# VIASONÎX
## Advanced Vascular Technologies

# Dolphin
# Transcranial Doppler
## Taking TCD Technology One Step Further

**DOLPHIN***MAX*
Battery Operated TCD System

**DOLPHIN**4D
Standalone TCD System

**DOLPHIN***IQ*
TCD Module

*Discover the Most Advanced Bilateral TCD Robot in The Market*

**DOLPHIN***XF*
**TCD Robot**

# Everything You Expect from a State-of-the-Art TCD System and Much More...

- ✓ Slim design, lightweight and battery operated
- ✓ Scroll back in time and save Doppler spectrums from different depths along the Ultrasound beam.
- ✓ View a suspected emboli travelling along the blood vessel
- ✓ Operate the Dolphin with a single operation button
- ✓ Receive immediate statistical database information
- ✓ Send reports and automatic worksheets to EMR and PACS
- ✓ And much more!

## Experience the Power of the Dolphin

## Clinical Applications & Specialty Tests

| Routine Cerebral Examinations | Specialty Tests | Continuous Examinations |
|---|---|---|
| Stroke Management | VMR / Autoregulation | Cerebral Monitoring |
| Vasospasm and SAH | Breath Holding Test | Emboli Detection |
| Arteriovenous Malformation | Patent Foramen Ovale (PFO) | Endarterectomy |
| Intracranial Stenosis | Sickle Cell Disease | Evaluation of ICP changes |
| Collateral Capacity | Brain Death Diagnosis | Intraoperative Doppler |
| | Evoked Flow | Intraoperative TCD Monitoring |

## Discover the *Dolphin/XF*
## The most advanced and unique bilateral TCD Robot in the market!
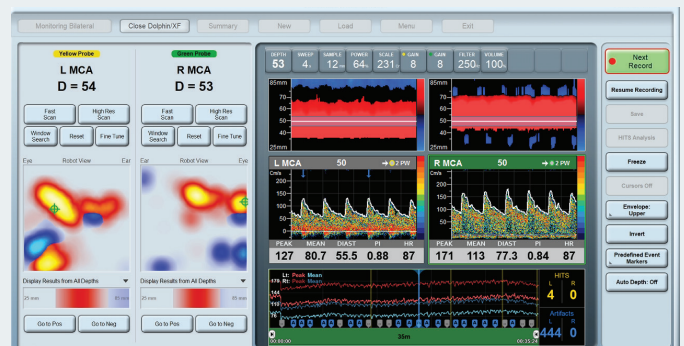
**DOLPHIN XF**
**TCD Robot**

The *Dolphin/XF* TCD Robot Quickly scans the cerebral circulation and automatically assists in identifying blood flow velocities on the right and left sides of the brain. Using the *Dolphin/XF* is fast, simple and stable. Ideal for monitoring in the ICU, OR, and TCD lab, and for a range of specialty tests such as PFO or VMR tests.

## *Dolphin/XF* Selected Features:

- ✓ Comfortable Fabric Headset
- ✓ Automatic Bilateral Scan
- ✓ Auto Search along the Ultrasound Beam
- ✓ Position Memory and Maximum Position Accuracy
- ✓ Scan Across all Depths
- ✓ "Heat Maps" Identifying Cerebral Vessels
- ✓ Simple and Intuitive User Interface
- ✓ Disposable Headset
- ✓ Fast Scan Option in just a few Seconds
- ✓ Fully Compatible with all Dolphin TCD models

*Robotic Bilateral Scan*
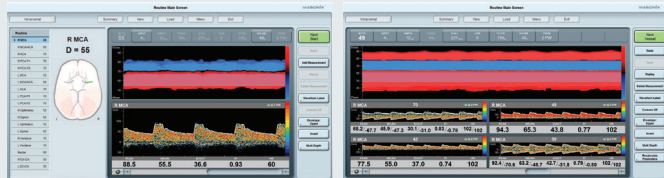
## Range of Accessories

