

v.a. medical center  
3710 sw vets hosp rd  
Portland, or

PO# 648-B31000

## Configuration - Included Items

	Item Part Number - Description	Qty
1	<p data-bbox="146 472 422 499"><b>L05323 -SonoSite M-Turbo</b></p> <p data-bbox="146 499 876 787">SonoSite M-Turbo high-resolution, all-digital, 7.5-pound (3.0 kg) ultrasound system with 10.4in. Digital display. Standard features include display module, 2D grayscale with SonoMB Multi Beam Technology and Auto Gain, with SonoADAPT Tissue Optimization Technology, Clips storage, M-mode, HIPAA compliance tool set, comprehensive application specific calculation packages, PC direct connectivity capability (through USB Memory Stick or via SiteLink and USB Cable ordered separately). Also includes battery, ultrasound gel, and user guide on a CD (Printed user guides also available as a purchasable option). You can select one of five (5) different exterior color plates to customize your system.</p> <p data-bbox="146 808 876 1039">The M-Turbo combines the high performance of cart-based systems with the speed, flexibility and durability of hand-carried ultrasound. 8 GB of on-board Flash memory will retain enough data for over 40 standard exams (or 2,400 seconds of clips, 1,200 still frames and 40 report pages) even after power is turned off. The system supports USB media playback, and connectivity is accomplished through one of two USB slots on the system, which allow for direct sharing of images (JPEG) and Clips (MPEG4) to a PC or Mac. Additional connectivity is achieved via the optional H-Stand or Mini-Dock, to meet your specific needs.</p> <p data-bbox="146 1060 876 1165">M-Turbo's reliability and durability are backed by a five-year standard warranty, which is included in the price of the system. Software upgrades to the main system and transducer databases are both accomplished through one of the two USB ports on the system.</p> <p data-bbox="146 1186 876 1375">Additional features available to add to our system include: SonoHD Imaging Technology image processing, SonoMBe, ColorHD, Tissue Harmonic Imaging, PW Doppler, TDI PW, CW Doppler, DICOM Bundle, In Progress Archive, Worksheets, and a full array of multi-frequency, broadband transducers. This product is designed with an intuitive interface with Chip Fusion Technology.</p> <p data-bbox="146 1396 876 1470">Included with the purchase of your SonoSite M-Turbo, you will receive four consecutive hours of installation provided by a SonoSite Clinical Specialist.</p> <p data-bbox="146 1470 876 1516">The installation includes an overview of the product and accessories purchased, training on the features, functions, and user interface, and system</p>	1

Item	Part Number -	Qty	
2	P07272 -M-Turbo Color Option - Glacier Sky Glacier Sky, Blue		
3	P08592 -Standard Application Software Package M-Turbo The following minimum application package must be ordered with your M-Turbo ultrasound system in order to assure the best imaging performance that was designed into the product. If any of the application software packages below are ordered, there is no need to order this option since this capability is bundled with the other software features. This package provides the following capabilities for the transducers that support these features: - Tissue Harmonic Imaging (THI), a capability in which the system transmits at one frequency and receives at a higher harmonic frequency to reduce noise and clutter and improve resolution. - SonoHD Imaging Technology, technology which significantly reduces speckle noise while enhancing tissue margins, thereby dramatically improving contrast and structural resolution.	1	0
4	P12819 -DICOM Bundle (Print/Store/Worklist Mpps Sc) M-Turbo The DICOM complete package includes the capability to interface with your PACS network with the complete offering of DICOM Print, Store, Worklist, storage commit, and modality perform procedure step.	1	
5	P08293 -Color Doppler And Velocity Color Velocity color flow imaging provides the clinician with the color sensitivity to perform color Doppler examinations with all transducers during a clinical procedure.	1	
6	P17726 -Wireless Data Management This kit includes the USB dongle that is used to transmit images and information wirelessly and installation instructions.	1	
7	P13930 -SonoMBe, M-Turbo Proprietary software that enhances the systems ability to aid needle visualization.	1	
8	P07693 -HFL50x / 15-6 MHZ Transducer Biopsy Compatible HFL50x / 15-6 MHz multi-frequency, broadband, 50mm linear array transducer for small parts, breast, musculoskeletal and nerve. Supports 2D with SonoMB, Sono UltraRes Technology, Multi Beam Technology and Auto Gain capabilities, SonoHD Imaging Technology, M-mode, Color Power Doppler, Velocity Color Flow Doppler and Pulsed Wave Doppler. Biopsy guide available. Maximum depth is 6 cm.	1	
9	L12163 -H-Universal Stand (M-Turbo Only)	1	

