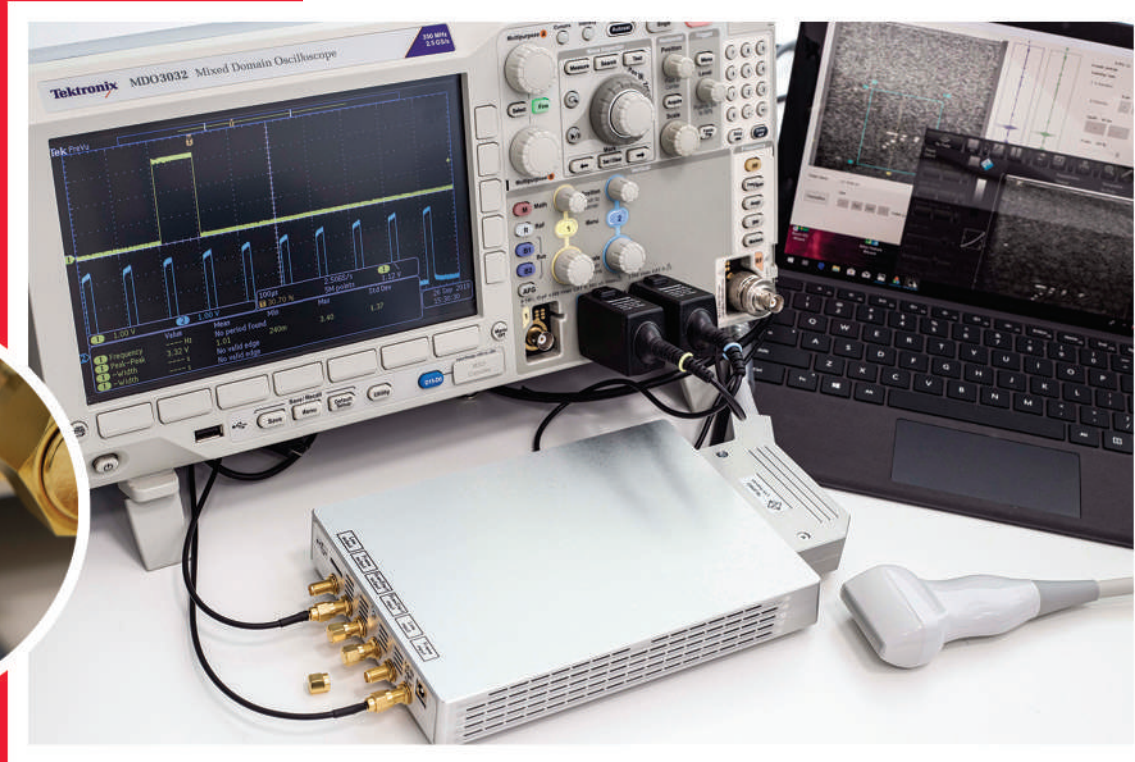




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TELEMED
ULTRASOUND MEDICAL SYSTEMS



WHY TELEMED'S ARTUS?

- Compact and lightweight
- Compatible with most modern computers
- Cost-effective solution
- Free SDK
- Free Matlab, Python and Labview Tools access to raw RF data in real-time*
- Ease to synchronize with external equipment**
- CE, FDA Certified

*Optional RF module required

**Optional I/O Module required

DIAGNOSTIC SYSTEM WITH RESEARCH CAPABILITIES

ArtUs ultrasound scanners are designed for clinical use and meet safety standards for ultrasound diagnostic equipment. Optional RF Module and I/O Module enables functions that are not usually available in commercial ultrasound scanners. Combined with Telemed's software tools research modules enable access to raw ultrasound data in combination with B-mode imaging in clinical environment.

I/O Module

Hardware/software option, intended to synchronize ultrasound scans with external equipment. Useful for research labs and manufacturers to integrate ultrasound with other imaging and non-imaging equipment.

Two trigger inputs and two outputs (ultrasound line and frame triggers) are available and allow system to be used in a "master" or "slave" modes.

RF Module

Hardware/software option for real-time access to raw ultrasound information on various stages of data processing.

