



Mentor UT

A new generation of ultrasonic inspection.



waygate-tech.com

Reimagine ultrasonic testing

The pressure to reduce operating costs and increase productivity while maintaining reliable inspections is higher than ever. And with increasingly complex testing procedures, more instrument parameters to understand, and the growing loss of domain expertise, it's becoming even more challenging.

The majority of Ultrasonic Phased Array Testing (PAUT) systems on the market are complex and require extensive inspector training. Instruments designed to gather a wealth of data for a range of usecases can lead to inconsistency among procedures. That means higher costs and less efficiency.

But what if performing high-quality, efficient UT inspections was as easy as using a smartphone? With Mentor UT, it is.

Consistency you can customize.

Mentor UT offers a new kind of inspection experience by combining outstanding UT performance, customizable workflow applications and user interfaces, and intuitive hardware with embedded expertise—making inspections more accessible and efficient. Visit inspectionworks.com to download the software at no cost.



Mentor Create

This desktop software allows you to customize or create inspection "apps" for your unique testing procedures, industry applications, and experience levels. These can be as detailed or generic as you see fit.



Mentor PC

Utilize all the tools available on Mentor UT, right on your PC. With Mentor PC, you can conveniently upload and analyze your inspection data on your computer without having to purchase or learn another specialized software package.

With Mentor PC Live, you can harness the processing power of your PC to drive the Mentor UT remotely with the scan data saved directly to your local network



Workflows

User-defined menus can walk technicians through every step of any inspectionfrom probe selection and calibration, to reporting-ensuring consistency across your inspections, every time, from every inspector. And with the flexibility to load multiple workflows on one device, you can guarantee easy access to the right apps for any inspection.



Remote Collaboration

With live video and two-way chat and annotation features, remote experts can see what the inspector sees and instantly communicate, troubleshooting issues on the spot, without the inspector ever leaving the inspection site.

Power meets performance

Mentor UT was developed with the quality and precision you expect from Waygate Technologies. And it's now more powerful than ever.

Field-ready right out of the box

Take the guesswork out of inspection setup with probe kits and inspection apps already installed on your device. Reference guides are also immediately accessible during field inspections with pictures, videos, training documents, and detailed inspection procedures.

Remote calibration-capable

MENTOR

Save time and resources. Every Mentor UT is InspectionWorks enabled. This makes it the first UT device to easily allow wireless connectivity and live streaming. Now, you can get expert advice or a second opinion for tough inspection calls when you need it: in real time.

🔎 Rugged durability

Mentor UT stands up to tough environments with its IP65 durability rating. It's extensively tested for water and dust resistance, extreme heat and humidity, cold, vibration, shocks, and drops.

High-performance design

With 20 kHz pulse repetition frequency (PRF), Mentor UT combines a 32:32 phased array flaw detector (upgradable to 32:128) with a conventional UT channel to instantly switch between phased array and conventional inspections as needed.

Intuitive operation

With a glove-friendly, daylight-readable touchscreen, data collection, archiving and reporting are simplified with the ability to store A-scan data, as well as post-inspection analyses, right on the device.

Find the solution tailored for your application.

When you need a strong tool that knows how to set the bar high, Mentor UT and its custom-tailored workflows are ideal for any industrial application, guiding you through consistent inspections and ensuring reliable results.



With superb mechanical design and quality, our fieldproven PALM scanners offer unparalleled ease of use for operators inspecting circumferential butt welds.



Despite the increasing use of adhesives as a joining technology for automotive body panels, adhesive bonding may not provide 100% process reliability. The Bond Scanner identifies areas with lack of adhesive, as well as misaligned bond lines, and provides a workflow-based, reliable inspection with the Mentor UT.



With performance rivaling that of a full immersion C-scan system, our easy-to-use RotoArray gives you faster, more reliable Scan-images, all with the portability of a handheld probe. Together with the Mentor UT, this phased array inspection device allows rapid scanning of a wide variety of materials and components, making ultrasonic inspections even simpler.



Increase productivity with our solid axle mechanized testers (SAMT). Designed for front-face inspections of railway axles, this flexible solution delivers the required steering angles to optimally cover the axle's full lateral service. And combining SAMT with our Mentor UT's multi-group capabilities enables faster, safer and more accurate inspections.

With a demonstrated history of providing a wide array of solutions, our experienced Application Engineers and Specialists will work closely with you to provide technical assistance, design custom products or do whatever it takes to solve your ultrasonic testing challenges.

