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On Site Server - Retail Stores

	Database Server				
Component/ Number of Users	1-10 Users	11-25 Users	26-50 Users	51-99 Users	100+ Users
Processor - Recommended	Intel® Xeon® ProcessorE5-1650v4 (15MB Cache, 3.60 GHz, 6 cores)	Intel® Xeon® Processor E5-2640 v4 (25MBCache,2.40 GHz, 10 Cores)	Intel® Xeon® ProcessorE5-2683v4 (40MB Cache,2.1 GHz, 16Cores)	Intel® Xeon® Processor E5-2698 v4(50MBCache,2.2 GHz, 20Cores)	Intel® Xeon® Processor E5-4669 v4 (55MBCache, 2.2 GHz, 22Cores)
Processor - Minimum	Intel® Xeon® ProcessorE5-1620 v4 (10MB Cache, 3.50 GHz, 4 cores)	Intel® Xeon® ProcessorE5-1650v4 (15MB Cache, 3.60 GHz, 6 cores)	Intel® Xeon® Processor E5-2640 v4 (25MBCache,2.40 GHz, 10 Cores)	Intel® Xeon® ProcessorE5-2683v4 (40MB Cache,2.1 GHz, 16Cores)	Intel® Xeon® Processor E5-2698 v4(50MBCache,2.2 GHz, 20Cores)
Memory / RAM - Recommended	16 GB	32 GB	64 GB	64 - 128 GB	128 - 160 GB
Memory / RAM - Minimum	8 GB	16 GB	32 GB	64 GB	128 GB
Disk Configuration			RAID 1 or RAID 5		
Hard Drive - Total Storage	-500GBSCSI15K RPM or SSD (Dedicated IPS Drive) -500GBSCSI15K RPM orSSD (Dedicated Backup Drive on NAS) (Should be capable of adding more storage and both drives should be separate aside from the Windows System Drive)	- 1TBSCSI15KRPM or SSD (Dedicated IPS Drive) - 500GBSCSI15K RPM orSSD (Dedicated Backup Drive on NAS) (Should be capable of adding more storage and both drives should be separate aside from the Windows System Drive)	- 2TBSCSI15KRPM or SSD (Dedicated IPS Drive) - 1TBSCSI15KRPM or SSD (Dedicated Backup Drive on NAS) (Should be capable of adding more storage and both drives should be separate aside from the Windows System Drive)	- 3TBSCSI15KRPM or SSD (Dedicated IPS Drive) - 1TBSCSI15KRPM or SSD (Dedicated Backup Drive on NAS) (Should be capable of adding more storage and both drives should be separate aside from the Windows System Drive)	- 4TBSCSI15KRPM or SSD (Dedicated IPS Drive) - 2TBSCSI15KRPM or SSD (Dedicated Backup Drive on NAS) (Should be capable of adding more storage and both drives should be separate aside from the Windows System Drive)



Operating System	Windows® Server 2012 and 2016				
Network Card / Ports (1000Mbps)	2 NIC, 1 port each	2 NIC, 1 port each	2 NIC, 2 ports each	2 NIC, 2 ports each	2 NIC, 2 ports each
Backup Solution - Onsite	At least 1TB NAS (Network-attached Storage) or External Hard Drive				
Backup Solution - Offsite	Pharmacy Safeguard or any HIPAA Compliant Offsite Backup Solution				
Internet Connectivity	Broadband or Fiber Internet connection required for online services.				
Notes	What should not be run on the database server? DNS server, Domain Controller, Router, File and/or print server, Terminal Services/Citrix Services. The Database Server cannot function as a Web Server. All clients using the Web Portal, mRx Mobile Patient Application, or Mobile Delivery Application must purchase a separate Web Server.				

Web Server

(For mRx and Mobile Delivery Apps only)

- A separate server is recommended. If the Database Server is above the minimum specifications, a VM (virtual machine) can be added as the webserver. Both Database Server and Web Server should have above minimum server specifications after virtualization.

Component	Minimum Specifications
Processor	Intel® Xeon® Processor E5-2640 v4 (25MB Cache, 2.40 GHz, 10 Cores)
Memory / RAM - Minimum	16 GB
Hard Drive - Total Storage	250 GB
Operating System	Windows® Server 2012 and 2016
Internet Connectivity	Broadband or Fiber Internet connection with static IP address required for online services.
Router (Ports)	Ports Forwarding is required for ports 443 (Web Portal), 4430 (Mobile Delivery), 4431 (mRx)
Network Card / Ports (1000Mbps)	2 NIC, 1 port each



	- IIS 7/8 or 10 should be added to server role.
Notes	- Static External IP Address is required and will be binded to domain name for the
	Web Portal.
	Domain name for the Web Portal is required. A subdomain can be used froman existing
	domain.
	- SSL Wildcard Certificate for the domain/subdomain will also be required.

Workstations	Workstations Desktop/Laptop/Tablet PC	High-Usage Workstations (Scanning and Front Desk, Triage)
Component	Minimum Specifications	Recommended Specifications
Processor	7thGenerationIntel®Core™i5-7500TProcessor (6MBCache, 2.70 GHz, 4 cores)	7th Generation Intel® Core™ i5-7600 K Processor (6MB Cache, 3.80 GHz, 4 cores)
Memory / RAM - Minimum	4 GB	8 GB
Hard Drive - Total Storage	120 GB	250 GB
Operating System	Windows 10 Professional	Windows 10 Professional
Network Card	100 Mbps	100 Mbps

Network Infrastructure					
Component	Minimum Specifications		Recommended Specifications		
Wired Network	100 Mbps Ethernet or higher		1000 Mbps Ethernet or higher		
	1-10 RemoteUsers	11-25 Remote Users	26-50 Remote Users	51-99 RemoteUsers	100+ RemoteUsers
Internet Connectivity	Broadband or Fiber Internet connection with at least 50 Mbps Download / 20 Mbps Upload Speed	Broadband or Fiber Internet connection with at least 50 Mbps Download / 20 Mbps Upload Speed	Broadband or Fiber Internet connection with at least 100 Mbps Download / 40 Mbps Upload Speed		Broadband or Fiber Internet connection with at least 1 GBPS Download / 250 Mbps Upload Speed



