

System requirements for the latest release versions of CAAS and 3mensio applications.

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## 1. 3mensio Workstation

Version: **10.2**

### Hardware configuration:

- i5 or equivalent CPU
- 512 GB SSD for data
- 16 GB of RAM
- Discrete DX11 GPU, or
- Intel HD Graphics recommended 515 or better (minimal Intel HD Graphics 4000)
- 1920x1080 or higher resolution

If the system does not meet these specifications, 3mensio will likely run, but it is likely to run into issues like excessive delays or suboptimal screen layout.

### Supported operating systems:

- Windows 10 (64 bit) (recommended)
- Windows 8.1 (64 bit)
- Windows 7 SP1 (64 bit)

### 3mensio on a Mac is supported using Parallels or Bootcamp, with the following conditions:

- Mac hardware supports DirectX 10
- Mac hardware includes a discrete GPU
- Parallels version is 15.0 or higher
- Retina resolution is turned off (parallels VM config) or resolution is set to 'Scaled'
- Video memory set at max. 512 MB (parallels VM config)
- It is recommended to have at least 4 GB of RAM available for the VM.

## 2. 3mensio server requirements

Version: **10.2**

A 3mensio server is to be understood as a system (either workstation or server) which hosts:

1. 3mensio Structural Heart and / or Vascular floating license
2. 3mensio shared archive service

Specifications vary depending on how the system is used.

### 3mensio server with rendering capabilities

*(users would do measurements directly on the system)*

Operating System:	Windows 7 SP1 (64 bit), 8, 8.1, 10 Windows Server 2008 R2 SP1, 2012, 2012 R2, 2016, 2019 .NET Framework 4.8 or higher is required
CPU:	i5 or better, Xeon 3 <sup>rd</sup> generation or better
GPU:	Intel HD4000 or better
Memory:	8 GB or more
Hard drive:	500 GB (per 100 studies or 40 4D studies)

*Note: To meet the security requirements, the server needs to be part of a Windows domain*

### 3mensio server without rendering capabilities

Operating System:	Windows 7 SP1 (64 bit), 8, 8.1, 10 Windows Server 2008 R2 SP1, 2012, 2012 R2, 2016, 2019 .NET Framework 4.8 or higher is required
CPU:	i5 or better, Xeon 3 <sup>rd</sup> generation or better
GPU:	-
Memory:	8 GB or more
Hard drive:	500 GB (per 100 studies or 40 4D studies)

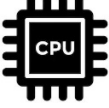







*Note: To meet the security requirements, the server needs to be part of a Windows domain*

### 3mensio server - license only

Operating System:	Windows 7 SP1 (64 bit), 8, 8.1, 10 Windows Server 2008 R2 SP1, 2012, 2012 R2, 2016, 2019 .NET Framework 4.8 or higher is required
CPU:	-
GPU:	-
Memory:	-
Hard disk space:	-

### 3. CAAS Workstation

Version: 8.5

	Computer / Processor	Intel Core 5 equivalent CPU or higher (Intel Core 7 equivalent CPU or higher for IV-LINQ with streaming device)
	Operating system	Windows 10 64-bit Windows 8 and 8.1 64-bit Windows 7 64-bit with Service Pack 1 (SP1) or higher  <b><i>Please be aware that, even though CAAS Workstation is tested on Windows 7 and Windows 8, no security updates are provided by Microsoft anymore.</i></b>
	Video card	In case the QCA3D, IV-LINQ and vFFR extension is used, a video card of 256 MB or higher and OpenGL 1.1 support
	Memory	4 GB Ram (8 GB Ram for IV-LINQ with streaming device)
	Monitor	Minimum screen resolution of 1280 x 800
	Hard drive	SSD with 500mb of free disk space
	Drive	DVD-ROM drive (if installation is done from a CD-ROM)
	Peripherals	Two button mouse device, mouse wheel is recommended PC standard keyboard USB port for the software protection device which supports at least USB 1.0 compatible devices (USB 3.0 port for connecting the IV-LINQ streaming device)

## 4. CAAS MR Solutions

Version: 5.2

Recommended hardware:

- Computer/Processor
  - Computer with an Intel Core 5 equivalent or higher.
- Memory
  - 16 GB Ram or higher
- Hard Drive
  - SSD
- Drive
  - CD-ROM drive (if installation is done from a CD-ROM)
- Graphics Card
  - Graphics card that supports OpenGL version 3.3 or higher (memory  $\geq$  256MB)
  - Graphics card NVIDIA Quadro or higher
- Monitor
  - Color monitor
  - Minimum resolution of 1280x1024
- Peripherals
  - A two button mouse device with mouse wheel
  - A PC standard keyboard
  - One USB port for the software protection device which supports USB 3.0 compatible devices

Supported Operating Systems:

- Windows 7 SP1 (64-bit)
- Windows Server 2008 R2 (64-bit)
- Windows Server 2012 (64-bit)
- Windows 8.1 SP1 (64-bit)
- Windows Server 2012 R2 (64-bit)
- Windows 10 (64-bit)
- Windows Server 2016

All service packs are supported

## 5. CAAS Qardia

Version: 1.0

### Specifications for the server

Supported operating systems:

- Windows Server 2012
- Windows Server 2016
- Windows Server 2019
- Windows 10 (64 bit versions)

Recommended hardware:

- Computer with an Intel Core 5 equivalent or higher
- HD access time < 12 ms
- 16 GB available memory (available = not consistently claimed by other applications)
- Network connectivity and available network bandwidth of at least 10 Mbps (available = available for the necessary communication of Caas Qardia, not used by other processes)
- A graphics card of 256 MB that supports at least OpenGL 3.3

### Specifications for the workstation

Supported web browsers (assuming up to date versions are available):

- Google Chrome
- Microsoft Edge (Chromium-based)
- Mozilla Firefox
- Safari on Mac OS

Required operating systems are any version of Windows or Mac OS that supports these browsers. Other operating systems that support these browsers may be usable, but have not been tested by Pie Medical Imaging.

Recommended hardware:

- Available network bandwidth of 10 Mbps (available = available for the necessary communication of Caas Qardia, not used by other processes)
- Mouse like pointer device with mouse wheel (or trackpad)
- Standard keyboard
- A color monitor with a minimum screen resolution of 1280 x 1024 (landscape) and 16 M colors, with a sufficiently high refresh rate

### Client-based deployment

Workstation must adhere to the hardware and OS requirements for the server, as described above in 'Server-based deployment'.

Workstation must also adhere to the hardware and browser requirements for the workstation, as described above in 'Server-based deployment'.

## 6. CAAS IntraVascular

Version: **2.1**

### **Recommended hardware configuration:**

- › i5 or equivalent CPU
- › 512 GB SSD for data
- › 8 GB of RAM
- › Discrete DX11 GPU, or
- › Intel HD Graphics 515 or better
- › 1920x1080 or higher resolution

### **Minimal hardware configuration:**

- › 64 bit CPU
- › 8 GB of RAM
- › Discrete DX11 GPU, or
- › Intel HD Graphics 4000 or better
- › 1920x1080 resolution
- › 256 GB disk

### **Supported operating systems:**

- › Windows 10 (64 bit) (recommended)
- › Windows 8.1 (64 bit)
- › Windows 8 (64 bit)
- › Windows 7 SP1 (64 bit)

## 7. CAAS A-Valve

Version: **2.1**

Recommended hardware requirements:

- Computer/Processor
  - Computer with a 2.6GHz 32-bit (x86) or 64-bit (x64) processor.
- Operating System
- Memory
  - 2GB Ram
- Hard Drive Space
  - A minimum of 2 GB of free disk space
- Drive
  - CD-ROM drive (if installation is done from a CD-ROM)
- Display
  - A display adapter with a minimal screen resolution of 1280x800
- Peripherals
  - A two button mouse device, mouse wheel is recommended
  - A PC standard keyboard
  - One USB port for the software protection device which supports at least USB 1.0 compatible devices

Supported Operating Systems:

- Windows 7 32-bit or higher
- Windows 7 64-bit or higher
- Windows 8.1
- Windows 10