General specifications

Dimension (VM vi r D) 295 kg (0.55 kg) Veloping V 2.8 kg (0.55 kg) Veloping V Veloping V Bisson 264 kg (0.65 kg) Veloping Angle 265 gl (veloping V) Several (VM vi r Landow r gancific calor modes Veloping V) Veloping Angle 265 gl (veloping V) Several (VM vi r Landow r gancific calor modes Veloping V) Several (VM vi r Landow r gancific calor modes Veloping V) Several (VM vi r Landow r gancific calor modes Veloping V) Several (VM vi r Landow r gancific calor modes Veloping V) Several (VM vi r Landow r gancific calor modes Veloping V) Several (VM vi r Landow r gancific calor modes Veloping V) Several (VM vi r Landow r gancific calor mode) Veloping V) Several (VM vi r Landow r gancific calor mode) Veloping V) Several (VM vi r Landow r gancific calor mode) Veloping V) Several (VM vi r Landow r gancific calor mode) Veloping V) Several (VM vi r Landow r gancific calor mode) Veloping V) Several (VM vi r Landow r gancific calor mode) Veloping V) Several (VM vi r mode) Veloping V) <	Physical	
Spinp 294 mm (0.4°) diagonal Base Add Add Add Add Add Add Add Add Add Ad	Dimensions (W x H x D)	295 mm x 230 mm x 60 mm (12" x 9.4" x 2.4")
sine 24/4 rr (0.4) diagonal tesculation 05/4 r 286 pixels Voted Indear and autobox specific color modes. diversing Argla + 8 fol at facetions. Start Scene (Multi-toue) Ves Bardson Ves Start Scene (Multi-toue) Ves Start Scene (Start) Ves Scene (Start) Start Scene (Start) Ves Farmat Scene Copture Ves Farmat Scene Copture Ves Farmat Scene Copture Ves Farmat Ves Farmat Ves Farmat Scen	Weight, w/Battery	2.9 kg (6.5 lbs)
sine 24/4 rr (0.4) diagonal tesculation 05/4 r 286 pixels Voted Indear and autobox specific color modes. diversing Argla + 8 fol at facetions. Start Scene (Multi-toue) Ves Bardson Ves Start Scene (Multi-toue) Ves Start Scene (Start) Ves Scene (Start) Start Scene (Start) Ves Farmat Scene Copture Ves Farmat Scene Copture Ves Farmat Scene Copture Ves Farmat Ves Farmat Ves Farmat Scen	Dioplay	
Sequidanian 004 7 X8 p predis Mode and outdoor spacific color modes Mode And outdoor spacific color modes Sequence A BS of directors Sequence Chemically strengthened gioss, scratch mesistant, chemical resistant, optically bonded to display Defails Storage Chemically strengthened gioss, scratch mesistant, chemical resistant, optically bonded to display Defails Storage Chemically strengthened gioss, scratch mesistant, chemical resistant, optically bonded to display Defails Storage Chemically strengthened gioss, scratch mesistant, chemical resistant, optically bonded to display Defails Storage Chemically strengthened gioss, scratch mesistant, chemical resistant, optically bonded to display Defails Storage Chemically strengthened gioss, scratch mesistant, optically bonded to display Defails Storage Chemically strengthened gioss, scratch mesistant, optically bonded to display Defails Storage Chemically strengthened gioss, scratch mesistant, optically bonded to display Storage All Instrument settings pacific numbers Storage All Instrument settings play bonded to module Storage Storage Defails Storage Storage Storage Defails Sto		264 mm (10.4") diagonal
Nodes Indicer and autidater specific color modes identing Angle = 85° dl directions identing Angle = 85° dl directions identing Angle = 85° dl directions identing Angle Ves idention Angle Chemically strengthened glass, scrutch resistant, chemical resistant, optically bonded to display identification 128 GB		
viewing Angle 4 80° all directions Touch Screen (Multi-touch) Stored Operation Yes Stored Operation Yes Stored Operation Yes Stored Operation Yes Stored Storage LBS 30 wincluded module Storage LBS 30 wincluded module Storage And Capture Full ASCAN capture for every CSCAN point, all settings. Recall on instrument with full analysis capability Storage Angle Angle Angle Angle Angle Storage Angle Storage Angle Angle Angle Angle Storage Angle		
Concent Second (Multi-touch) Bieved Operation Yes Chemically strengthened glass, scratch resistant, chemical resistant, optically bonded to display Data Storage 28 06 Sidewald Operation 128 06 Using Sectors Dive 128 06 Using Sectors Dive 128 06 Using Sectors Dive Rull ASCAN capture for every CSCAN point, all settings. Recall on instrument with full analysis capability Data Graphure Rull ASCAN capture for every CSCAN point, all settings. Recall on instrument with full analysis capability Data Graphure Rull ASCAN capture settings plus position in workflow Sectors Options JPO Format Connectivity WFFI MSD 18, g, n Sectors Divers Connectivity USB 20, Its g, n Connective response Incolled JO USB 20, Ethernet, HDM Renote Collaboration Local Network and Internet-Enabled via Inspection/Works Connect Inspection/Works Enabled One 2 digital quadrature encoders for X-Y axes Markel Tone, 2 Yakz Power Internet Tone, 2 Yakz Power supply		
Biowad Operation Yes Surface Chemically strengthened glass, scratch resistant, optically bonded to display ball Surface Biomically strengthened glass, scratch resistant, optically bonded to display ball Surface Biomically strengthened glass, scratch resistant, optical resistant, optical postical resistant, optical resistant, opti		
Burtoo Chemically strengthened glass, scratch resistant, chemical resistant, optically bonded to display Data Storage 128 08 Bild State Hand Drive 128 08 Bild State Hand Drive 128 0.02 Bild State Hand Drive 128 0.01 Bind Drive 12		