	Peripherals
Router	HL7 Interfaces may require a VPN Capable router to setup site to site VPN Tunnel.
Document Printer	PCL5 or higher compatible network printer (All-in-one devices can only be used for printing)
Label Printer	ZebraZT41042-T010000Z-NOCUTTER(forperforatedlabels), ZebraZT41042-T210000Z-WITHCUTTER(for continuous label), or Zebra GX430 Series
Document Scanner	FujitsuFI-6130, FujitsuFI-7160 or any of the FujitsuFI-Series, Brother ADS 2000 or any scanner with TWAIN compatible drivers. Network scanner not supported.
Barcode Scanner	Symbol/Zebra LS2208 or LS9203 and Honeywell MS Series
Receipt Printer	BixolonSRP350IISeries(USBTypewith Drawer Kickout Connector) or BixolonSRP350IIISeries (USBType with Drawer Kickout Connector)
Signature Pad	Topaz Systems TM-LBK755SE-HSB-R, TM-LBK755-HSB-R and TM-LBK766SE-HSB-R
Cash Drawer	MSCashDrawer CF-405 (must be receipt printer driven, check compatibility with Receipt Printer) or any Printer Driven Cash Drawer (check compatibility with Receipt Printer)
Magnetic Swipe Reader	Idtech IDRE-335133B
Weighting Scale	Ohaus Explorer EX1103N Balance Scale, Sartorius Quintix Series
Mobile Delivery Device	7"or10.1"TabletswithAndroidOS5orhigher(with3Gor4Gcapability)or10.1"AppleiPadwithiOS10or higher(with3Gor4Gcapability)
mRx	Android or iOS Smartphones
Supplementary Backup	NAS or a Network Shared Drive with at least 500GB diskspace and capable of adding more as the need arises. Storage size differs to the number of users connecting to DB and is mentioned on the first page under "Hard Drive Storage."



On Site Server - LTC Stores

	Database Server				
Component / Number Of Users	1-10 Users	11-25 Users	26-50 Users	51-99 Users	100+ Users
Processor -	Intel® Xeon® ProcessorE5-1650v4	Intel® Xeon® Processor E5-2640	Intel® Xeon® ProcessorE5-2683v4	Intel® Xeon® Processor E5-2698	Intel® Xeon® Processor E5-4669
Recommended	(15MB Cache, 3.60 GHz, 6 cores)	v4(25MBCache,2.40 GHz, 10 Cores)	(40MB Cache,2.1 GHz, 16Cores)	v4(50MBCache,2.2 GHz, 20Cores)	v4(55MBCache, 2.2 GHz, 22Cores)
Processor -	Intel® Xeon® ProcessorE5-1620v4	Intel® Xeon® ProcessorE5-1650v4	Intel® Xeon® Processor E5-2640	Intel® Xeon®	Intel® Xeon®
Minimum	(10MB Cache, 3.50 GHz, 4 cores)	(15MB Cache, 3.60 GHz, 6 cores)	v4(25MBCache,2.40 GHz, 10 Cores)	ProcessorE5-2683v4 (40MB Cache,2.1 GHz, 16Cores)	Processor E5-2698 v4(50MBCache,2.2 GHz, 20Cores)
Memory / RAM - Recommended	16 GB	32 GB	64 GB	64 - 128 GB	128 - 160 GB
Memory / RAM - Minimum	8 GB	16 GB	32 GB	64 GB	128 GB
Disk Configuration	RAID 1 or RAID 5				



Hard Drive - Total Storage	- 500GBSCSI15K RPM orSSD (Dedicated IPS Drive) - 500GBSCSI15K RPM orSSD (Dedicated Backup Drive on NAS) (Should be capable of adding more storage and both drives should be separate aside from the Windows System Drive)	- 1TBSCSI15KRPM or SSD (Dedicated IPS Drive) - 500GBSCSI15K RPM orSSD (Dedicated Backup Drive on NAS) (Should be capable of adding more storage and both drives should be separate aside from the Windows System Drive)	- 2TBSCSI15KRPM or SSD (Dedicated IPS Drive) - 1TBSCSI15KRPM or SSD (Dedicated Backup Drive on NAS) (Should be capable of adding more storage and both drives should be separate aside from the Windows System Drive)	- 3TBSCSI15KRPM or SSD (Dedicated IPS Drive) - 1TBSCSI15KRPM or SSD (Dedicated Backup Drive on NAS) (Should be capable of adding more storage and both drives should be separate aside from the Windows System Drive)	- 4TBSCSI15KRPM or SSD (Dedicated IPS Drive) - 2TBSCSI15KRPM or SSD (Dedicated Backup Drive on NAS) (Should be capable of adding more storage and both drives should be separate aside from the Windows System Drive)
Operating System		Windows® Server 2012 and 2016			
Network Card / Ports (1000Mbps)	2 NIC, 1 port each	2 NIC, 1 port each	2 NIC, 2 ports each	2 NIC, 2 ports each	2 NIC, 2 ports each
Backup Solution - Onsite	At least 1TB NAS (Netw	At least 1TB NAS (Network-attached Storage) or External Hard Drive			
Backup Solution - Offsite	Pharmacy Safeguard or any HIPAA Compliant Offsite Backup Solution				
Internet Connectivity	Broadband or Fiber Internet connection required for online services.				
Notes	What should not be run on the database server? DNS server, Domain Controller, Router, File and/or print server, Terminal Services/Citrix Services. The Database Server cannot function as a Web Server. All clients using the Web Portal, mRx Mobile Patient Application, or Mobile Delivery Application must purchase a separate Web Server.				



Web Server / Pharmacy Portal

- All clients using the Web Portal must purchase a separate Web Server. The Database Server cannot function as a Web Server.
- For clients using mRx or Mobile Delivery (No Web Portal), a separate server is recommended. If the Database Server is above the minimum specifications, a VM (virtual machine) can be added as the webserver. Both Database Server and Web Server should have above minimum server specifications after virtualization.