Item	Part Number -	Qty
	Ergonomic stand and mobile work platform for the M-Turbo system and transducers. Complete with power supply, DVI mini-dock and accessory basket.	
10	P07662 -User Guide M-Turbo M-Turbo Ultrasound System User Guide, English	1
11	P14689 -USB Footswitch Hands-free operation with a customizable two pedal footswitch with USB connection. Allows user customization for high use functions such as Freeze, Save, Save Clip, Record, or Print.	1
12	P08144 -Service Manual M-Turbo M-Turbo Ultrasound Service Manual.	1
13	P08144 -Service Manual M-Turbo M-Turbo Ultrasound Service Manual.	1
14	5-YR-WARRANTY -60 MONTHS - STANDARD COVERAGE WARRANTY 60 MONTHS - STANDARD COVERAGE WARRANTY	1

## System Specifications:

System weight	6.7 lbs./3.04 kg
Dimensions	11.9" Lx 10.8" Wx 3.1" H / 30.2 cm Lx 27.4 cm Wx 7.9 cm H
Display	10.4"/26.4 cm diagonal LCD (NTSC or PAL)
Architecture	All-digital broadband
Dynamic range	Up to 165 dB
Gray scale	256 shades
HIPAA compliance	Comprehensive tool set

## Imaging Modes and Processing:

Broadband, Multifrequency Imaging:  
 2D / Tissue Harmonic Imaging / M-Mode  
 Velocity Color Doppler / Color Power Doppler  
 PW, PW Tissue Doppler and CW  
 Doppler angle, correct after freeze

Image processing:  
 SonoADAPT- Tissue Optimization  
 SonoHD- Imaging Technology  
 Advanced Needle Visualization (SonoMBe- Imaging)  
 Dual Imaging, Duplex Imaging, 2x pan/zoom capability, Dynaic range and gain

## Transducers:

Broadband and Multifrequency:  
 Linear Array, Curved Array, Multiplane TEE and Micro-Convex

Single Frequency:  
 Cardiac Static Pencil

## User Interface and Remappable Controls:

Softkeys to drive advanced features  
 Programmable A and B keys: each can be assigned by the user for increased ease of use  
 Alphanumeric elastomeric QWERTY keyboard  
 Track pad with select key for easy operation and navigation  
 Doppler controls: angle, steer, scale, baseline, gain and volume  
 Image acquisition keys: review, report, Clip Store, DVD, save  
 Dedicated AutoGain and exam keys to allow quick activation

## Application Specific Calculations:

OB/Gyn/Fertility: Diameter/ellipse measurements, volume, ten follicle measurements, estimated fetal weight, established due date, gestational age, last menstrual period, growth charts, userdefined tables, multiple userselectable authors, ratios, amniotic fluid index, patient report, humerus and tibia measurement and charts

Vascular: Diameter/ellipse/trace measurements, volume, volume flow, percent diameter and area reduction, Lt/Rt CCA, ICA, ECA, ICA/CCA ratio, time average mean (TAM), peaktrace, ICA/CCA ratio, angle correction, patient report

CITMT (Carotid Intima TMedia Thickness): Embedded SonoCal<sup>®</sup> IMT software (optional) automatic edge detection withmean and maximum thickness reporting

Cardiac: Automated Cardiac Output package and patient report including: ventricular, aortic and atrial measurements; ejection fraction, volume measurements, Simpson's rule, continuity equation, pressure half-time and cardiac output; PA AT, TV E, A, PHT, TVI, MV time, Pulm Veins

Transcranial Doppler (TCD): Coplete TCD package including Tie Average Peak (TAP)

## Onboard Image and Clip Storage/Review:

8GB internal Flashmemory storage capability  
 Potential to store 30,000 images or 960 2-second clips  
 Clip Store capability (maximum single clip length: 60 seconds)  
 Clip Store capability via either number of heart cycles (using the ECG) or time base  
 Maximum storage in ECG beats mode is 10 heart cycles. Maximum storage in time base mode is 60 seconds  
 Cine review up to 255 frame-by-frame images

