

Catalog	Category	Sub Category
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Category A (Full & Open)

Catalog 1	Business Servers	Department Class
Catalog 2	Business Notebook	Desktop Replacement
Catalog 4	Desktop/Workstation	Desktop Mini Tower

Form Factor	Rack Mounted (2U Maximum)
Fans	Hot Swappable and Redundant
Processor	Minimum Specification - can exceed.
Base Processor	Intel Xeon E5620 2.4GHz or equivalent
Processor Option 1	Intel Xeon L5630 2.13GHz or equivalent
Processor Option 2	Intel Xeon X5650 2.8GHz or equivalent
Processor Option 3	Intel Xeon X5660 2.67GHz or equivalent
Processor Option 4	Intel Xeon X5680 2.93GHz or equivalent
Second Processor	Optional Second processor identical to first
Processor Extensions	64 bit
Hardware assisted Virtualization Technology	Yes
DIMM Slots	8 minimum
Operating System	Must ship without Windows OS, but permitted for Linux.
Driver Support	Windows Server 2003 R2 and later; Linux Distributions (Red Hat and Suse); VMWare Server ESX/ESXi 4.0 or higher
Optical Drive	
Base Optical Drive	CD/DVD
Optical Drive Option 1	DVD+/-RW
Video Card	Super VGA (800x600) or higher
Memory	Must support expansion to at least 192GB
Base Memory	8GB or greater
Memory Option 1	16GB or greater
Memory Option 2	32GB or greater
Memory Option 3	48GB or greater
Memory Protection	Supports ChipKill ECC and Memory mirroring support
Hard Drive	
Base Hard Drive	Two (2) 250GB 7.2K RPM or better SATA
Hard drive Option 1	Two (2) 1TB 7.2K RPM or better SATA
Hard drive Option 2	Two (2) 140GB 15K RPM or better Serial - Attached SCSI
Hard drive Option 3	Two (2) 450GB 10K RPM or better Serial - Attached SCSI 6Gbps
Hard drive Option 4	Two (2) 600GB 10K RPM or better Serial - Attached SCSI 6Gbps
RAID (dedicated)	Support RAID-0,1,10, and 5 (minimum)
Base RAID Level	RAID 1 (Mirroring)
Drive Bays	4 - 3.5 inch (minimum) or 6 - 2.5" (minimum)
Hot Swappable Drives	Optional Hot Swap Hard Drive
Drive types	SAS, SATA or Solid-state

Expansion Slot	System must have a minimum least QTY 1 Full Height half-length PCI-E 16 lane slot
Out of Band Management	Required
IPMI	Intelligent Platform Management Interface capable
TPM	Trusted Platform Module compliant
USB Ports	4 total supporting USB 2.0 (minimum), 1 of 4 on Front Panel
Predictive failure indicators	Optional
Cover Removal	Tool-less
19" Rack mountable	Yes
Rack mount kit	Included
Networking	
Base Networking	Dual channel integrated NICs with TCP Offload Engine capability, 10/100/1000
Networking Option 1	10GB Ethernet with TCP offload Engine capability
Power	
Power Cord	NEMA 5-15 (Type B)
Power Cord Option 1	C13 to C14
Power Supply Option 1	High Efficiency Power Supply
Power Supply Option 2	Dual Hot Swap High Efficiency Power Supply
Warranty	
Base Warranty	3-year Next Business Day onsite with replacement warranty (minimum), includes hardware, firmware and server software support
Warranty Option 1	4-year Next Business Day onsite with replacement warranty (minimum), includes hardware, firmware and server software support
Warranty Option 2	3-year 7X24 Four (4) hour on-site response with same day return to service
Warranty Option 3	4-year 7X24 Four (4) hour on-site response with same day return to service
Onsite Installation	Option: Onsite Installation Hardware install
Keep your Hard Drive	User has the option to retain their hard drive in the event of replacement under warranty if option is selected.
Additional Options	
Multinode scalability	Optional