Component	Minimum Specifications	Recommended Specifications	
Processor	Intel®Xeon®ProcessorE5-2640v4(25MBCache, 2.40 GHz, 10 Cores)	Intel®Xeon®ProcessorE5-2683v4(40MBCache, 2.1 GHz, 16 Cores)	
Memory / RAM - Minimum	16 GB	32 GB	
Hard Drive - Total Storage	250 GB	500 GB	
Operating System	Windows® Server 2012 and 2016	Windows® Server 2012 and 2016	
Internet Connectivity	BroadbandInternetconnectionwithstaticIP address required for online services.	BroadbandInternetconnectionwithstaticIP addressrequired for online services.	
Router (Ports)	Ports Forwarding is required for ports 443 (Web Portal)), 4430 (Mobile Delivery), 4431 (mRx)	
Network Card / Ports (1000Mbps)	2 NIC, 1 port each	2 NIC, 1 port each	
Notes	 - IIS 7/8 should be added to server role. - Static External IP Address is required and will be binded to domain name for the Web Portal. - Domain name for the Web Portal is required. A subdomain can be used from an existing domain. - SSL Wildcard Certificate for the domain/subdomain will also be required. 		

Workstations	Workstations Desktop/Laptop/Tablet PC	High-Usage Workstations (Scanning and Front Desk, Triage)
Component	Minimum Specifications	Recommended Specifications
LProcessor		7thGenerationIntel®Core™ i5-7600KProcessor (6MBCache, 3.80 GHz, 4 cores)



Memory / RAM - Minimum	8 GB	16 GB
Hard Drive - Total Storage	120 GB	250 GB
Operating System	Windows 10 Professional	Windows 10 Professional
Network Card	100 Mbps	100 Mbps

Network Infrastructure					
Component	Minimum Specifications		Rec	ommended Specificat	tions
Wired Network	100 Mbps Ethernet or higher		1000 Mbps Ethernet or higher		
	1-10 RemoteUsers	11-25 Remote Users	26-50 Remote Users	51-99 RemoteUsers	100+ RemoteUsers
Internet Connectivity	Broadband or Fiber Internet connection with at least 50 Mbps Download / 20 Mbps Upload Speed	Broadband or Fiber Internet connection with at least 50 Mbps Download / 20 Mbps Upload Speed	Broadband or Fiber Internet connection with at least 100 Mbps Download / 40 Mbps Upload Speed	Broadband or Fiber Internet connection with at least 250 Mbps Download / 100 Mbps Upload Speed	Broadband or Fiber Internet connection with at least 1 GBPS Download / 250 Mbps Upload Speed

	Peripherals Peripherals
Router	HL7 Interfaces may require a VPN Capable router to setup site to site VPN Tunnel.
Document Printer	PCL5 or higher compatible network printer (All-in-one devices can only be used for printing)
Label Printer	ZebraZT41042-T010000Z-NOCUTTER(forperforatedlabels), ZebraZT41042-T210000Z-WITHCUTTER(for continuous label), or Zebra GX430 Series
Document Scanner	Fujitsu FI-6130, Fujitsu FI-7160 or any of the Fujitsu FI-Series, Brother ADS 2000 or any scanner with TWAIN compatible drivers. Network scanner not supported.
Barcode Scanner	Symbol/Zebra LS2208 or LS9203 and Honeywell MS Series
Weighting Scale	Ohaus Explorer EX1103N Balance Scale, Sartorius Quintix Series



Mobile Delivery Device	7" or 10.1" Tablets with Android OS5 or higher (with 3G or 4G capability) or 10.1" Applei Pad with iOS10 or higher (with 3G or 4G capability)
mRx	Android or iOS Smartphones
Supplementary Backup	NAS or a Network Shared Drive with at least 500GB diskspace and capable of adding more as the need arises. Storage size differs to the number of users connecting to DB and is mentioned on the first page under "Hard Drive Storage."

On Site Server - Combo Stores

	Database Server				
Component / Number Of Users	1-10 Users	11-25 Users	26-50 Users	51-99 Users	100+ Users
Processor - Recommended	Intel® Xeon® ProcessorE5-1650v4 (15MB Cache, 3.60 GHz, 6 cores)	Intel® Xeon® Processor E5-2640 v4 (25MBCache,2.40 GHz, 10 Cores)	Intel® Xeon® ProcessorE5-2683v4 (40MB Cache,2.1 GHz, 16Cores)	Intel® Xeon® Processor E5-2698 v4(50MBCache,2.2 GHz, 20Cores)	Intel® Xeon® Processor E5-4669 v4 (55MBCache, 2.2 GHz, 22Cores)
Processor - Minimum	Intel® Xeon® ProcessorE5-1620 v4 (10MB Cache, 3.50 GHz, 4 cores)	Intel® Xeon® ProcessorE5-1650v4 (15MB Cache, 3.60 GHz, 6 cores)	Intel® Xeon® Processor E5-2640 v4 (25MBCache,2.40 GHz, 10 Cores)	Intel® Xeon® ProcessorE5-2683v4 (40MB Cache,2.1 GHz, 16Cores)	Intel® Xeon® Processor E5-2698 v4(50MBCache,2.2 GHz, 20Cores)
Memory / RAM - Recommended	16 GB	32 GB	64 GB	64 - 128 GB	128 - 160 GB
Memory / RAM - Minimum	8 GB	16 GB	32 GB	64 GB	128 GB
Disk Configuration	RAID 1 or RAID 5				



Hard Drive - Total Storage	- 500GBSCSI15K RPM orSSD (Dedicated IPS Drive) - 500GBSCSI15K RPM orSSD (Dedicated Backup Drive on NAS) (Should be capable of adding more storage and both drives should be separate aside from the Windows System Drive)	- 1TBSCSI15KRPM or SSD (Dedicated IPS Drive) - 500GBSCSI15K RPM orSSD (Dedicated Backup Drive on NAS) (Should be capable of adding more storage and both drives should be separate aside from the Windows System Drive)	- 2TBSCSI15KRPM or SSD (Dedicated IPS Drive) - 1TBSCSI15KRPM or SSD (Dedicated Backup Drive on NAS) (Should be capable of adding more storage and both drives should be separate aside from the Windows System Drive)	- 3TBSCSI15KRPM or SSD (Dedicated IPS Drive) - 1TBSCSI15KRPM or SSD (Dedicated Backup Drive on NAS) (Should be capable of adding more storage and both drives should be separate aside from the Windows System Drive)	- 4TBSCSI15KRPM or SSD (Dedicated IPS Drive) - 2TBSCSI15KRPM or SSD (Dedicated Backup Drive on NAS) (Should be capable of adding more storage and both drives should be separate aside from the Windows System Drive)
Operating System	Windows® Server 2012 and 2016				
Network Card / Ports (1000Mbps)	2 NIC, 1 port each	2 NIC, 1 port each	2 NIC, 2 ports each	2 NIC, 2 ports each	2 NIC, 2 ports each
Backup Solution - Onsite	At least 1TB NAS (Netwo	At least 1TB NAS (Network-attached Storage) or External Hard Drive			
Backup Solution - Offsite	Pharmacy Safeguard or any HIPAA Compliant Offsite Backup Solution				
Internet Connectivity	Broadband or Fiber Internet connection required for online services.				
Notes	What should not be run on the database server? DNS server, Domain Controller, Router, File and/or print server, Terminal Services/Citrix Services. The Database Server cannot function as a Web Server. All clients using the Web Portal, mRx Mobile Patient Application, or Mobile Delivery Application must purchase a separate Web Server.				