## Power Supply:

System operates via battery or AC power  
 Rechargeable lithium-ion battery  
 AC: universal power adapter, 100-240 VAC, 50/60 Hz input, 15 VDC output



## Measurement Tools, Pictograms and Annotations:

2D: Distance calipers, ellipse and manual trace  
 Doppler: Velocity measurements, pressure half time, auto and manual trace  
 TM-TMode: Distance and time measurements, heart rate calculation  
 User-selectable text and pictograms  
 User-defined, application-specific annotations  
 Biopsy guidelines

## External Data Management and Wireless:

DICOM<sup>®</sup> Image TManagement (TCP/IP):  
 Print and Store, Modality Work List

Storage Commit:  
 Modality, Perform, Procedure Step

PC Workstation Image TManagement (TCP/IP, USB):  
 SiteLink- Image Manager allows transfer, archiving, viewing and printing of high resolution bitmap images/clips, and batchcompression to J PEG on PCs  
 Direct writing capability to USB 2.0 mass storage removable media (PC and MAC compatible)  
 Supported export formats are: MPEG-4 (H.264), JPEG, BMP, and HTML  
 SonoSite<sup>®</sup> Education Key- training video compatible

SonoSite<sup>®</sup> Workflow Solutions (SWS<sup>™</sup>):  
 A suite of specialized tools to streamline exam management for billing, credentialing, EMR and image archiving

Wireless Solutions:  
 SonoRemote- Control — Bluetooth<sup>®</sup> wireless technology

## External Video and Audio:

S-video (in/out) to VCR or DVD for record and playback  
 RGB or DVI output to external LCD display  
 Composite video output (NTSC/PAL) to VCR or DVD, video printer or external LCD display  
 Audio output  
 Integrated speakers

## Universal Stand and Peripherals:

Transducer and gel holders  
 Optional Triple Transducer Connect (TTC) to quickly activate transducers electronically  
 Optional foot switch  
 Optional 15" (diagonal) DVI monitor

## Optional peripherals:

Printers: Medical-grade black and white or color  
 External storage devices: Medical-grade DVD  
 External data input devices: Bar code reader  
 ECG module: 3-lead ECG — works with standard ECG leads and electrodes  
 External analog ECG input also available  
 USB bar code reader

SonoSite, the SonoSite logo, and other trademarks not owned by third parties are registered or unregistered intellectual property of SonoSite, Inc.  
 Bluetooth is a registered trademark of BluetoothSIG, Inc.  
 Mac is a trademark of Apple Inc., registered in the U.S. and other countries. VESA<sup>®</sup> is a registered trademark of its respective owner.  
 DICOM is the registered trademark of the National Electrical Manufacturers Association for its standards publications relating to digital communications of medical information.

SonoSite designs, manufactures and tests transducers in-house with real-world customer needs in mind. our transducers exceed stringent military specifications for drop testing and fluid resistance, so you can use them with confidence in the most demanding of environments. Maybe that's why SonoSite is the only ultrasound company to offer an industry leading 5-year warranty on the transducers it manufactures.



<p><b>L38xi</b></p> <p>10-5 MHz 38-mm broadband linear array</p> <p>Scan Depth: 9 cm</p> <p>Applications: Breast, small parts, vascular, IMT, nerve, venous,</p>	<p><b>HFL38x</b></p> <p>13-6 MHz 38-mm broadband linear array</p> <p>Scan Depth: 6 cm</p> <p>Applications: Breast, small parts, vascular, musculoskeletal, IMT, nerve, venous</p>	<p><b>HFL50x</b></p> <p>15-6 MHz 50-mm broadband linear array</p> <p>Scan Depth: 6 cm</p> <p>Applications: Breast, small parts, musculoskeletal, nerve</p>	<p><b>L25x</b></p> <p>13-6 MHz 25-mm broadband linear array</p> <p>Scan Depth: 6cm</p> <p>Applications: Musculoskeletal, vascular, nerve, superficial, venous, ophthalmic</p>	<p><b>C11x</b></p> <p>8-5 MHz 11-mm broadband curved array</p> <p>Scan Depth: 10 cm</p> <p>Applications: Abdominal, neonatal, nerve, vascular</p>	<p><b>C60x</b></p> <p>52 MHz 60-mm broadband curved array</p> <p>Scan Depth: 30 cm</p> <p>Applications: oB, gyn, abdominal, nerve, musculoskeletal</p>
<p>musculoskeletal <b>CTx</b></p> <p>8-5 MHz 11-mm broadband tightly curved array</p> <p>Scan Depth: 10 cm</p> <p>Applications: oB, gyn</p>	<p><b>P21x</b></p> <p>1 MHz 21-mm broadband phased array</p> <p>Scan Depth: 35 cm</p> <p>Applications: Abdominal, oB, cardiology, TCD, orbital</p>	<p><b>P10x</b></p> <p>8-4 MHz 10-mm broadband phased array</p> <p>Scan Depth: 14 cm</p> <p>Applications: Cardiology, abdominal, neonatal head</p>	<p><b>SLAx</b></p> <p>13-6 MHz 25-mm broadband linear array</p> <p>Scan Depth: 6cm</p> <p>Applications: Vascular, musculoskeletal, venous, superficial, nerve</p>	<p><b>TEEX</b></p> <p>8-3 MHz Multiplane transesophageal 180° rotation of the imaging plane, providing a 360° field of view</p> <p>Scan Depth: 18 cm</p> <p>Applications: Adult cardiology</p>	<p><b>D2x</b></p> <p>2 MHz Penciltransducer, Pedof CW</p> <p>Scan Depth: N/A</p> <p>Applications: Cardiology (CW)</p>