Feature	Description Notebook Desktop Replacement
Weight (with standard battery)	5.6 lbs. maximum
Processor	Min spec - can exceed
Base Processor Option 1	Intel Core i3 or equivalent
Processor Option 2	Intel Core i5 (2 core) or equivalent
Processor Option 2	Intel Core i5 (4 core) or equivalent
Processor Option 3	Intel Core i7 or equivalent
Processor Extensions	64 bit, Virtualization
Operating System	Windows 7
Office Suite	N/A
Minimum Display size	14"
Display Option 1	High resolution display
Optical Drive	must indicate internal or external
Base Optical Drive	CDRW/DVD
Optical Drive Option 1	DVD+/-RW
Optical Drive Option 2	Blu-Ray RW
Video Card	
Base Video Card Option 1	Integrated and discrete graphics minimum 256MB with ability to switch between as needed
Video Card Option 2	Integrated and discrete graphics minimum 512MB with ability to switch between as needed
Memory	
Base Memory	4GB
Memory Option 1	8 GB
Hard drive	SSD must support TRIM
Base Hard drive	160GB or more
Hard drive Option 1	250GB (7200 rpm) or more
Hard drive Option 2	500GB (7200 rpm) or more
Base Solid State Hard drive	64GB or more
Solid State Option 1	120GB or more
Solid State Option 2	250GB or more
Integrated Keyboard	backlit keyboard
Battery	
Base Battery	6 Cell
Battery Option 1	9 Cell
Battery Option 2	12 Cell
Connectivity	
Wireless	802.11 b/g/n Minimum
Networking	Integrated Ethernet Adapter

Bluetooth	2.0 or higher
Express Card 54	
Security	
Smartcard Reader Option 1	Integrated/dedicated
Smartcard Reader Option 2	External USB
Smartcard Reader Option 3	Bluetooth
Security Option 1	Fingerprint Reader
Security Option 2	Laptop lock
Security Option 3	Laptop privacy filter
Multimedia	
Webcam	Integrated
Microphone	Integrated/line in
Headphone Jack	Integrated/Speaker out
Power	
Base Power Cord (min length: 8 feet)	NEMA 1-15 (Type A) or NEMA 5-15 (Type B)
Power Cord Option 1	External Travel Power Adaptor auto/air supports Airline EmP connector or 20mm DC connector
Docking Stations	Offered as an option. Must be able to order at least QTY 2 per each laptop.
Docking Station Option 1 (port replicator)	Optional docking station. Must be Notebook specific, no video over USB.
Docking Station Option 2 (integrated stand)	Optional docking station. Must be Notebook specific, no video over USB. Docking station stand must elevate notebook for better use as secondary monitor
Warranty	
Base Warranty	3 years
Warranty Option 1	Add 1 year (total of 4 years)
Keep your Hard Drive	User has the option to retain their hard drive in the event of replacement under warranty if option is selected.
Additional Options	All items below shall be offered as an option with the Base system
Keyboard	
Keyboard Option 1	USB Standard
Keyboard Option 2	USB Backlit
Keyboard Option 3	USB with integrated smartcard reader
Keyboard Option 4	USB Ergonomic

Keyboard Option 5	Wireless
Mouse	
Mouse Option 1	USB Optical (standard size)
Mouse Option 2	USB Ergonomic
Mouse Option 3	Wireless
Mouse Option 4	Travel Mouse
Keyboard/Mouse Package	
Keyboard/Mouse Package Option 1	USB Package
Keyboard/Mouse Package Option 2	USB Ergonomic Package
Keyboard/Mouse Package Option 3	Wireless Package
Keyboard/Mouse Package Option 4	Travel Package
	Offered as an option. Must be able to order at least QTY 2 per each Notebook.
Monitor	
Monitor Option 1 (LCD, LED Backlit)	19" 1280X1024 or greater
Monitor Option 2 (LCD, LED Backlit)	20" 1600X1200 or greater
Monitor Option 3 (LCD, LED Backlit)	24" 2048X1152 or greater
Monitor Option 4 (LCD, LED Backlit)	27" 2048X1152 or greater
External Speakers	
External Speakers Option 1	Stereo Speakers w/o Sub Woofer
External Speakers Option 2	Stereo Speakers w/ Sub Woofer
Carrying Case	
Carrying Case Option 1	Portfolio/Satchel w/optional shoulder strap
Carrying Case Option 2	Backpack
Carrying Case Option 3	Laptop Roller Bag
Media Card Reader	Compact Flash type I, Compact Flash type II, Smart Media (SM), Multi Media Card (MMC),MMC Plus (MMC 4), Reduced-Size Multi Media Card (RS-MMC),Reduced-Size Multi Media Card Plus (RS-MMC 4),MMC micro, Secure Digital (SD), Secure Digital High-Capacity (SD-HC),Mini Secure Digital (mini-SD), xD Picture Card, Memory Stick (MS),Memory Stick Pro (MS Pro) including 8GB),Memory Stick micro (MS micro), Memory Stick Duo (MS Duo),Memory Stick Pro Duo (MS Pro Duo)