Web Server / Pharmacy Portal

- All clients using the Web Portal must purchase a separate Web Server. The Database Server cannot function as a Web Server.
- For clients using mRx or Mobile Delivery (No Web Portal), a separate server is recommended. If the Database Server is above the minimum specifications, a VM (virtual machine) can be added as the webserver. Both Database Server and Web Server should have above minimum server specifications after virtualization.

Component	Minimum Specifications	Recommended Specifications	
Processor	Intel®Xeon®ProcessorE5-2640v4(25MBCache, 2.40 GHz, 10 Cores)	Intel®Xeon®ProcessorE5-2683v4(40MCache,2.1 GHz, 16Cores)	
Memory / RAM - Minimum	16 GB	32 GB	
Hard Drive - Total Storage	250 GB	500 GB	
Operating System	Windows® Server 2012 and 2016	Windows® Server 2012 and 2016	
Internet Connectivity	BroadbandorFiberInternetconnectionwith staticIPaddressrequiredforonlineservices.	BroadbandorFiberInternetconnectionwithstatic IP address required for online services.	
Router (Ports)	Ports Forwarding is required for ports 443 (Web Portal)	, 4430 (Mobile Delivery), 4431 (mRx)	
Network Card / Ports (1000Mbps)	2 NIC, 1 port each	2 NIC, 1 port each	
Notes	 IIS 7/8 should be added to server role. Static External IP Address is required and will be binded to domain name for the Web Portal. Domain name for the Web Portal is required. A subdomain can be used from an existing domain. SSL Wildcard Certificate for the domain/subdomain will also be required. 		

Workstations	Workstations Desktop/Laptop/Tablet PC	High-Usage Workstations (Scanning and Front Desk, Triage)	
Component Minimum Specifications		Recommended Specifications	
Processor	7thGenerationIntel®Core™i5-7500TProcessor (6MBCache, 2.70 GHz, 4 cores)	7th Generation Intel® Core™ i5-7600 K Processor (6MB Cache, 3.80 GHz, 4 cores)	
Memory / RAM - Minimum	8 GB	16 GB	



Hard Drive - Total Storage	120 GB	250 GB
Operating System	Windows 10 Professional	Windows 10 Professional
Network Card	100 Mbps	100 Mbps

	Network Infrastructure				
Component	Minimum Specifications		Recommended Specifications		
Wired Network	100 Mbps Ethernet or higher		1000 Mbps Ethernet or higher		
	1-10 RemoteUsers	11-25 Remote Users	26-50 Remote Users	51-99 RemoteUsers	100+ RemoteUsers
Internet Connectivity	Broadband or Fiber Internet connection with at least 50 Mbps Download / 20 Mbps Upload Speed	Internet connection with at least 50 Mbps	Broadband or Fiber Internet connection with at least 100 Mbps Download / 40 Mbps Upload Speed	Broadband or Fiber Internet connection with at least 250 Mbps Download / 100 Mbps Upload Speed	Broadband or Fiber Internet connection with at least 1 GBPS Download / 250 Mbps Upload Speed

	Peripherals Peripherals
Router	HL7 Interfaces may require a VPN Capable router to setup site to site VPN Tunnel.
Document Printer	PCL5 or higher compatible network printer (All-in-one devices can only be used for printing)
Label Printer	ZebraZT41042-T010000Z-NOCUTTER(forperforated labels), ZebraZT41042-T210000Z-WITHCUTTER(for continuous label), or Zebra GX430 Series
Document Scanner	Fujitsu FI-6130, Fujitsu FI-7160 or any of the Fujitsu FI-Series, Brother ADS 2000 or any scanner with TWAIN compatible drivers. Network scanner not supported.
Barcode Scanner	Symbol/Zebra LS2208 or LS9203 and Honeywell MS Series
Receipt Printer	Bixolon SRP 350 II Series (USBType with Drawer Kickout Connector) or Bixolon SRP 350 III Series (USBType with Drawer Kickout Connector)
Signature Pad	Topaz Systems TM-LBK755SE-HSB-R, TM-LBK755-HSB-R and TM-LBK766SE-HSB-R



Cash Drawer	MSCashDrawer CF-405 (must be receipt printer driven, check compatibility with Receipt Printer) or any Printer Driven Cash Drawer (check compatibility with Receipt Printer)
Magnetic Swipe Reader	ldtech IDRE-335133B
Weighting Scale	Ohaus Explorer EX1103N Balance Scale, Sartorius Quintix Series
Mobile Delivery Device	7"or10.1"Tablets with Android OS5 or higher (with 3Gor 4G capability) or 10.1"AppleiPad with iOS10 or higher (with 3Gor 4G capability)
mRx	Android or iOS Smartphones
Supplementary Backup	NAS or a Network Shared Drive with at least 500GB diskspace and capable of adding more as the need arises. Storage size differs to the number of users connecting to DB and is mentioned on the first page under "Hard Drive Storage."