Details Storage Details Storage Bolid Storage UBE 2.0 wincluded module Data Capture Rull RSCN capture for every CSCAN point, all settings. Recall on instrument with full analysis capability Data Capture Rull RSCN capture for every CSCAN point, all settings. Recall on instrument with full analysis capability Data Capture JPA Format Stering Sines All Instrument settings plus position in workflow Steren Capture JPA Format Connectivity W-Fi B02.0 B, g.n Connectors USB 2.0, Ehernet, HDMI Exernation Collaboration Local Network and Internet-Inabiled via InspectionWorks Connect Encoled //O Variable Tone, 2.7 Mr Power Staget quadrature encoders for X Y axes Variable Notes 2 digital quadrature encoders for X Y axes Variable Power Staget quadrature encoders for X Y axes Variable Notes 2 digital quadrature encoders for X Y axes Variable Variable Tone, 2.7 Mr Staget quadrature encoders for X Y axes Variable Power Staget quadrature encoders for X Y axes Variable		
Solid State Hard Drive 128 08 USB Storage USB 2.0 w included module Data Capture Full ASCAN capture for every CSCAN point, all settings. Recall on instrument with full analysis capability Data Capture JPH Format Series Capture JPH Format Series Capture JPH Format Connectivity JPH Format Wi-FI Bo2.1b.g.n Connectivity JPH Format Connectivity JPH Format Connectivity JPH Format Connectivity JPH Format Series Calaboration Leao Network and Internet-Inabled via InspectionWorks Connect InspectionWorks Enabled Viander Calaboration Leao Network and Internet-Inabled via InspectionWorks Connect More Connectivity Viander Calaboration Leao Network and Internet-Inabled via InspectionWorks Connect Number Of Statema Statema Statema Statema Viander Of Statema Statema Statema Statema Viander Of Statema Statema Statema Statema Statema Statema Statema Statema Viander Calaboration State Statema Statema	Surface	Chemically strengthened glass, scratch resistant, chemical resistant, optically bonded to display
USB 2.0 vincluided module USB 2.0 vincluided module FUI SCCNA copture for every CSCCNA point, all settings, Recall on instrument with full analysis copability Deate Full Deate Full Full SCCNA copture for every CSCCNA point, all settings, Recall on instrument with full analysis copability Deate Full Deate Full Full SCCNA copture Deate Full	Data Storage	
Data Capture Full ASCAN capture for every CSCAN point, all settings. Recall on instrument with full analysis capability Data Files All instrument settings plus position in workflow Settings Files All instrument settings plus position in workflow Secen Capture JPP Format Connectivity FPF Format Connectivity FPF Format Connectivity Use 3.0.4.thmmt WH-Fi 80211 b.g.n. Connectivity Local Network and Internet-Enabled via Inspection/Works Connect Remote Callaboration Local Network and Internet-Enabled via Inspection/Works Connect None Tone, 2.7 kHz Power Validation Internal Battery 63 WH Lithium Ion Rever Supply 100 to 240 VAC, 47-63 Hz, 18 A; 12VDC Sattery Life 3 his internal, 6 has with waternal battery under typical operating conditions Control Vector 150° SC (-4F to 138F) to MIL-STD-8100 Method 501.5 & 502.5, Procedure I Storage Temperature -20C to 455 C (-4F to 138F) to MIL-STD-8100 Method 501.5 & 502.5, Procedure II Storage Temperature -20C to 455 C (-4F to 138F) to MIL-STD-8100 Method 501.5 & 502.5, Procedure II Storage Temperature -20C	Solid State Hard Drive	128 GB
Data Files memd files, CSV files Settings Files All Instrument settings plus position in workflow Screen Capture JPO Format Seport DPD Format Seport DPD Format Connectivity B0211b.g.n Wi-Fi B0211b.g.n Connectivits USB 2.0. Ethernot, HDMI Connectivits Local Network and Internet-Enabled via InspectionWorks Connect Remote Collaboration Local Network and Internet-Enabled via InspectionWorks Connect Spectro 2 digital quadrature encoders for X-Y axes Audible Tone, 2.7 Mrz Power Statum Iot Statum I Sattry B3 WH Lithium Ion Power Statum Ion Power Statum Ion Power Supply 100 to 240 VAC, 47–63 Hz, 19 A; 12VDC Statum I Sattry B3 WH Lithium Ion Power Supply 100 to 240 VAC, 47–63 Hz, 19 A; 12VDC Staturg I Emperature 2-02C to 4+55 C (-4# to 13H) to MIL-STD-810G Method 50L5 & 5025, Procedure I Staturg I Emperature -20C to 4+55 C (-4# to 13H) to MIL-STD-810G Method 50L5 & 5025, Procedure I Statung I Emperature <td>USB Storage</td> <td>USB 2.0 w included module</td>	USB Storage	USB 2.0 w included module
Sattings Files All instrument sattings plus position in workflow Screen Capture JPG Format Report PDF Format Report PDF Format Connectivity WFI MFI 802.11 b, g, n Connectors USB 2.0, Ethernet, HDMI Connectors USB 2.0, Ethernet, HDMI Remote Collaboration Local Network and Internet-Enabled via InspectionWorks Connect InspectionWorks Enabled //O Available //O Available Tone, 2.7 kHz Power Power B3 WH Lithium Ion External Battery 63 WH Lithium Ion External Battery B4 WH Lithium Ion External Battery Co to +55 C (-4F to 151F) to MIL-STD-BIOG Method 5015 & 5025, Procedure I Compliance Verter Supply Dio Yo C (-4F to 151F) to MIL-STD-BIOG Method 501	Data Capture	Full ASCAN capture for every CSCAN point, all settings. Recall on instrument with full analysis capability
Bareen Capture JPG Format Report PDF Format Connectivity Mr-FI Mr-FI B0211b,g,n Connectors USB 20, Ethernet, HDMI Remote Collaboration Locol Network and Internet-Enabled via Inspection/Works Connect Inspection/Works Enabled //O Available //O Connectors //O Available //O Connectors //	Data Files	memd files, CSV files