Form Factor	Small form factor case. No larger than 4x13.5x15 (HxWxD)
Processor	
Base Processor	Intel Core 2 Duo (2.9GHz) or equivalent/better
Processor Option 1	Intel Core 2 Duo (3.1GHz) or equivalent/better
Processor Extensions	64 bit, Virtualization
Optical Drive	
Base Optical Drive	DVD+/-RW
Optical Drive Option 1	Blu-ray
Video Card (Display Port)	Dual Monitor Support
Base Video Card	Integrated
Video Card Option 1	256MB ATI RADEON HD or equivalent
Memory	
Base Memory	4GB or greater
Memory Option 1	8GB or greater
Memory Option 2	16GB or greater
Hard drive	SSD must support TRIM
Base Hard drive	160GB or more
Hard drive Option 1	250GB (7200 rpm) or more
Hard drive Option 2	500GB (7200 rpm) or more
Base Solid State Hard drive	64GB or more
Solid State Option 1	120GB or more
Solid State Option 2	250GB or more
Connectivity	
Networking	Integrated Gigabit Ethernet 10/100/1000
Bluetooth Option	2.0 or higher
eSata	minimum of 1
Security	
SmartCard Reader Option 1	Bluetooth
Security Option 1	Fingerprint Reader
Security Option 2	Monitor privacy filter
Multimedia	
Microphone	Integrated/line in
Headphone Jack	Integrated/Speaker out
Power	
Base Power Cord (min length: 8 feet)	NEMA 5-15 (Type B) Grounded
Warranty	
Warranty standard	3 years
Warranty Option 1	Add 1 year (total of 4 years)
Keep your Hard Drive	User has the option to retain their hard drive in the event of replacement under warranty if option is selected.

Expansion Slot	System must have at least QTY 1 low profile PCI-E 16 lane slot
Additional Options	All items below shall be offered as an option with the standard system.
Keyboard	
Keyboard Option 1	USB Standard
Keyboard Option 2	USB Backlit
Keyboard Option 3	USB with integrated smartcard reader
Keyboard Option 4	USB Ergonomic
Keyboard Option 5	Wireless
Mouse	
Mouse Option 1	USB Optical (standard size)
Mouse Option 2	USB Ergonomic
Mouse Option 3	Wireless
Keyboard/Mouse Package	
Keyboard/Mouse Package Option 1	USB Package
Keyboard/Mouse Package Option 2	USB Ergonomic Package
Keyboard/Mouse Package Option 3	Wireless Package
Systems Management	Out of Band
Monitor	Offered as an option. Must be able to order at least QTY 2 per each Desktop.
Monitor Option 1 (LCD, LED Backlit)	19" 1280X1024 or greater
Monitor Option 2 (LCD, LED Backlit)	20" 1600X1200 or greater
Monitor Option 3 (LCD, LED Backlit)	24" 2048X1152 or greater
Monitor Option 4 (LCD, LED Backlit)	27" 2048X1152 or greater
External Speakers	
External Speakers Option 1	Stereo Speakers w/o Sub Woofer
External Speakers Option 2	Stereo Speakers w/ Sub Woofer
Media Card Reader	Compact Flash type I, Compact Flash type II, Smart Media (SM), Multi Media Card (MMC),MMC Plus (MMC 4), Reduced-Size Multi Media Card (RS-MMC),Reduced-Size Multi Media Card Plus (RS-MMC 4),MMC micro, Secure Digital (SD), Secure Digital High-Capacity (SD-HC),Mini Secure Digital (mini-SD), xD Picture Card, Memory Stick (MS),Memory Stick Pro (MS Pro) including 8GB),Memory Stick micro (MS micro), Memory Stick Duo (MS Duo),Memory Stick Pro Duo (MS Pro Duo)