Host Based System – Retail Stores

	Database Server					
Component / NumberOfUsers	1-10 Users	11-25 Users	26-50 Users	51-99 Users	100+ Users	
Processor - Recommended	Intel® Xeon® Processor E5-1650 v4(15MBCache, 3.60 GHz, 6 cores)	Intel® Xeon® Processor E5-2640 v4 (25MBCache, 2.40 GHz, 10 Cores)	Intel® Xeon® Processor E5-2683 v4 (40MB Cache,2.1 GHz, 16Cores)	Intel® Xeon® Processor E5-2698 v4(50MBCache,2.2 GHz, 20Cores)	Intel® Xeon® Processor E5-4669 v4 (55MBCache, 2.2 GHz, 22Cores)	
Processor - Minimum	Intel® Xeon® Processor E5-1620	Intel® Xeon® ProcessorE5-1650v4	Intel® Xeon® Processor E5-2640	Intel® Xeon® Processor E5-2683	Intel® Xeon® Processor E5-2698	
	v4(10MBCache,3.50 GHz, 4 cores)	(15MB Cache, 3.60 GHz, 6 cores)	l '	v4(40MBCache,2.1 GHz, 16Cores)	v4(50MBCache,2.2 GHz, 20Cores)	
Memory / RAM - Recommended	16 GB	32 GB	64 GB	64 - 128 GB	128 - 160 GB	
Memory / RAM - Minimum	8 GB	16 GB	32 GB	64 GB	128 GB	



Disk Configuration	RAID 1 or RAID 5					
Hard Drive - Total Storage	500GBSCSI15K RPM orSSD (Dedicated IPS Drive)	1TBSCSI15KRPMor SSD (Dedicated IPS Drive)	2TBSCSI15KRPMor SSD (Dedicated IPS Drive)	3 TB SCSI 15K RPM or SSD (Dedicated IPS Drive)	4 TB SCSI 15K RPM or SSD (Dedicated IPS Drive)	
Operating System	Windows® Server 20	012 and 2016				
Network Card / Ports(1000Mbps)	2 NIC, 1 port each	2 NIC, 1 port each	2 NIC, 2 ports each	2 NIC, 2 ports each	2 NIC, 2 ports each	
Backup Solution - Onsite	At least 1TB NAS (Network-attached Storage) or External Hard Drive					
Backup Solution - Offsite	Pharmacy Safeguard or any HIPAA Compliant Offsite Backup Solution					
Internet Connectivity	Broadband or Fiber Internet connection required for online services.					
Notes	What should not be run on the database server? DNS server, Domain Controller, Router, File and/or print server, Terminal Services/Citrix Services.					

Terminal Server					
Component	Minimum Specifications Recommended Specifications				
Processor	Intel®Xeon®ProcessorE5-2640v4(25MB Cache, 2.40 GHz, 10 Cores)	Intel®Xeon®ProcessorE5-2683v4(40MBCache,2.1GHz,16Cores)			
Memory / RAM - Minimum	16 GB	32 GB			
Hard Drive - Total Storage	250 GB	500 GB			
Operating System	Windows® Server 2012	Windows® Server 2012			
Network Card / Ports (1000Mbps)		2 NIC, 1 port each			



	1-10 RemoteUsers	11-25 Remote Users	26-50 Remote Users	51-99 RemoteUsers	100+ RemoteUsers
Internet Connectivity	Broadband or Fiber Internet connection with at least 50 Mbps Download / 20 Mbps Upload Speed	Broadband or Fiber Internet connection with at least 50 Mbps Download / 20 Mbps Upload Speed	Internet connection with at least 100 Mbps Download / 40 Mbps	Internet connection with at least 250 Mbps Download / 100 Mbps	Broadband or Fiber Internet connection with at least 1 GBPS Download / 250 Mbps Upload Speed
Notes	8 RDP Users per Terminal Server				

Web Server

(For mRx and Mobile Delivery Apps only)

- A separate server is recommended. If the Database Server is above the minimum specifications, a VM (virtual machine) can be added as the webserver. Both Database Server and Web Server should have above minimum server specifications after virtualization.

Component	Minimum Specifications
Processor	Intel® Xeon® Processor E5-2640 v4 (25MB Cache, 2.40 GHz, 10 Cores)
Memory / RAM - Minimum	16 GB
Hard Drive - Total Storage	250 GB
Operating System	Windows® Server 2012 and 2016
Internet Connectivity	BroadbandorFiberInternetconnectionwithstaticIPaddressrequiredforonlineservices.
Router (Ports)	Ports Forwarding is required for ports 443 (Web Portal), 4430 (Mobile Delivery), 4431 (mRx)
Network Card / Ports (1000Mbps)	2 NIC, 1 port each
Notes	 IIS 7/8 should be added to server role. Static External IP Address is required and will be binded to domain name for the Web Portal. Domain name for the Web Portal is required. A subdomain can be used from an existing domain. SSL Wildcard Certificate for the domain/subdomain will also be required.



Workstations Desktop/Laptop/Tablet PC		High-Usage Workstations (Scanning and Front Desk, Triage)	
Component	Minimum Specifications	Recommended Specifications	
Processor	7thGenerationIntel®Core™i5-7500TProcessor (6MBCache, 2.70 GHz, 4 cores)	7th Generation Intel® Core™ i5-7600 K Processor (6MB Cache, 3.80 GHz, 4 cores)	
Memory / RAM - Minimum	4 GB	8 GB	
Hard Drive - Total Storage	120 GB	250 GB	
Operating System	Windows 10 Professional	Windows 10 Professional	
Network Card	100 Mbps	100 Mbps	

	Network Infrastructure						
Component	Minimum Specificat	ions	Recommended Specifications				
Wired Network	100 Mbps Ethernet or I	nigher	1000 Mbps Ethernet or higher				
	1-10 RemoteUsers	11-25 Remote Users	26-50 Remote Users	51-99 RemoteUsers	100+ RemoteUsers		
Internet Connectivity	Broadband or Fiber Internet connection with at least 50 Mbps Download /20 Mbps Upload Speed	Internet connection with at least 50 Mbps		Broadband or Fiber Internet connection with at least 250 MbpsDownload/100 Mbps UploadSpeed	Broadband or Fiber Internet connection with at least 1 GBPS Download /250 Mbps Upload Speed		
Notes	8 RDP Users per Terminal Server						

	Peripherals Peripheral Periph
Router	VPN Enabled Router (e.g. Sonicwall TZ100l)
	AVPNTunnelSetupfromtheHostingProvidertothePharmacyisrequired.ThePharmacyITResource(who is experiencedinSitetoSiteVPNSetup)willworkwiththeHostingProvidertosetthisupforthepharmacy.