Report PDF Format Connectivity 80211b, g, n USB 2.0, Ethernet, HDMI Secondary Bemate Collaboration Local Network and Internet-Enabled via InspectionWorks Connect Bemate Collaboration Local Network and Internet-Enabled via InspectionWorks Connect Bemate Collaboration Local Network and Internet-Enabled via InspectionWorks Connect Market Schlaboration Local Network and Internet-Enabled via InspectionWorks Connect Market Schlaboration Local Network and Internet-Enabled via InspectionWorks Connect Market Schlaboration Local Network and Internet-Enabled via InspectionWorks Connect Market Schlaboration Enabled Market Schlaboration Enabled Market Schlaboration Enabled Market Schlaboration 63 WH Lithium Ion Schemal Battery 84 WH Lithium Ion Power Statemal Battery Battery Life 3 hrs Internat, 6 hrs with external battery under typical operating conditions Compliance Meets IAT air transport regulations with one contained Installed battery and one packed external battery Enabled -20C to +55 C (-4f to 13if) to MIL-STD-810G Method 5015 & 502.5, Procedure I Ingress Pro	Settings Files	All instrument settings plus position in workflow
Connectivity Wi-Fi B02.11 b. g. n Connectors USB 2.0, Ethernet, HDMI Remote Collaboration Local Network and Internet-Enabled via Inspection/Works Connect Inspection/Works Enabled ///////////////////////////////////	Screen Capture	JPG Format
Wi-Fil S02.11 b. g. n Connectors USB 2.0, Ethernet, HDMI Remote Collaboration Lacal Network and Internet-Enabled via InspectionWorks Connect InspectionWorks Enabled InspectionWorks Enabled /O	Report	PDF Format
Wi-Fil S02.11 b. g. n Connectors USB 2.0, Ethernet, HDMI Remote Collaboration Lacal Network and Internet-Enabled via InspectionWorks Connect InspectionWorks Enabled InspectionWorks Enabled /O	Connectivity	
Connectors USB 2.0, Ethernet, HDMI Remote Collaboration Local Network and Internet-Enabled via InspectionWorks Connect InspectionWorks Enabled // Enabled // Connectors // Contonstators	Wi-Fi	802.11 b. a. n
Remote Collaboration Local Network and Internet-Enabled via InspectionWorks Connect InspectionWorks Enabled //O // Axes 2 digital quadrature encoders for X-Y axes Audible Tone, 2.7 kHz Power // Internal Battery 63 WH Lithium Ion Statum JD 63 WH Lithium Ion Power Supply 84 WH Lithium Ion Power Supply 100 to 240 VAC, 47-63 Hz, 19 A; 12 VDC Battery Life She Internal, 6 hrs with external battery under typical operating conditions Compliance Meets IATA air transport regulations with one contained installed battery and one packed external battery Power Supply 100 to 240 VAC, 47-63 Hz, 19 A; 12 VDC Battery Life She Internal, 6 hrs with external battery under typical operating conditions Compliance Meets IATA air transport regulations with one contained installed battery and one packed external battery Operating Temperature -20C to 455 C (~4F to 13BF) to MIL-STD-810G Method 5015 & 5025, Procedure I Ingress Protection Tested to IP65 Shock 4 transit Drop to MIL-STD-810G method 516, Procedure V Datent Interface Customizable with Mentor Create soft		
InspectionWorks Enabled Aves 2 digital quadrature encoders for X-Y axes Audible Tone, 2.7 kHz Power Internal Battery 63 WH Lithium Ion State Sta		
Axes 2 digital quadrature encoders for X-Y axes Audible Tone, 2.7 kHz Power External Battery B4 WH Lithium Ion Meets IATA air transport regulations with one contained installed battery and one packed external battery External Battery Polo C + 5C C (-4F to 13F) to MIL-STD-810G Method 5015.6 502.5, Procedure I Storage Temperature -20C to +70C (-4F to 15B To MIL-STD-810G Method 5015.6 502.5, Procedure II B5rock 4 Transit Drop to MIL-STD-810G method 516.6, Procedure V Dater Interaface Custo	InspectionWorks	
Axes 2 digital quadrature encoders for X-Y axes Audible Tone, 2.7 kHz Power External Battery B4 WH Lithium Ion Meets IATA air transport regulations with one contained installed battery and one packed external battery External Battery Polo C + 5C C (-4F to 13F) to MIL-STD-810G Method 5015.6 502.5, Procedure I Storage Temperature -20C to +70C (-4F to 15B To MIL-STD-810G Method 5015.6 502.5, Procedure II B5rock 4 Transit Drop to MIL-STD-810G method 516.6, Procedure V Dater Interaface Custo		
Audible Tone, 2.7 kHz Power Internal Battery 63 WH Lithium Ion External Battery 84 WH Lithium Ion Power Supply 100 to 240 VAC, 47–63 Hz, 19 A; 12VDC Battery Life 3 hrs internal, 6 hrs with external battery under typical operating conditions Compliance Meets IATA air transport regulations with one contained installed battery and one packed external battery Environmental -20C to +55 C (-4F to 13IF) to MIL-STD-8106 Method 501.5 & 502.5, Procedure I Storage Temperature -20C to +70C (-4F to 15BF) to MIL-STD-8106 Method 501.5 & 502.5, Procedure II Storage Temperature -20C to +70C (-4F to 15BF) to MIL-STD-8106 Method 501.5 & 502.5, Procedure II Storage Temperature -20C to +70C (-4F to 15BF) to MIL-STD-8106 Method 501.5 & 502.5, Procedure II Storage Temperature -20C to +70C (-4F to 15BF) to MIL-STD-8106 Method 501.5 & 502.5, Procedure II Detection Tested to IP65 Shock 4' Transit Drop to MIL-STD-810G method 516.6, Procedure V Obtact Visualization Any data view may be expanded to full screen with gesture User Interface Customizable with Mentor Create software Zoom Any data view may be expanded to full screen with gesture Instructional Material		0 divited eventeet ve en enders fan V. V. swee
