

The Mind Research Network Mobile Imaging System

Siemens Magnetom Avanto with high-speed cardiac gradients:

- 1.5 Ultra Short 150 cm , whole body Superconductive 1.5 T Magnet
- RF Transmit Receive System
- Q-Engine 45mT/m Gradient System
- TIM : Total Image Matrix: 76 x 18
 - 76 Integrated Coil Elements combinable to 18 RF Channels
- Maximum Slew Rate: 200T/m/s per axis
- Maximum FoV: 50 cm
- High Performance Image Processor with Dual Processor: 8GB RAM
- High Performance Host Computer with Dual Pentium Processor
- 73GB Hard Disk for about 110,000 images
 - (256 or 512 matrix non- compressed)
- CD/DVD-R Writer
 - CD approx. 4000 images, DVD approx 25,000 images in 256 matrix
- Syngo MR software with Inline Technology, 1D/2D PACE, iPAT, Phoenix
- Standard Matrix Table: Supports up to 440 lbs
- Patient viewing window
- PMU Wireless Physio Control System
- Inline Diffusion & Perfusion
- Neuro Perfusion
- 3D CISS & 3D DESS
- Dicom 3.0
- VB17 A Software

TIM Application Suite:

- Neuro, Angio, Cardiac, Body, Onco, Breast, Ortho, Pediatric, Scientific

COILS:

- Head Matrix, Neck Matrix, Spine Matrix, Body Matrix, CP Large & Small Flex Coils, Shoulder Array

- Medrad Spectris Solaris EP Injector
- 48' Mobile Shielded Trailer

SERVICE:

- Siemens Service Agreement: Monday – Friday 8:00 AM – 5:00 PM
- Medrad Service Agreement: Available upon request.

Additional Research Capabilities:

The system is also fully equipped for complete functional MRI acquisition.

- High performance stimulus delivery computer with Intel Xeon CPU (3.2GHz) and 8GB of RAM.
- Stimulus delivery programs Neurobehavioral Systems Presentation (ver. 16.3 Build. 12.20.12), Psychology Software Tools, Inc. E-Prime (vers. 1.12 and 2.0) and PsychoPy (ver. 1.78 – Free, open source stimulus delivery software written in Python)
- Seamless integration of Presentation and E-Prime with SR Research Eye Link 1000 and BIOPAC MP150 via required plug-ins and toolboxes
- Fiber optic response devices
- Real-time monitoring of participant behavioral responses via a separate high performance stimulus delivery computer.
- Local 2TB Ubuntu (ver. 12.04) database machine for automatic and immediate back up of all collected imaging data.
- Custom built Apache Tomcat (ver. 7.0.41) server with web-based interface to upload participant behavioral data to local database machine for immediate back up of all collected behavioral data.