Document Printer	All printing will be tunneled through the VPN. A network printer is required with at least PCL5 compatibility. All-in-one devices should not be used for scanning but for printing only.					
	Host-based printers will not work for Citrix/Terminal Server Environment.					
Label Printer	All printing will be tunneled through the VPN. Zebra ZT41042-T010000Z - NO CUTTER (for perforated labels), Zebra ZT41042-T210000Z - WITH CUTTER (for continuous label), or Zebra GX430 Series					
	All labels printers must be networked.					
Document Scanner	Fujitsu FI-6130, Brother ADS 2000 or any scanner with TWAIN compatible drivers. Network scanners are not supported. Unlimited TSScan license is needed.					
Barcode Scanner	Symbol/Zebra LS2208 or LS9203 and Honeywell MS Series					
Receipt Printer	Bixolon SRP 350 II Series (USB Type with Drawer Kickout Connector) or Bixolon SRP 350 III Series (USB Type with Drawer Kickout Connector)					
Signature Pad	Topaz Systems T-LBK755SE-BBSB-R OR T-LBK755-BBSB-R					
Magnetic Swipe Reader	Idtech IDRE-335133B Credit Card Swiper					
Cash Drawer	MSCashDrawer CF-405 (must be receipt printer driven, check compatibility with Receipt Printer) or any Printer Driven Cash Drawer (check compatibility with Receipt Printer)					
Weighting Scale	Ohaus Explorer EX1103N Balance Scale, Sartorius Quintix Series					
Mobile Delivery Device	7" or 10.1" Tablets with Android OS5 or higher (with 3G or 4G capability) or 10.1" Apple i Pad with i OS10 or higher (with 3G or 4G capability)					
mRx	Android or iOS Smartphones					



Host Based System – LTC Stores

	Database Server					
Component / NumberOfUsers	1-10 Users	11-25 Users	26-50 Users	51-99 Users	100+ Users	
Processor - Recommended	Intel® Xeon® Processor E5-1650 v4 (15MB Cache, 3.60 GHz, 6 cores)	Intel® Xeon® Processor E5-2640 v4 (25MBCache, 2.40 GHz, 10 Cores)	Intel® Xeon® Processor E5-2683 v4(40M Cache,2.1 GHz, 16 Cores)	Intel® Xeon® Processor E5-2698 v4 (50MBCache,2.2 GHz, 20Cores)	Intel® Xeon® Processor E5-4669 v4 (55MBCache, 2.2 GHz, 22Cores)	
Processor - Minimum	Intel® Xeon® Processor E5-1620 v4 (10MBCache, 3.50 GHz, 4 cores)	Intel® Xeon® ProcessorE5-1650v4 (15MB Cache, 3.60 GHz, 6 cores)	Intel® Xeon® Processor E5-2640 v4 (25MBCache, 2.40 GHz, 10 Cores)	Intel® Xeon® Processor E5-2683 v4 (40MBCache,2.1 GHz, 16Cores)	Intel® Xeon® Processor E5-2698 v4 (50MBCache, 2.2 GHz, 20Cores)	
Memory / RAM - Recommended	16 GB	32 GB	64 GB	64 - 128 GB	128 - 160 GB	
Memory / RAM - Minimum	8 GB	16 GB	32 GB	64 GB	128 GB	
Disk Configuration			RAID 1 or RAID 5			
Hard Drive - Total Storage	500GBSCSI15K RPM orSSD (Dedicated IPS Drive)	1TBSCSI15KRPMor SSD (Dedicated IPS Drive)	2TBSCSI15KRPMor SSD (Dedicated IPS Drive)	3 TB SCSI 15K RPM or SSD (Dedicated IPS Drive)	4 TB SCSI 15K RPM or SSD (Dedicated IPS Drive)	
Operating System	Windows® Server 2012	, and 2016			-	
Network Card / Ports(1000Mbps)	2 NIC, 1 port each	2 NIC, 1 port each	2 NIC, 2 ports each	2 NIC, 2 ports each	2 NIC, 2 ports each	
Backup Solution - Onsite	At least 1TB NAS (Network-attached Storage) or External Hard Drive					
Backup Solution - Offsite	Pharmacy Safeguard or any HIPAA Compliant Offsite Backup Solution					
Internet Connectivity	Broadband or Fiber Internet connection required for online services.					



Notes	What should not be run on the database server?
Notes	DNS server, Domain Controller, Router, File and/or print server, Terminal Services/Citrix Services.

	Terminal Server					
Component	Minimum S	pecifications	Recommended Specifications			
Processor	Intel®Xeon®ProcessorE5-2640v4(25MB Cache, 2.40 GHz, 10 Cores)		Intel®Xeon®ProcessorE5-2683v4(40MBCache,2.1GHz,16Cores)			
Memory / RAM - Minimum	16 GB		32 GB			
Hard Drive - Total Storage	250 GB		500 GB			
Operating System	Windows® Server 2012		Windows® Server 2012			
Network Card / Ports (1000Mbps)	2 NIC, 1 port each					
	1-10 RemoteUsers	11-25 Remote Users	26-50 Remote Users	51-99 RemoteUsers	100+ RemoteUsers	
Internet Connectivity	Broadband or Fiber Internet connection with at least 50 Mbps Download / 20 Mbps Upload Speed	Broadband or Fiber Internet connection with at least 50 Mbps Download / 20 Mbps Upload Speed	Broadband or Fiber Internet connection with at least 100 Mbps Download / 40 Mbps Upload Speed	Broadband or Fiber Internet connection with at least 250 Mbps Download / 100 Mbps Upload Speed	Broadband or Fiber Internet connection with at least 1 GBPS Download / 250 Mbps Upload Speed	
Notes	8 RDP Users per Terminal Server					





Web Server / Pharmacy Portal

- All clients using the Web Portal must purchase a separate Web Server. The Database Server cannot function as a Web Server.
- For clients using mRx or Mobile Delivery (No Web Portal), a separate server is recommended. If the Database Server is above the minimum specifications, a VM (virtual machine) can be added as the webserver. Both Database Server and Web Server should have above minimum server specifications after virtualization.