Power Power Power Supply 63 WH Lithium Ion Power Supply 100 to 240 VAC, 47–63 Hz, 1, 9, 2; 12VDC Sattery Life 3 hrs internal, 6 hrs with external battery under typical operating conditions Compliance Meets IATA air transport regulations with one contained installed battery and one packed external battery Environmental -20C to +55 C (-4F to 13IF) to MIL-STD-810G Method 501.5 & 502.5, Procedure I Storage Temperature -20C to +55 C (-4F to 158F) to MIL-STD-810G Method 501.5 & 502.5, Procedure I Storage Temperature -20C to +70C (-4F to 158F) to MIL-STD-810G Method 501.5 & 502.5, Procedure II Ingress Protection Tested to IP65 Shock 4' Transit Drop to MIL-STD-810G method 516.6, Procedure V Data Visualization -20C to +70C (-4F to 158F) to MIL-STD-810G method 516.8, Procedure V Data Visualization -20C to +70C (-4F to 158F) to MIL-STD-810G method 516.6, Procedure V Data Visualization -20C to +70C (-4F to 158F) to MIL-STD-810G method 516.8, Procedure V Data Visualization -20C to +70C (-4F to 158F) to MIL-STD-810G method 516.8, Procedure V Data Visualization Any data view may be expanded to full screen with gesture Rise Interface Customizable with Mentor Create software		
Internal Battery63 WH Lithium IonExternal Battery84 WH Lithium IonPower Supply100 to 240 VAC, 47–63 Hz, 19 A; 12VDCBattery Life3 hrs internal, 6 hrs with external battery under typical operating conditionsComplianceMeets IATA air transport regulations with one contained installed battery and one packed external batteryEnvironmental-20C to +55 C (-4F to 131F) to MIL-STD-810G Method 501.5 & 502.5, Procedure IStorage Temperature-20C to +55 C (-4F to 131F) to MIL-STD-810G Method 501.5 & 502.5, Procedure IIngress ProtectionTested to IP65Shock4' Transit Drop to MIL-STD-810G method 516.6, Procedure VOtat VisualizationCustomizable with Mentor Create softwareZoomAny data view may be expanded to full screen with gestureInstructional MaterialRich Text, JPG, PNG, BMP, PDF or Video (MP4)ViewsA-SCAN, C-SCAN, C-SCAN, OVERVIEW, E-SCAN, S-SCANProbe SelectionSwap between conventional and phased array on same screenViewsA-SCAN, C-SCAN, C-SCAN, OVERVIEW, E-SCAN, S-SCANProbe SelectionSwap between conventional and phased array on same screenViewasurementsAmplitudes, Depth, Distance, % Wall Loss, Thinnest Point, X and Y PositionsCalibrationsPhased Array: TCG, Material Velocity, Probe Delay, Auto80, Encoder Cal, Dead Element Check Conventional: 2 Point (Material Velocity and Probe Delay)	BIGIDUA	Tone, 2.7 KHz
External Battery84 WH Lithium IonPower Supply100 to 240 VAC, 47–63 Hz, 19 A; 12 VDCBattery Life3 hrs internal, 6 hrs with external battery under typical operating conditionsComplianceMeets IATA air transport regulations with one contained installed battery and one packed external batteryEnvironmental-20C to +55 C (-4F to 131F) to MIL-STD-810G Method 501.5 & 502.5, Procedure IStorage Temperature-20C to +70C (-4F to 158F) to MIL-STD-810G Method 501.5 & 502.5, Procedure IIIngress ProtectionTested to IP65Shock4' Transit Drop to MIL-STD-810G method 516.6, Procedure VOctat VisualizationCustomizable with Mentor Create softwareZoomAny data view may be expanded to full screen with gestureInstructional MaterialRich Text, JPG, PNG, BMP, PDF or Video (MP4)ViewsA-SCAN, C-SCAN, C-SCAN OVERVIEW, E-SCAN, S-SCANProbe SelectionSwap between conventional and phased array on same screenEvaluation2 dates, one can be used as interface each gateKeasurementsAmplitudes, Depth, Distance, % Wall Loss, Thinnest Point, X and Y PositionsCalibrationsPhased Array: TCG, Material Velocity, Probe Delay, Auto80, Encoder Cal, Dead Element Check Conventional: 2 Point (Material Velocity and Probe Delay)	Power	
Power Supply 100 to 240 VAC, 47–63 Hz, 1.9 A; 12VDC Battery Life 3 hrs internal, 6 hrs with external battery under typical operating conditions Compliance Meets IATA air transport regulations with one contained installed battery and one packed external battery Environmental -20C to +55 C (-4F to 131F) to MIL-STD-810G Method 501.5 & 502.5, Procedure I Storage Temperature -20C to +55 C (-4F to 158F) to MIL-STD-810G Method 501.5 & 502.5, Procedure II Ingress Protection Tested to IP65 Shock 4 Transit Drop to MIL-STD-810G method 516.6, Procedure V Data Visualization Customizable with Mentor Create software Zoom Any data view may be expanded to full screen with gesture Instructional Material Rich Text, JPG, PNG, BMP, PDF or Video (MP4) Views A-SCAN, C-SCAN VERVIEW, E-SCAN, S-SCAN Probe Selection Swap between conventional and phased array on same screen Evaluation 2 Gates, one can be used as interface echo gate Kasurements Amplitudes, Depth, Distance, % Wall Loss, Thinnest Point, X and Y Positions Calibrations Phased Array: TCG, Material Velocity, Probe Delay, Auto80, Encoder Cal, Dead Element Check Conventional: 2 Point (Material Velocity and Probe Delay)	Internal Battery	63 WH Lithium Ion
Battery Life 3 hrs internal, 6 hrs with external battery under typical operating conditions Compliance Meets IATA air transport regulations with one contained installed battery and one packed external battery Environmental -20C to +55 C (-4F to 131F) to MIL-STD-810G Method 501.5 & 502.5, Procedure 1 Storage Temperature -20C to +70C (-4F to 158F) to MIL-STD-810G Method 501.5 & 502.5, Procedure 1 Ingress Protection Tested to IP65 Shock 4' Transit Drop to MIL-STD-810G method 516.6, Procedure V Deta Visualization Customizable with Mentor Create software Zoom Any data view may be expanded to full screen with gesture Instructional Material Rich Text, JPG, PNG, BMP, PDF or Video (MP4) Views A-SCAN, C-SCAN, C-SCAN OVERVIEW, E-SCAN, S-SCAN Probe Selection Swap between conventional and phased array on same screen Evaluation 2 Gates, one can be used as interface echo gate Measurements Amplitudes, Depth, Distance, % Wall Loss, Thinnest Point, X and Y Positions Calibrations Phased Array: TCG, Material Velocity, Probe Delay, Auto80, Encoder Cal, Dead Element Check Conventional: 2 Point (Material Velocity and Probe Delay)	External Battery	84 WH Lithium Ion