Biopsy kits available with the following transducers — L38xi, HFL38x, HFL50x, C60x, ICTx and 1310x. A transverse needle guide is available with the L25x transducer.

For detailed information, please visit [www.sonosite.com/products/m-turbo](http://www.sonosite.com/products/m-turbo) or speak with your SonoSite customer representative.

## Universal Stand

The universalstand offers physicians a more ergonomic design with a lighter, more robust, and modular architecture. Ideal for point-of-care ultrasound applications, the universalstand can be easily maneuvered through crowded hospital corridors and optimally positioned at the patient's bedside or in other space-constrained areas. The H-Universal Stand and the V-Universal Stand's are compatible with our third and fourth generation products.

The universalstand can be upgraded to incorporate SonoSite Power Solutions (see reverse side) to offer the most flexible options to meet the challenges of point-of-care environments.

### Features:

- Four transducer holders
- Cable hooks
- Locking wheels
- Storage basket
- Power supply
- Keyboard tray\*

### Peripherals (optional):\*\*

- Sony B&W printer
- Sony color printer
- Sony DVD recorder
- 15 in. auxiliary monitor\*\*\*
- Triple transducer connect\*\*\*

### Accessories:

- PowerPark—Dedicated charging station
- PowerPack—Extended battery pack

The H-UniversalStand can be configured with the M-Turbo® and MicroMaxx® ultrasound systems.

The V-UniversalStand can be configured with the S Series™ and NanoMaxx™ ultrasound systems.

\*V-UniversalStand only

\*\*V-UniversalStand only accommodates one periphera

\*\*\*H-UniversalStand only



HUniversal Stand



VUniversal Stand

Specifications		VUniversal Stand
Width:	20 in./50.8 cm	20 in./50.8 cm
Depth:	23 in./58.4 cm	23 in./58.4 cm
Height:	Min: 33 in./83.8cm. Max: 45 in./114.3 cm.	Min: 42.5 in./108 cm Max: 54.5 in./138.4 cm
Pneumatic height range:	12 in./30.5 cm	12 in./30.5 cm
Weight:	40.0 lbs./18.1 g	45.0 lbs./20.5 g

## PowerPark Dedicated Charging Station

For true mobility to any point-of-care location around the hospital or office, the PowerPark is a cordless and convenient charging solution for SonoSite ultrasound systems. The PowerPark provides a dedicated charging station while the ultrasound system is mounted on the stand. Just park and charge.

- Increase workflow and efficiency—System remains fully-charged
- Provide storage—Dedicated storage location for stand and ultrasound system
- Facilitate cord management—No need for ultrasound system electrical cords

### Specifications:

Width	8.6 in./21.8 cm
Length	15 in./38.1 cm
Height	4.8 in./12.2 cm
Weight	20 lbs./9 kg

## PowerPack Extended Battery Pack

The ultimate power solution for hospital and office settings, SonoSite's PowerPack-F1 is an innovative and streamlined external battery pack. With the ability to double a system's battery life, the PowerPack provides improved flexibility and efficiency, enabling physicians to see more patients on a single battery charge. The PowerPack can be easily installed on the SonoSite universal stand for a ready-to-go charging solution.