Form Factor	The case must support desktop and tower configuration
Processor	
Base Processor	Intel Core 2 Duo (2.9GHz) or equivalent/better
Processor Option 1	Intel Core 2 Duo (3.1GHz) or equivalent/better
Processor Option 2	Intel Core 2 Quad (2.66GHz) or equivalent/better
Processor Extensions	64 bit, Virtualization
Optical Drive	
Base Optical Drive	DVD+/-RW
Optical Drive Option 1	Blu-ray
Video Card (Display Port)	Dual Monitor Support
Base Video Card	Integrated
Video Card Option 1	256MB ATI RADEON HD or equivalent
Memory	
Base Memory	4GB or greater
Memory Option 1	8GB or greater
Memory Option 2	16GB or greater
Hard drive	SSD must support TRIM
Base Hard drive	160GB or more
Hard drive Option 1	250GB (7200 rpm) or more
Hard drive Option 2	500GB (7200 rpm) or more
Base Solid State Hard drive	64GB or more
Solid State Option 1	120GB or more
Solid State Option 2	250GB or more
Connectivity	
Networking	Integrated Gigabit Ethernet 10/100/1000
Bluetooth Option	2.0 or higher
eSata	minimum of 1
Security	
SmartCard Reader Option 1	Bluetooth
Security Option 1	Fingerprint Reader
Security Option 2	Monitor privacy filter
Multimedia	
Microphone	Integrated/line in
Headphone Jack	Integrated/Speaker out
Power	
Base Power Cord	NEMA 5-15 (Type B) Grounded
Warranty	
Warranty standard	3 years
Warranty Option 1	Add 1 year (total of 4 years)

Keep your Hard Drive	user has the option to retain their hard drive in the event of replacement under warranty if option is selected.
Expansion Slot	System must have a minimum least QTY 1 Full Height half-length PCI-E 16 lane slot
Additional Options	All items below shall be offered as an option with the standard system
Keyboard	
Keyboard Option 1	USB Standard
Keyboard Option 2	USB Backlit
Keyboard Option 3	USB with integrated smartcard reader
Keyboard Option 4	USB Ergonomic
Keyboard Option 5	Wireless
Mouse	
Mouse Option 1	USB Optical (standard size)
Mouse Option 2	USB Ergonomic
Mouse Option 3	Wireless
Keyboard/Mouse Package	
Keyboard/Mouse Package Option 1	USB Package
Keyboard/Mouse Package Option 2	USB Ergonomic Package
Keyboard/Mouse Package Option 3	Wireless Package
Systems Management	Out of Band
Monitor	Offered as an option. Must be able to order at least QTY 2 per each Desktop.
Monitor Option 1 (LCD, LED Backlit)	19" 1280X1024 or greater
Monitor Option 2 (LCD, LED Backlit)	20" 1600X1200 or greater
Monitor Option 3 (LCD, LED Backlit)	24" 2048X1152 or greater
Monitor Option 4 (LCD, LED Backlit)	27" 2048X1152 or greater
External Speakers	
External Speakers Option 1	Stereo Speakers w/o Sub Woofer
External Speakers Option 2	Stereo Speakers w/ Sub Woofer
Media Card Reader	Compact Flash type I, Compact Flash type II, Smart Media (SM), Multi Media Card (MMC),MMC Plus (MMC 4), Reduced-Size Multi Media Card (RS-MMC),Reduced-Size Multi Media Card Plus (RS-MMC 4),MMC micro, Secure Digital (SD), Secure Digital High-Capacity (SD-HC),Mini Secure Digital (mini-SD), xD Picture Card,Memory Stick (MS),Memory Stick Pro (MS Pro) including 8GB),Memory Stick micro (MS micro), Memory Stick Duo (MS Duo),Memory Stick Pro Duo (MS Pro Duo)