Compliance Meets IATA air transport regulations with one contained installed battery and one packed external battery Environmental Compliance -20C to +55 C (-4F to 13IF) to MIL-STD-810G Method 501.5 & 502.5, Procedure I Storage Temperature -20C to +70C (-4F to 158F) to MIL-STD-810G Method 501.5 & 502.5, Procedure I Storage Temperature -20C to +70C (-4F to 158F) to MIL-STD-810G Method 501.5 & 502.5, Procedure II Ingress Protection Tested to IP65 Shock 4' Transit Drop to MIL-STD-810G method 516.6, Procedure V Data Visualization Customizable with Mentor Create software Zoom Any data view may be expanded to full screen with gesture Instructional Material Rich Text, JPG, PNG, BMP, PDF or Video (MP4) Views A-SCAN, C-SCAN, C-SCAN OVERVIEW, E-SCAN, S-SCAN Probe Selection Swap between conventional and phased array on same screen Evaluation 2 Gates, one can be used as interface echo gate Measurements Amplitudes, Depth, Distance, % Wall Loss, Thinnest Point, X and Y Positions Calibrations Phased Array: TCG, Material Velocity, Probe Delay, Auto80, Encoder Cal, Dead Element Check Conventional: 2 Point (Material Velocity and Probe Delay)	Power Supply	100 to 240 VAC, 47–63 Hz, 1.9 A; 12VDC
Environmental Deperating Temperature -20C to +55 C (-4F to 13IF) to MIL-STD-810G Method 501.5 & 502.5, Procedure I Storage Temperature -20C to +70C (-4F to 158F) to MIL-STD-810G Method 501.5 & 502.5, Procedure II ingress Protection Tested to IP65 Shock 4' Transit Drop to MIL-STD-810G method 516.6, Procedure V Data Visualization Visualization User Interface Customizable with Mentor Create software Zoom Any data view may be expanded to full screen with gesture Instructional Material Rich Text, JPG, PNG, BMP, PDF or Video (MP4) Views A-SCAN, C-SCAN, C-SCAN OVERVIEW, E-SCAN, S-SCAN Probe Selection Swap between conventional and phased array on same screen Evaluation 2 Gates, one can be used as interface echo gate Measurements Amplitudes, Depth, Distance, % Wall Loss, Thinnest Point, X and Y Positions Calibrations Phased Array: TCG, Material Velocity, Probe Delay, Auto80, Encoder Cal, Dead Element Check Conventional: 2 Point (Material Velocity and Probe Delay)	Battery Life	3 hrs internal, 6 hrs with external battery under typical operating conditions
Operating Temperature-20C to +55 C (-4F to 13IF) to MIL-STD-810G Method 501.5 & 502.5, Procedure IStorage Temperature-20C to +70C (-4F to 158F) to MIL-STD-810G Method 501.5 & 502.5, Procedure IIingress ProtectionTested to IP65d ' Transit Drop to MIL-STD-810G method 516.6, Procedure VData VisualizationCustomizable with Mentor Create softwareCustomizable with Mentor Create softwareCustomizable with Mentor Create softwareZoomAny data view may be expanded to full screen with gestureInstructional MaterialRich Text, JPG, PNG, BMP, PDF or Video (MP4)ViewsA-SCAN, C-SCAN, C-SCAN OVERVIEW, E-SCAN, S-SCANProbe SelectionSwap between conventional and phased array on same screenEvaluation2 Gates, one can be used as interface echo gateMeasurementsAmplitudes, Depth, Distance, % Wall Loss, Thinnest Point, X and Y PositionsCalibrationsPhased Array: TCG, Material Velocity, Probe Delay, Auto80, Encoder Cal, Dead Element Check Conventional: 2 Point	Compliance	Meets IATA air transport regulations with one contained installed battery and one packed external battery
Operating Temperature-20C to +55 C (-4F to 13IF) to MIL-STD-810G Method 501.5 & 502.5, Procedure IStorage Temperature-20C to +70C (-4F to 158F) to MIL-STD-810G Method 501.5 & 502.5, Procedure IIingress ProtectionTested to IP65d ' Transit Drop to MIL-STD-810G method 516.6, Procedure VData VisualizationCustomizable with Mentor Create softwareCustomizable with Mentor Create softwareCustomizable with Mentor Create softwareZoomAny data view may be expanded to full screen with gestureInstructional MaterialRich Text, JPG, PNG, BMP, PDF or Video (MP4)ViewsA-SCAN, C-SCAN, C-SCAN OVERVIEW, E-SCAN, S-SCANProbe SelectionSwap between conventional and phased array on same screenEvaluation2 Gates, one can be used as interface echo gateMeasurementsAmplitudes, Depth, Distance, % Wall Loss, Thinnest Point, X and Y PositionsCalibrationsPhased Array: TCG, Material Velocity, Probe Delay, Auto80, Encoder Cal, Dead Element Check Conventional: 2 Point	Environmental	
-20C to +70C (-4F to 158F) to MIL-STD-810G Method 501.5 & 502.5, Procedure II ingress Protection Tested to IP65 Shock 4' Transit Drop to MIL-STD-810G method 516.6, Procedure V Data Visualization User Interface Zoom Any data view may be expanded to full screen with gesture Instructional Material Rich Text, JPG, PNG, BMP, PDF or Video (MP4) Views A-SCAN, C-SCAN, C-SCAN OVERVIEW, E-SCAN, S-SCAN Probe Selection Swap between conventional and phased array on same screen Evaluation 2 Gates, one can be used as interface echo gate Measurements Amplitudes, Depth, Distance, % Wall Loss, Thinnest Point, X and Y Positions Calibrations Phased Array: TCG, Material Velocity, Probe Delay, Auto80, Encoder Cal, Dead Element Check Conventional: 2 Point (Material Velocity and Probe Delay)		-20C to +55 C (-4F to 131F) to MIL-STD-810G Method 501.5 & 502.5, Procedure I