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SOFTWARE TOOLS

RF DATA CONTROL

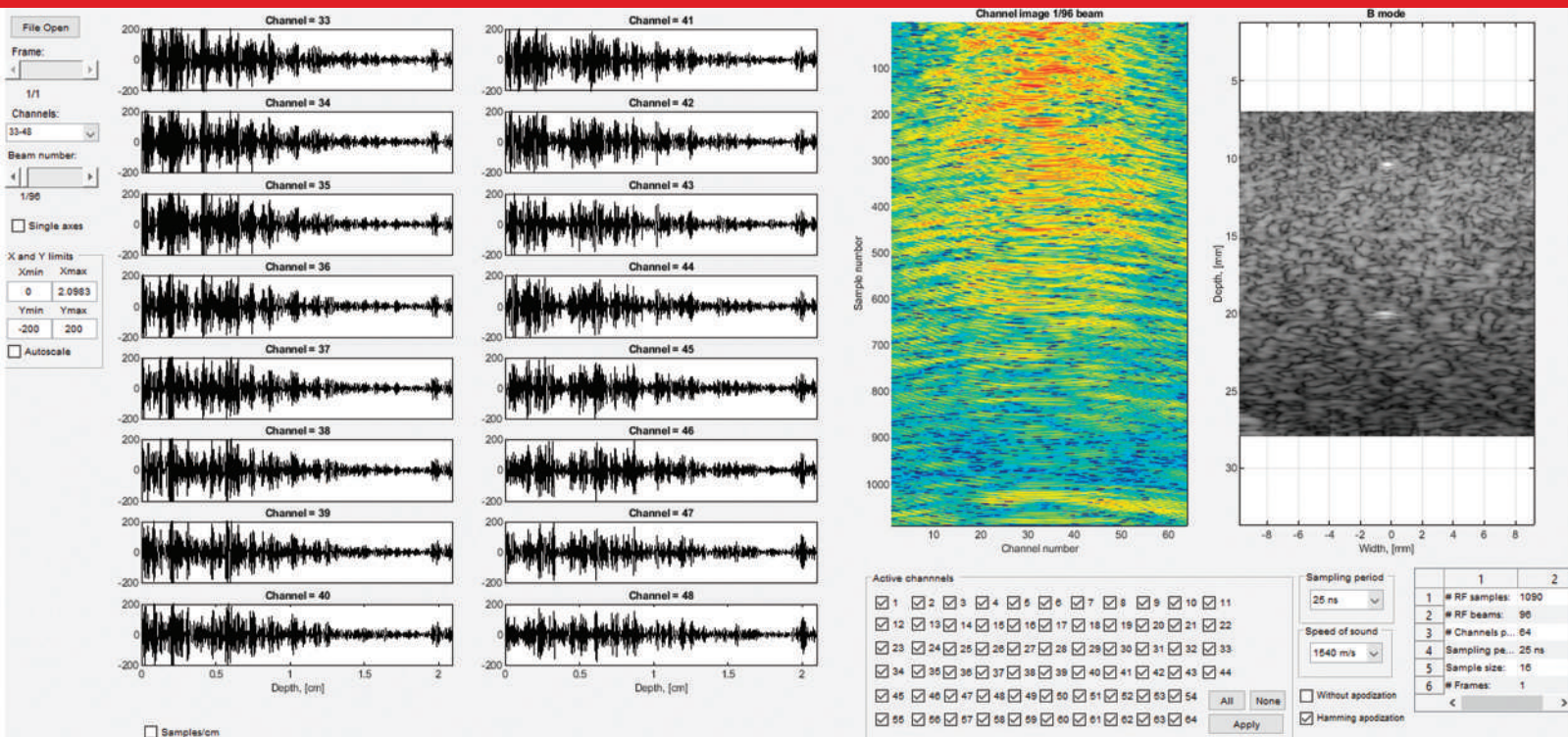
The C++ program provides control of ultrasound scanning parameters and access to three levels of real-time data streams: raw channel data, raw beamformed RF data and image data. Raw data could be used for the development of novel parametric imaging techniques and biomarkers, while channel data is essential for development of advanced beamforming techniques, custom transmit focusing, plane wave imaging and etc. Raw and image data could be used for training and testing of deep learning or other algorithms for the improvements of image quality including detection and segmentation of clinically significant anatomical regions. Same functionality programs available also for MATLAB, Python, LabView.

CHANNEL DATA VIEWER

GUI functions are intended to review recorded channel data and examples of DAS beamforming of B-mode image.

MATLAB RF DATA TOOLS

Graphical user interface simplifies import and review of annotated RF data. Collection of scripts illustrates conventional RF signal processing steps typically used in the B mode image formation engine, such as filtering and logarithmic compression.



TELEMED SDK

Consists of runtime modules, documentation and samples providing unified interface for Telemed's ultrasound scanners. The SDK grants full control of the scanning parameters, access to raw and image data in real-time, data recording functions.

Beamformer unit:

- Wide range of transducers available: linear, convex, phased array type
- 64 TX/RX channels multiplexed to 192 transducer lines
- Three-level Pulser, 3 to 140Vpp programmable, 2A max
- Optional extension modules: I/O, RF, Channel data
- Variable gain and input impedance
- 1-18MHz frequency range
- USB3.0 interface
- 12V 3A power