



Roche Middleware Solutions

HARDWARE OPTIONS



PC – Optiplex 7010



Server – T620



Rack – R620

	Middleware - Standard	Middleware - Server	Middleware - Rack Server
	Minimum Hardware Specification:	Minimum Hardware Specification:	Minimum Hardware Specification:
Base Unit	Dell OptiPlex 7010 Minitower Chassis	Dell PowerEdge T620 Tower Chassis	Dell PowerEdge R620 1U Rack-mountable Chassis
Processor	Intel Core i3-3220 3.30 GHz dual core	Xeon Processor Intel Xeon E5-2620, 2.00 GHz, 15M Cache	Xeon Processor Intel Xeon E5-2620, 2.00 GHz, 15M Cache
Memory	4 GB x 2 dual channel 1600 MHz	16 GB	16 GB
Hard Drive	1TB SATA 7200 RPM hard drive	(3) 300 GB 15K RPM Serial-Attach SCSI 6Gbps 3.5-in HotPlug	300 GB 15K RPM Serial-Attach SCSI 6Gbps 2.5-in HotPlug
Hard Drive Controller	N/A	PERC H710 Adapter RAID controller, 512 MB NV Cache, Full Height	PERC H710 Adapter RAID controller, 512 MB NV Cache, Full Height
Operating System	Windows 7 64 bit SP1	Windows Server 2008 R2 x 64	Windows Server 2008 R2 x 64
NIC Card	Intel 82579M Gb NIC	2x Broadcom 1 Gb NIC	2x Broadcom 1 Gb NIC
CD-ROM or DVD-ROM	DVD +/- RW	DVD +/- RW	DVD +/- RW
Monitor	19" Planar Monitor	19" Planar Monitor	None
Keyboard/ Mouse	USB Standard Windows Keyboard and mouse	USB Standard Windows Keyboard and mouse	None
Dimensions	Height: 14.2" (36 cm) Width: 6.9" (17.5cm) Depth: 16.4" (41.7cm)**	Height: 18.50" w/feet Width: 11.90" Depth: 27.90" (including LCD Panel) Weight: 95 lbs.	Height: 1.68" Width: 18.9"-includes rack latches Depth: 30.39"-includes PSU handles/bezel Weight: 40 lbs.
Power Requirements	Standard 275 W PSU, ENERGY STAR 5.2 compliant	Titanium efficiency 750W power supply	Auto-ranging Titanium efficiency 750W AC power supply Auto-ranging Platinum efficiency 495W, 750W, or 1100W AC power supply 1100W DC power supply

Note: Due to changes in production cycles by computer manufacturers, hardware specifications are stated as minimum specifications. The currently shipping system may exceed the capabilities listed above.

Instrument Manager - Software

	Version	Version	Version
Instrument Manager	8.13	8.13	8.13
Cache	2013.1.0.446.0.13067	2013.1.0.446.0.13067	2013.1.0.446.0.13067
Internet Explorer	10 (unavailable for 11)	10 (unavailable for 11)	10 (unavailable for 11)
Microsoft Windows**	Windows 7 64 bit SP1	Windows Server 2008 R2 x 64	Windows Server 2008 R2 x 64
Java	Current	Current	Current
Adobe Reader	10	10	10
Symantec Antivirus*	12.1	12.1	12.1
Instrument/ LIS Connectivity	Predicated by instrument and LIS Connectivity Requirements. Options include: Client/Server connectivity via TCP/IP (Static IP address), device/terminal servers, serial board and/or file exchange. Serial connections only available on standard class system.		



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SOFTWARE OPTIONS

	PC	SERVER
	Minimum Hardware Specification:	Minimum Hardware Specification:
Base Unit	Manufacturer determined by customer	Manufacturer determined by customer
Processor	Intel Core i3 processor	Xeon Processor Intel Xeon E5-2620, 2.00 GHz, 15M Cache
Memory	4 GB	16 GB (4x4 GB) DDR3 1066Mhz RAM
Hard Drive	1TB SATA hard drive	3x 300 GB 15K-RPM HDD
Hard Drive Controller	N/A	PERC H710 Adapter RAID controller, 512 MB NV Cache, Full Height
Operating System	Windows 7 64 bit SP1	Windows Server 2008 R2, SP2, 64 bit
NIC Card	1 Gb NIC	2x, 1 Gb Ethernet
CD-ROM or DVD-ROM	DVD +/- RW	DVD-ROM +/- RW SATA Drive
Monitor	Resolution at least 1280 x 1024	Resolution at least 1024 x 768
Keyboard/ Mouse	Determined by customer	Determined by customer

	Version
Instrument Manager	8.13
Cache	2013.1.0.446.0.13067
Internet Explorer	10 (unavailable for 11)
Microsoft Windows**	Windows 7/ Server 2008 64 bit
Java	Current
Adobe Reader	10
Symantec Antivirus*	12.1 (shipped with all software only purchases)

* Roche will provide anti-virus software for the Roche Middleware, but will not maintain those updates. Roche will configure the server to keep the virus definitions up-to-date using the Symantec LiveUpdate feature that updates the definitions from the Symantec site. The customer site will need to ensure the Middleware system has access to the internet for these updates.

** Data Innovations thoroughly reviews and tests all Microsoft Patches to determine the effects on the software. Once the review has been completed, a list of approved patches is listed every month on MyLabOnline website. These security patches are the only patches Data Innovations reviews for the Roche Middleware. The customer site has the responsibility of updating Microsoft Updates for their systems. As you are well aware, these patches are available directly from Microsoft and are not provided by Roche directly.

*** Rack-mountable chassis will be placed in Rack cabinet provided by the customer. Customer will be responsible for placing rack system into rack cabinet.

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Recommended minimum dedicated CPU and Memory capacity for virtualized server.

Connectivity Only	Single Automation Single cobas® 8000 modular analyzer series	Multiple Automation Multiple cobas® 8000 modular analyzer series
<ul style="list-style-type: none"> 2 vCPU (CPU Reservation required) 4 GB vRAM (Memory Reservation required to avoid swap file usage) 200 GB Virtual Disk 2x Virtual NICs Windows Server 2008 R2, SP2, 64 bit 	<ul style="list-style-type: none"> 2 vCPU (CPU Reservation required) 6 GB vRAM (Memory Reservation required to avoid swap file usage) 200 GB Virtual Disk 2x Virtual NICs Windows Server 2008 R2, SP2, 64 bit 	<ul style="list-style-type: none"> 3 vCPU (CPU Reservation required) 8 GB vRAM (Memory Reservation required to avoid swap file usage) 250 GB Virtual Disk 2x Virtual NICs Windows Server 2008 R2, SP2, 64 bit

*Additional connections, features, and workload could require increased vCPU and RAM

NOTE: Roche does not create Virtual Machine instances or images nor does Roche support issues found to be related to VM environments. Roche supports issues that either are known to occur on a non-virtualized server, or can be demonstrated not to be a result of running in a virtualized environment. All other issues are managed by the customer's internal IT team.