Ingress ProtectionTested to IP65Shock4' Transit Drop to MIL-STD-810G method 516.6, Procedure VData VisualizationUser InterfaceCustomizable with Mentor Create softwareZoomAny data view may be expanded to full screen with gestureInstructional MaterialRich Text, JPG, PNG, BMP, PDF or Video (MP4)ViewsA-SCAN, C-SCAN, C-SCAN OVERVIEW, E-SCAN, S-SCANProbe SelectionSwap between conventional and phased array on same screenEvaluation2 Gates, one can be used as interface echo gateMeasurementsAmplitudes, Depth, Distance, % Wall Loss, Thinnest Point, X and Y PositionsCalibrationsPhased Array: TCG, Material Velocity, Probe Delay, Auto80, Encoder Cal, Dead Element Check Conventional: 2 Point (Material Velocity and Probe Delay)		
Solution4' Transit Drop to MIL-STD-810G method 516.6, Procedure VData VisualizationUser InterfaceCustomizable with Mentor Create softwareZoomAny data view may be expanded to full screen with gestureInstructional MaterialRich Text, JPG, PNG, BMP, PDF or Video (MP4)ViewsA-SCAN, C-SCAN, C-SCAN OVERVIEW, E-SCAN, S-SCANProbe SelectionSwap between conventional and phased array on same screenEvaluation2 Gates, one can be used as interface echo gateMeasurementsAmplitudes, Depth, Distance, % Wall Loss, Thinnest Point, X and Y PositionsCalibrationsPhased Array: TCG, Material Velocity, Probe Delay, Auto80, Encoder Cal, Dead Element Check Conventional: 2 Point	Ingress Protection	
User InterfaceCustomizable with Mentor Create softwareZoomAny data view may be expanded to full screen with gestureInstructional MaterialRich Text, JPG, PNG, BMP, PDF or Video (MP4)ViewsA-SCAN, C-SCAN, C-SCAN OVERVIEW, E-SCAN, S-SCANProbe SelectionSwap between conventional and phased array on same screenEvaluation2 Gates, one can be used as interface echo gateMeasurementsAmplitudes, Depth, Distance, % Wall Loss, Thinnest Point, X and Y PositionsCalibrationsPhased Array: TCG, Material Velocity, Probe Delay, Auto80, Encoder Cal, Dead Element Check Conventional: 2 Point	Shock	
User InterfaceCustomizable with Mentor Create softwareZoomAny data view may be expanded to full screen with gestureInstructional MaterialRich Text, JPG, PNG, BMP, PDF or Video (MP4)ViewsA-SCAN, C-SCAN, C-SCAN OVERVIEW, E-SCAN, S-SCANProbe SelectionSwap between conventional and phased array on same screenEvaluation2 Gates, one can be used as interface echo gateMeasurementsAmplitudes, Depth, Distance, % Wall Loss, Thinnest Point, X and Y PositionsCalibrationsPhased Array: TCG, Material Velocity, Probe Delay, Auto80, Encoder Cal, Dead Element Check Conventional: 2 Point		
ZoomAny data view may be expanded to full screen with gestureInstructional MaterialRich Text, JPG, PNG, BMP, PDF or Video (MP4)ViewsA-SCAN, C-SCAN, C-SCAN OVERVIEW, E-SCAN, S-SCANProbe SelectionSwap between conventional and phased array on same screenEvaluation2 Gates, one can be used as interface echo gateMeasurementsAmplitudes, Depth, Distance, % Wall Loss, Thinnest Point, X and Y PositionsCalibrationsPhased Array: TCG, Material Velocity, Probe Delay, Auto80, Encoder Cal, Dead Element Check Conventional: 2 Point		Customizable with Mentor Create enfluere
Instructional MaterialRich Text, JPG, PNG, BMP, PDF or Video (MP4)ViewsA-SCAN, C-SCAN, C-SCAN OVERVIEW, E-SCAN, S-SCANProbe SelectionSwap between conventional and phased array on same screenEvaluation2 Gates, one can be used as interface echo gateMeasurementsAmplitudes, Depth, Distance, % Wall Loss, Thinnest Point, X and Y PositionsCalibrationsPhased Array: TCG, Material Velocity, Probe Delay, Auto80, Encoder Cal, Dead Element Check Conventional: 2 Point (Material Velocity and Probe Delay)		
Views A-SCAN, C-SCAN, C-SCAN OVERVIEW, E-SCAN, S-SCAN Probe Selection Swap between conventional and phased array on same screen Evaluation 2 Gates, one can be used as interface echo gate Measurements Amplitudes, Depth, Distance, % Wall Loss, Thinnest Point, X and Y Positions Calibrations Phased Array: TCG, Material Velocity, Probe Delay, Auto80, Encoder Cal, Dead Element Check Conventional: 2 Point (Material Velocity and Probe Delay)		
Probe SelectionSwap between conventional and phased array on same screenEvaluation2 Gates, one can be used as interface echo gateMeasurementsAmplitudes, Depth, Distance, % Wall Loss, Thinnest Point, X and Y PositionsCalibrationsPhased Array: TCG, Material Velocity, Probe Delay, Auto80, Encoder Cal, Dead Element Check Conventional: 2 Point (Material Velocity and Probe Delay)		
Evaluation2 Gates, one can be used as interface echo gateMeasurementsAmplitudes, Depth, Distance, % Wall Loss, Thinnest Point, X and Y PositionsCalibrationsPhased Array: TCG, Material Velocity, Probe Delay, Auto80, Encoder Cal, Dead Element Check Conventional: 2 Point (Material Velocity and Probe Delay)		
Measurements Amplitudes, Depth, Distance, % Wall Loss, Thinnest Point, X and Y Positions Calibrations Phased Array: TCG, Material Velocity, Probe Delay, Auto80, Encoder Cal, Dead Element Check Conventional: 2 Point (Material Velocity and Probe Delay)		
Calibrations Phased Array: TCG, Material Velocity, Probe Delay, Auto80, Encoder Cal, Dead Element Check Conventional: 2 Point (Material Velocity and Probe Delay)		
(Material Velocity and Probe Delay)		
		(Material Velocity and Probe Delay)

