environment. PowerServer's database is VSS aware making it compatible with most VM level backup & replication technologies, including both Hyper-V or VMware.

Microsoft Hyper-V Methods:

Technology	Compatibility
Manual Checkpoint	PowerServer is fully compatible with checkpoints in Hyper-V
Hyper-V Replication	PowerServer is fully compatible with Microsoft's live Hyper-V replica technology. Vendor documentation can be found here
Hyper-V Data Protection Manager	PowerServer is fully compatible with Microsoft's Hyper-V backup offering. Vendor documentation can be found here
Veeam, VRanger & other market tools	PowerServer is fully compatible with most market-leading VM level replication & Backup toolsets

VMware Methods:

Technology	Compatibility
Manual Snapshot	PowerServer is fully compatible with snapshots in VMware

vSphere Replication	PowerServer is fully compatible with vSphere Replication technology. Vendor documentation can be found here
vSphere Data Protection	PowerServer is fully compatible with vSphere Data Protection technology. Vendor documentation can be found here
Veeam, VRanger & other market tools	PowerServer is fully compatible with most market-leading VM level replication & Backup toolsets

Items to Note:

If performing VM level replication, any sites and/or workstations must have connectivity to both the primary and secondary (replica) locations to ensure appropriate failover times.

If replicating to a different geographic location, it is imperative to ensure traffic is encrypted via alternate means (i.e., IPsec) and Wide Area Network throughputs are sufficient for synchronization.

Clustered Virtualized Environment with SAN Storage (PowerServer)

PowerServer is fully compatible with a large clustered virtualized environment that utilizes backend SAN type storage. Live migration tools such as Vmotion (VMware) and Live Migration (Hyper-V) can be leveraged.

[On-Premises Only] File Level Only Backups (PowerServer)

RamSoft products are compatible with most Windows-based file backup solutions. A critical requirement is for the solution to be capable of handling folder/file structures with potentially millions of individual files that change frequently.

Files	Default Location
TemplateLibrary	C:\ProgramData\RamSoft\TemplateLibrary
PeerCertificates	C:\Program Files\RamSoft\PowerServer\Certificates

FormConfig	C:\ProgramData\RamSoft\FormConfig
PACS Database Backup files	D:\RamSoft Data\DBBack
Image Volume(s)	D:\RamSoft Data\Image

Note: The backup location must have sufficient storage to accommodate the data volume. Generally, this means at least the same amount as primary storage.

[On-Premises Only] File Level Image Only Backups (PowerServer)

Please utilize this backup method with caution. File-level Image only backups are intended for those customers who wish to backup only their images. The PowerServer application and its database are not backed up. In the event of a recovery, a net new installation of PowerServer is required, as well as an image import. All patient/study demographics will be lost.

Note: The backup location must have sufficient storage to accommodate the data volume.

Files	Typical Location
Image Volume(s)	D:\RamSoft Data\Image

DB Only Backups (Gateway Router)

This method of backup is reserved for Gateway Router (with or without PowerCache) only. The DB file contains all locally significant configurations, i.e., stations List, which, if lost, would delay recovery significantly.

Files	Default Location
Configuration Database	C:\ProgramData\RamSoft\DB

SUPPORT CONTRACT OPTIONS

Below is a breakdown of the various support options available for all RamSoft products. An active

support contract is required in all instances.

Product	Software Support Available	RamSoft Anytime Remote Access Capabilities	RamSoft Remote Monitoring Performed
PowerServer (all flavors)	Yes	Yes	Yes
Gateway Router	Yes	Yes	Yes
Gateway Viewer	Yes	Yes	Possible*
Gateway Mammo Viewer	Yes	Yes	Possible*
PowerCache	Yes	Yes	Yes
Tech workstation	Yes	No	No

**Depending on the use case. If the station is utilized for viewing purposes only, no monitoring is performed. If the workstation is*

Product	Software Support Available	RamSoft Anytime Remote Access Capabilities	RamSoft Remote Monitoring Performed
Radiologist workstation	Yes	No	No

utilized for viewing and high-volume study routing, then monitoring is performed.

Necessary RamSoft utilizes LogMeIn to provide ongoing remote support and monitoring. The device in question must have internet access (outbound only) for the agent to check-in. If the customer implements network restrictions on their perimeter firewalls, the following entries must be whitelisted: [Link](#).

VERSIONS

Version	Revision Notes	Updated by	Reviewed by	Effective Date
Rev 1	Updated for 6.0 Release	LLG	VRN	2014/12/12
Rev 2–23	Various updates — see Version 6.0 document for full history	Various	Various	2015–2022
Rev 24	Replaced Windows 10 Pro with Windows 11. Removed support for Word 2016, Windows Server 2016. Increased RAM for Gateway Router to 16 GB. Updated RAID 6 to "Equivalent resiliency to RAID 6". Updated style and format.	MK	EM	2026/01/13
Rev 25	Updated to version 6.7	MK	—	2026/01/30
Rev 26	Scoped document for RamSoft Hosted customers only. Removed on-premises Customer Responsibility section. Added hosted notices. Updated manufacturer address.	SD	—	2026/04/24
Rev 27	Expanded document to cover both Hosted and On-Premises deployments for 6.7. Re-added Customer Responsibility section scoped to On-Premises customers. Added feature availability comparison table (Hosted vs. On-Premises). Added deployment badges throughout (Both / Hosted Only / On-Premises Only / Add-On / Not Available) per director instruction following PowerServer_6.7_OnPrem_Proposal_v3.	SD	—	2026/05/27

Rev28	Updated on-premises Gateway Router, PowerCache, and Workstation CPU/RAM/GPU specs to 8-core AVX2 (Intel i7-12700 / AMD Ryzen 7700X), 32GB RAM (64GB for large CT/PET), DirectX GPU	SD	—	2026/08/19
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