Monitoring Headset

External Channels Connection Box

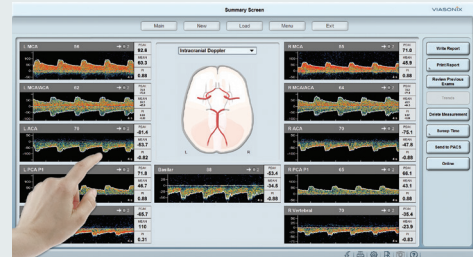Wireless / Wired Remote Control

Foot Switch

## Highly Advanced Doppler Processing

- ✓ Spectrum, M Mode & Sound **replay at any depth!**
- ✓ Complete **Raw Data** for post processing
- ✓ **Multi Depth** support
- ✓ **Velocity Profile** diagnosis

## User Friendly Interface

- ✓ **One Key** Operation
- ✓ Designed for **Touch Screen**
- ✓ Unlimited Flexible **Protocols**
- ✓ Configurable **Display**
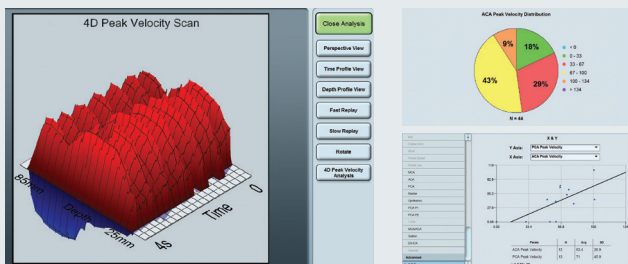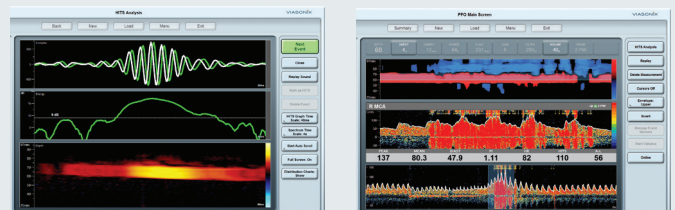- ✓ Dynamic **Reporting**
- ✓ **Language** support

## Complete Network Solution

- ✓ **EMR** & **PACS** Connectivity
- ✓ **DICOM** Worklist and Storage
- ✓ Programmable **Structured Report**
- ✓ **HL7** Interface
- ✓ **GDT** Connectivity
- ✓ Unlimited **Review Stations**

## Advanced HITS Detection

- ✓ Fast and thorough review of all **HITS**
- ✓ High resolution **HITS M-Mode display**
- ✓ Distribution **charts**
- ✓ Complex & Energy **graphs**

## Research Oriented

- ✓ Variety of **export** formats including **Raw Data**
- ✓ **4D velocity** scan
- ✓ Built in **statistics** tool
- ✓ Informative **charts** and comparisons
- ✓ **Data mining**

## About Us

**Viasonix** is the only international company that offers a wide range of advanced Peripheral Vascular and Transcranial Doppler (TCD) product lines. The company's state-of-the-art products meet common day-to-day routine clinical practice, as well as set new industry standards.

Optional Stand

### Range of Doppler Probes

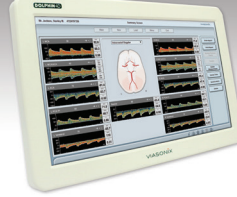2 MHz Monitoring  2 MHz  4 MHz  8 MHz  16 MHz

# Dolphin Specifications

## DOLPHIN*MAX*
**The Next Generation Battery Operated TCD System**

## DOLPHIN*4D*
**The Ultimate TCD Standalone System**

## DOLPHIN*IQ*
**The Ideal Cost-Effective TCD Module**

| | DOLPHIN MAX | DOLPHIN 4D | DOLPHIN IQ |
|---|---|---|---|
| **Dimensions** | 47x30x7 cm | 47x30x7 cm | 27x21x5.5 cm |
| **Weight** | 6 kg | 6 kg | 2 kg |
| **Computer** | Integrated | Integrated | External |
| **Battery** | Internal Rechargeable | No | No |