- Improves flexibility and workflow
- Extends the operating time of the ultrasound system
- Reduces the need to seek a power supply outlet in the patient exam room

### Specifications:

Width	4 in./10.2 cm
Length	10 in./25.4 cm
Height	2 in./5.1 cm
Weight	1.4 lbs./0.6 kg



The PowerPark and PowerPack are compatible with SonoSite's H Universal Stand and V Universal Stand. The PowerPark can be used with the MicroMaxx, NanoMaxx, M Turbo and S Series ultrasound systems and the PowerPack is compatible with the M Turbo, S Series and NanoMaxx ultrasound systems.

Product release is expected Q4 2010.

## SonoSite's industryleading Warranty

SonoSite's technology-driven, 5-year standard warranty covers damage to the system and SonoSite manufactured transducers due to defective materials, workmanship, and/or failure to operate in accordance with specifications in the User Guide. We will provide customers with loaner equipment of systems and transducers the next day where delivery is available. Additional coverage is available for purchase.



5-year warranty inclusions:

M-Turbo® and S Series— ultrasound systems. Transducers: C60x, HFL38x, L38xi, L25x, C11x, ICTx, P10x, P21x, HFL50xMicroMaxx® ultrasound system. Transducers: C60e, HFL38, L38e, P10, L25e, C11e, ICTe, P17  
 NanoMaxx— ultrasound system. Transducers: C60n, L38n, L25n, C11n, P21n

### Cost savings from SonoSite's 5Year Standard Warranty

Year	SonoSite's 5Year Standard Warranty	Industry 1Year Standard Warranty*
1	\$0	\$0
2	\$0	\$4,000
3	\$0	\$4,000
4	\$0	\$4,000
5	\$0	\$4,000
<b>Additional cost to customer</b>	<b>\$0</b>	<b>\$16,000</b>

\* Based on \$50,000 purchase price and annual service contract of 10% of purchase price.

### Warranty for Accessories and OEM Transducers

SonoSite accessories, as well as products and accessories made by our manufacturing partners that carry the SonoSite label, are covered under a 1-year warranty that covers damage due to defective materials and workmanship, and/or failure of the accessories and transducers named below to operate in accordance with specifications in the User Guide.

1-year warranty inclusions:

Transducers: C8e, TOE/TEE, SLA, SLT, D2 (Cardiac static pencil)  
 Accessories: H-Universal™ Stand, V-Universal™ Stand, SonoRemote™ Control

Please see SonoSite's Terms and Conditions for detailed coverage information on SonoSite's warranty offerings. Terms may vary for veterinary products.

S Series.

Call (877) 657-8050 to speak to a SonoSite representative to find out more about these options or to ask about the status of your warranty.



**World leader and specialist in hand-carried ultrasound.**

SonoSite, Inc.  
 Worldwide Headquarters  
 21919 30th Drive SE, Bothell, WA 98021-3904  
 Tel: +1 (425) 951-1200 or +1 (877) 657-8050  
 Fax: +1 (425) 951-6800 [E-mail: sonohq@sonosite.com](mailto:sonohq@sonosite.com)

[www.sonosite.com/support/warranty.and.service](http://www.sonosite.com/support/warranty.and.service)

MICROMAXX.



MTurbo

NanoMaxx



# How can we offer the best warranty in the industry?



When you build very durable products, you can eliminate annual service contracts and offer a 5-year warranty to deliver the lowest cost of ownership in point-of-care medicine

SonoSite's hand-carried and mounted ultrasound systems are the toughest in the industry. Built to exceed military specifications, our systems and proprietary transducers withstand a 3-foot drop onto a hard surface and resist fluid contamination. In the unlikely event your system or transducer needs repair, we have an overnight loaner program to minimize downtime.

SonoSite's third and fourth generation ultrasound systems comes with the same industry-leading, 5-year warranty that you have come to expect from us. With an installed base of more than 50,000 systems worldwide, our technology-driven warranty is based on a proven record of reliability and durability—just one of the reasons customers give us a 99% satisfaction rating.

Visit [www.sonosite.com/support/warranty-and-service](http://www.sonosite.com/support/warranty-and-service) or call (877) 657-8050 to speak with a customer service representative.



*World leader and specialist in hand-carried ultrasound.*