Component	Minimum Specifications	Recommended Specifications	
Processor	Intel®Xeon®ProcessorE5-2640v4(25MBCache, 2.40 GHz, 10 Cores)	Intel®Xeon®ProcessorE5-2683v4(40MBCache, 2.1 GHz, 16 Cores)	
Memory / RAM - Minimum	16 GB	32 GB	
Hard Drive - Total Storage	250 GB	500 GB	
Operating System	Windows® Server 2012 and 2016	Windows® Server 2012 and 2016	
Internet Connectivity	BroadbandInternetconnectionwithstaticIP address required for online services.	BroadbandInternetconnectionwithstaticIP address required for online services.	
Router (Ports)	Ports Forwarding is required for ports 443 (Web Portal), 4430 (Mobile Delivery), 4431 (mRx)		
Network Card / Ports (1000Mbps)	2 NIC, 1 port each	2 NIC, 1 port each	
Notes	 IIS 7/8 should be added to server role. Static External IP Address is required and will be Domain name for the Web Portal is required. A st domain. SSL Wildcard Certificate for the domain/subdor 	ubdomain can be used from anexisting	

Workstations	Workstations Desktop/Laptop/TabletPC	High-Usage Workstations (Scanning and Front Desk, Triage)
Component	Minimum Specifications	Recommended Specifications
Processor	7thGenerationIntel®Core™i5-7500TProcessor (6MB Cache, 2.70 GHz, 4 cores)	7thGenerationIntel®Core™i5-7600KProcessor (6MB Cache, 3.80 GHz, 4 cores)



Memory / RAM - Minimum	8 GB	16 GB
Hard Drive - Total Storage	120 GB	250 GB
Operating System	Windows 10 Professional	Windows 10 Professional
Network Card	100 Mbps	100 Mbps

	Network Infrastructure				
Component	Minimum Specifications		Rec	ommended Specification	ons
Wired Network	100 Mbps Ethernet or higher		1000 Mbps Ethernet or	igher	
	1-10 Remote Users	11-25 Remote Users	26-50 Remote Users	51-99 Remote Users	100+ Remote Users
Internet Connectivity	Internet connection with at least 50 Mbps		·	Broadband or Fiber Internet connection with at least 250 Mbps Download/100 Mbps UploadSpeed	Broadband or Fiber Internet connection with at least 1 GBPS Download /250 Mbps Upload Speed
Notes	8 RDP Users per Terminal Server				

	Peripherals Periph
	VPN Enabled Router (e.g. Sonicwall TZ100I)
Router	AVPNTunnelSetupfromtheHostingProvidertothePharmacyisrequired.ThePharmacyITResource(whois experienced in SitetoSiteVPNSetup)willworkwiththeHostingProvidertosetthisupforthepharmacy.
Document Printer	All printing will be tunneled through the VPN. A network printer is required with at least PCL5 compatibility. All-in-one devices should not be used for scanning but for printing only.
	Host-based printers will not work for Citrix/Terminal Server Environment.



Label Printer	All printing will be tunneled through the VPN. Zebra ZT41042-T010000Z - NOCUTTER (for perforated labels), Zebra ZT41042-T210000Z - WITHCUTTER (for continuous label), or Zebra GX430 Series
	All labels printers must be networked.
Document Scanner	Fujitsu FI-6130, Brother ADS 2000 or any scanner with TWAIN compatible drivers. Network scanners are not supported. Unlimited TSScan license is needed.
Barcode Scanner	Symbol/Zebra LS2208 or LS9203 and Honeywell MS Series
Weighting Scale	Ohaus Explorer EX1103N Balance Scale, Sartorius Quintix Series
Mobile Delivery Device	7"or10.1"TabletswithAndroidOS5orhigher(with3Gor4Gcapability)or10.1"AppleiPadwithiOS10orhigher (with3Gor4Gcapability)
mRx	Android or iOS Smartphones

Host Based System – Combo Stores

Database Server					
Component / NumberOfUsers	1-10 Users	11-25 Users	26-50 Users	51-99 Users	100+ Users
Processor - Recommended	Intel® Xeon® Processor E5-1650 v4 (15MB Cache, 3.60 GHz, 6 cores)	Intel® Xeon® Processor E5-2640 v4 (25MBCache, 2.40 GHz, 10 Cores)	Intel® Xeon® Processor E5-2683 v4(40M Cache,2.1 GHz, 16 Cores)	Intel® Xeon® Processor E5-2698 v4 (50MBCache,2.2 GHz, 20Cores)	Intel® Xeon® Processor E5-4669 v4 (55MBCache, 2.2 GHz, 22Cores)
Processor - Minimum	Intel® Xeon® Processor E5-1620 v4 (10MBCache, 3.50 GHz, 4 cores)	Intel® Xeon® ProcessorE5-1650v4 (15MB Cache, 3.60 GHz, 6 cores)	Intel® Xeon® Processor E5-2640 v4 (25MBCache, 2.40 GHz, 10 Cores)	Intel® Xeon® Processor E5-2683 v4 (40MBCache,2.1 GHz, 16Cores)	Intel® Xeon® Processor E5-2698 v4 (50MBCache,2.2 GHz, 20Cores)
Memory / RAM - Recommended	16 GB	32 GB	64 GB	64 - 128 GB	128 - 160 GB



Memory / RAM - Minimum	8 GB	16 GB	32 GB	64 GB	128 GB
Disk Configuration			RAID 1 or RAID 5		
Hard Drive - Total Storage	500GBSCSI15K RPM orSSD (Dedicated IPS Drive)	1TBSCSI15KRPMor SSD (Dedicated IPS Drive)	2TBSCSI15KRPMor SSD (Dedicated IPS Drive)	3 TB SCSI 15K RPM or SSD (Dedicated IPS Drive)	4 TB SCSI 15K RPM or SSD (Dedicated IPS Drive)
Operating System	Windows® Server 2012	Windows® Server 2012, and 2016			
Network Card / Ports(1000Mbps)	2 NIC, 1 port each	2 NIC, 1 port each	2 NIC, 2 ports each	2 NIC, 2 ports each	2 NIC, 2 ports each
Backup Solution - Onsite	At least 1TB NAS (Network-attached Storage) or External Hard Drive				
Backup Solution - Offsite	Pharmacy Safeguard or any HIPAA Compliant Offsite Backup Solution				
Internet Connectivity	Broadband or Fiber Internet connection required for online services.				
Notes	What should not be run on the database server? DNS server, Domain Controller, Router, File and/or print server, Terminal Services/Citrix Services.				

