Key Features

- Frequency-domain measurements providing the average intensity, the amplitude and the phase of the signal
- Up to 512 optical channels
- Up to 50 Hz measurement rate
- External triggering and synchronization options (two instruments can be used simultaneously)
- MRI compatible sensors
- Real-time exporting of data (serial port or TCP/IP)

Measured Physiological Quantities

- EROS (Event Related Optical Signal)
- Functional hemodynamic imaging (head & muscle)
- Absorption, scattering and hemoglobin concentration on an absolute scale (head & muscle):
  - oxy- and deoxy-hemoglobin concentration
  - total hemoglobin concentration (perfusion)
  - oxygen saturation
  - tissue absorption and scattering coefficients

Interface To External Instruments

- Four-channel analog input unit
- Compatible with Brainsight™ by Rogue Research
- Interfaceable to FASTRAK® by Polhemus

Instrument Specifications

- Modulation Frequency: 110 MHz standard (Up to 400 MHz)
- Frequency Response: Up to 400 MHz
- Light Sources: Up to 64 laser diodes emitting at 690 nm and 830 nm (Custom wavelengths upon request)
- Detectors: Up to 32 PMTs
- Sensors:
  - All fiber optically coupled to subject
  - Patches for adults & infants
  - Full head for adults
  - Up to 10 m long fibers
- External signal input: Analog – 4 channels;
  Digital – 8 channels
- Serial communication: 1 channel
- Software Operating System: Windows 7 (32-bit)
- Electrical Requirements: 110-240 V, 50/60 Hz
- Dimensions: 46 cm x 43 cm x 23 cm
- Weight: Main unit - 20 kg

Software Specifications

- Data Acquisition
  - Real-time calculation and monitoring of tissue optical properties
  - Real-time calculation and monitoring of hemodynamic concentration parameters
  - Real-time display of data for each optical channel
  - Integration of user supplied real-time calculation library
- Data Analysis
  - Graphical display of optical data time traces
  - Calculation of changes in Hb, HbO and Phase
  - High pass and low pass filtering
  - Separation of files into blocks of data related to episodes of repeated events
  - Data is compatible with several GNU licensed software packages for further image construction and analysis

www.iss.com

©2014 ISS, INC. ALL RIGHTS RESERVED. All other trademarks or registered trademarks are the property of their respective owners. Caution: Investigational device. Limited by Federal (or United States) law to investigational use. The ISS Imagent is presently used for research only. Information furnished by ISS is believed to be reliable. However, no responsibility is assumed for possible inaccuracies or emissions. ISS reserves the right to change the design, specifications, etc., of the product at any time without notice. Imagent is covered by US Patents numbers: 5,212,386; 5,492,118; 5,497,768; 5,772,587; 6,078,833; 6,192,261B1. Other US & foreign patents pending.