Ultrasonic specifications

Configuration	
Phased Array	
Channels	32:32 PR
Aperture	1–32 Elements
Focal Laws	1024
Scanning	Linear, sectorial, focused
Groups	Up to 8
Conventional	
Channels	1
Pulser (Phased Array and C	tonyontional)
PRF	10 Hz to 20 kHz
Pulse Shape	Bipolar or unipolar square wave
Voltage	20–150 V _{pp} , 0 – -75V _{op} ; in 5 V steps
Width (auto or manual)	50-3000 nS
Delay Step Increment	10 nS
Receiver and Digitizer (Pha	sed Array and Conventional)
Gain	0–78 dB (Phased Array), 0-94 dB (Conventional); in 0.2 dB steps
TCG	
Number of Points	Up to 16
Slope	50 dB/µS
Rectification	Pos HW, Neg HW, Full, RF
Bandwidth	0.5 MHz to 15 MHz
Digitizing Rate	62.5 MHz, up-sampled to 500 MHz
Delay Step Increment	2.5 nS
Acquisition Range	50 nS to 150 μS
ASCAN Compression Points	512, 1024, 2048, 4096

MUX module specifications

Physical	
Dimensions (W x H x D)	8.6" x 8.4" x 4.1"
Weight, w/Battery	6.5 lbs
Power	
Exchangable Battery, hot swap	84 WH Lithium Ion
Power Supply	100 to 240 VAC, 47–63 Hz, 1.9 A; 12VDC
Configurations Phased Array	
Channels	32:128 PR
Aperture	1-32 Elements
Focal Laws	1024
Scanning	Linear, sectorial, focused
Conventional	
Channels	1

Mentor UT and MUX Module complies to standard EN ISO 18563-1 for Phased Array Channels and EN ISO 12668-1 for Conventional Channels.

With Waygate Technologies, innovation is the standard.

Waygate Technologies' industry-leading Mentor portables are designed to enable the most reliable inspections, regardless of experience level. With outstanding performance and advanced software, these connected NDT portable devices can help you improve inspection productivity, asset reliability, and confidence.

> For more information contact sales@intechnde.com or visit www.intechnde.com



British Columbia 140 - 8851 Beckwith Road Richmond, B.C. V6X 1V4 Tel: 604 276 8006 Fax: 604 276 8725 Toll Free: 1 800 677 8884 Alberta 6211 Roper Road Edmonton, Alberta T6B 3G6 Tel: 780 448 9575 Fax: 780 466 1280 Toll Free: 1 888 576 7756 Ontario #48 1200 Speers Road Oakville, Ontario L6L 2X4 Tel: 289 430 0286 Fax: 780 466 1280