## General

**Power:** 110-220 V, 50-60 Hz
**Dolphin/MAX Battery Operation Time**: Up to 6 hours
**Doppler Frequencies:** 2 MHz, 1.6 MHz, 4 MHz, 8 MHz
**Intraoperative:** 16 MHz (Not for USA & Canada)
**Probe Connectors:** 5
**Operating System:** Windows 7/8/10/11 (32 or 64 bit)
**Unilateral/Bilateral:** Supported
**CW/PW Probes:** Supported
**FFT Size Options:** 64/128/256/512
**Probe Holder:** Integrated
**Controls:** Wired/Wireless remote control, Touch screen, Foot switch, Keyboard, Mouse

## Dolphin/MAX and Dolphin/4D Integrated Computer

**Screen:** 18" Wide Screen LED with capacitive Multi Touch screen
**VESA mount:** Built in
**Operating System:** Windows 10 Enterprise, 64 Bit
**CPU/RAM:** Quad Core 2 GHz, 8 GB
**Hard Drive:** 1 TB or higher Enterprise Grade SSD with power loss protection
**USB Connection:** x4, USB 3.0
**Network:** Ethernet
**Speakers:** Integrated

## Dolphin/IQ Recommended Computer

**Screen:** 21"-24" Wide Screen with Touch Screen
**CPU/RAM:** i3/i5/i7, 4 GB or higher
**Hard Drive:** 1 TB or higher

## Doppler Processing

**Technology:** Fully digital, 8000 channels for each side
**M Mode:** Dynamic up to 500 gates for selected depth range
**Auto-Depth:** Supported
**Multi-Depth:** Up to 8 spectrum depths
**Replay:** Spectrum, M Mode and Doppler audio at any depth
**Raw Data Post Processing:** Depth, Gain, Scale, Sample, Filter
**Specialty Tests:** Breath Holding, VMR, PFO, Sickle Cell, Vasospasm, Cognitive Response
**Save:** Automatic or Manual
**HITS Detection:** Simultaneous in multiple depths
**HITS M-Mode display:** 125 µs resolution
**HITS Analysis Screen:** with detailed events, distribution charts, complex & energy graphs
**Continuous Monitoring:** Trends display including zoom in/out
**Event Markers:** Automatic, Predefined, Alerts, Delta-mean

## Software Features

**Screen Display:** Designed for wide screen and High Definition
**Cybersecurity:** According to FDA Guidelines
**HIPAA:** Patient privacy options
**Protocols:** Unlimited, fully configurable
**Main Screen Layout:** Fully configurable, interactive
**Summary Screens:** Interactive
**User Profile Settings:** Unlimited, user configurable
**Designed Reports:** Fully configurable
**Free Text Report:** Templates, tables, camera & pictures, TAGS
**Waveform Labels:** Manual and automatic with threshold display
**Backup/Restore:** Integrated. USB/DVD/Network, Manual/Automatic
**Patient Details:** Flexible layout
**Medical History:** Configurable, with indication fields
**Storage:** Configurable options, compressed data files
**Camera:** USB camera support
**Maintenance:** Automated protocol with detailed report
**Languages:** Supported

## Connectivity

**External Channels:** Analog/Digital Input/Output (8/8)
**Capnograph:** Supported
**Review Stations:** Unlimited, including over network
**Shared Database:** Over network
**DICOM Worklist:** Offline and Online
**DICOM Store:** BMP/JPG/PDF, multiple destinations
**DICOM Features**: Auto-send, auto-retry (queue)
**DICOM Structured Report:** Default/Programmable
**HL7:** Orders, Report, Query, Patient Registration
**GDT:** Patients and Report
**PDF:** Automatic Report Export
**Email:** With PDF attachment, using SMTP
**Network Queue:** Send reports while network is offline

## Research Options

**Export:** PDF, BMP, JPG, PNG, Excel, VDL, Movie, Word, RTF, Raw Data, Anonymous PDF
**Statistics:** Advanced charts, Comparison graphs, X-Y Analysis
**Advanced Display:** Velocity Profile, Depth Scan, 4D Analysis
**Data Mining:** Available with advanced segments
**Patient History:** Quick review of previous exams, patient trends screen
**Database Search:** Multiple advanced options

## Selected Approvals

ISO 13485, CE 0344, FDA K202742
Additional country-specific approvals