Terminal Server		
Component	Minimum Specifications	Recommended Specifications
Processor	Intel®Xeon®ProcessorE5-2640v4(25MB Cache, 2.40 GHz, 10 Cores)	Intel®Xeon®ProcessorE5-2683v4(40MBCache,2.1GHz,16Cores)
Memory / RAM - Minimum	16 GB	32 GB
Hard Drive - Total Storage	250 GB	500 GB
Operating System	Windows® Server 2012	Windows® Server 2012



Network Card / Ports (1000Mbps)	2 NIC, 1 port each				
	1-10 Remote Users	11-25 Remote Users	26-50 Remote Users	51-99 Remote Users	100+ Remote Users
Internet Connectivity	Broadband or Fiber Internet connection with at least 50 Mbps Download / 20 Mbps Upload Speed	Broadband or Fiber Internet connection with at least 50 Mbps Download / 20 Mbps Upload Speed	Broadband or Fiber Internet connection with at least 100 Mbps Download / 40 Mbps Upload Speed	Broadband or Fiber Internet connection with at least 250 Mbps Download / 100 Mbps Upload Speed	Broadband or Fiber Internet connection with at least 1 GBPS Download / 250 Mbps Upload Speed
Notes		8 RC	P Users per Terminal S	erver	

Web Server / Pharmacy Portal

- All clients using the Web Portal must purchase a separate Web Server. The Database Server cannot function as a Web Server.
- For clients using mRx or Mobile Delivery (No Web Portal), a separate server is recommended. If the Database Server is above the minimum specifications, a VM (virtual machine) can be added as the webserver. Both Database Server and Web Server should have above minimum server specifications after virtualization.

Component	Minimum Specifications	Recommended Specifications	
Processor	Intel®Xeon®ProcessorE5-2640v4(25MBCache, 2.40 GHz, 10 Cores)	Intel®Xeon®ProcessorE5-2683v4(40MBCache, 2.1 GHz, 16 Cores)	
Memory / RAM - Minimum	16 GB	32 GB	
Hard Drive - Total Storage	250 GB	500 GB	
Operating System	Windows® Server 2012 and 2016	Windows® Server 2012 and 2016	
Internet Connectivity	BroadbandInternetconnectionwithstaticIP BroadbandInternetconnectionwithstaticI address required for online services.		
Router (Ports)	Ports Forwarding is required for ports 443 (Web Portal), 4430 (Mobile Delivery), 4431 (mRx)		
Network Card / Ports (1000Mbps)	2 NIC, 1 port each	2 NIC, 1 port each	



Notes	 IIS 7/8 should be added to server role. Static External IP Address is required and will be binded to domain name for the Web Portal. Domain name for the Web Portal is required. A subdomain can be used from an existing
	domain SSL Wildcard Certificate for the domain/subdomain will also be required.

Workstations	Workstations High-Usage Workstations Desktop/Laptop/Tablet PC (Scanning and Front Desk, Triage)	
Component	Minimum Specifications Recommended Specifications	
Processor	7thGenerationIntel®Core™i5-7500TProcessor (6MB Cache, 2.70 GHz, 4 cores)	7thGenerationIntel®Core™i5-7600KProcessor (6MB Cache, 3.80 GHz, 4 cores)
Memory / RAM - Minimum	8 GB	16 GB
Hard Drive - Total Storage	120 GB	250 GB
Operating System	Windows 10 Professional	Windows 10 Professional
Network Card	100 Mbps	100 Mbps

Network Infrastructure						
Component	Minimum Specifications		Recommended Specifications			
Wired Network	100 Mbps Ethernet or higher		1000 Mbps Ethernet or higher			
	1-10 Remote Users	11-25 Remote Users	26-50 Remote Users	51-99 Remote Users	100+ Remote Users	
Internet Connectivity	Internet connection with at least 50 Mbps			Broadband or Fiber Internet connection with at least 250 Mbps Download/100 Mbps UploadSpeed	Broadband or Fiber Internet connection with at least 1 GBPS Download /250 Mbps Upload Speed	
Notes	8 RDP Users per Terminal Server					



	Peripherals	
	VPN Enabled Router (e.g. Sonicwall TZ100l)	
Router	AVPNTunnelSetupfromtheHostingProvidertothePharmacyisrequired.ThePharmacyITResource(who isexperienced inSitetoSiteVPNSetup)willworkwiththeHostingProvidertosetthisupforthepharmacy.	
Document Printer	All printing will be tunneled through the VPN. A network printer is required with at least PCL5 compatibility. All-in-one devices should not be used for scnning but for printing only.	
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Label Printer	All printing will be tunneled through the VPN. Zebra ZT41042-T010000Z - NO CUTTER (for perforated labels), Zebra ZT41042-T210000Z - WITHCUTTER (for continuous label), or Zebra GX430 Series	
	All labels printers must be networked.	
Document Scanner	Fujitsu FI-6130, Brother ADS 2000 or any scanner with TWAIN compatible drivers. Network scanners are not supported.	
	Unlimited TSScan license is needed.	
Barcode Scanner	Symbol/Zebra LS2208 or LS9203 and Honeywell MS Series	
Receipt Printer	BixolonSRP350IISeries (USBType with Drawer Kickout Connector) or Bixolon SRP350IIISeries (USBType with Drawer Kickout Connector)	
Signature Pad	Topaz Systems T-LBK755SE-BBSB-R OR T-LBK755-BBSB-R	
Magnetic Swipe Reader	Idtech IDRE-335133B Credit Card Swiper	
Cash Drawer	MSCashDrawer CF-405 (must be receipt printer driven, check compatibility with Receipt Printer) or any Printer Driven Cast Drawer (check compatibility with Receipt Printer)	
Weighting Scale	Ohaus Explorer EX1103N Balance Scale, Sartorius Quintix Series	
Mobile Delivery Device	7"or10.1"TabletswithAndroidOS5orhigher(with3Gor4Gcapability)or10.1"AppleiPadwithiOS10orhigher (with3Gor4Gcapability)	
mRx	Android or iOS Smartphones	