Tracking tools
A wireless pointer tool is used for acquiring electrode positions. The position and orientation of the tool is tracked and visualized real-time on a monitor.
A head reference tool is affixed on the patient’s head, to allow the tracking of the patient’s head movements.

xensor™ software on a high-performance PC
xensor™ software is delivered on a high-performance Windows 10 PC for optimized work efficiency.

Optical tracking system
The electrode digitizer system is based on the NDI Polaris infrared camera system. The camera sends out infrared light which is reflected by multiple reflective spheres on the tools. This produces highly accurate location information that is used for the digitization of each electrode position.

Remote control
xensor™ comes with a wireless remote control which allows easy switching between different steps in the workflow. Press left or right to go back or proceed with the procedure, choose the upper or lower button to rotate the 3D head model in different directions. Going through the digitization workflow with the remote control is as easy as that!
Core features & benefits

- Real-time tracking, registration and storage of electrode positions
- Estimation of electrode positions for unsampled electrodes, based on the positions of sampled electrodes and the original positions supplied in the input electrode file
- A guiding electrode selection tool detects current location of the pointer tool with relation to the subject. With instant suggestions of the matching electrode, the selection of the right electrode is fast and easy
- High-accuracy digitization with the use of infrared camera (accuracy deviation of less than 2 mm)
- 3 head models with different head geometries available (import of individual head models via asa™ and/or visor2™ software possible)
- The head model is fitted to the acquired head shape points rendering a realistic virtual head which results in optimal localization results
- A wireless remote control allows the users to switch easily between different steps in the workflow
- Step-by-step sampling of electrodes with acoustic and visual feedback of sampling success and electrode label read-out
- Tracking hardware is not sensitive to electro-magnetic fields or metal objects in the surrounding space
- Standard pre-defined electrode positions are supplied for all standard waveguard™ caps (import of custom electrode layouts possible)
- Export of electrode positions in ASCII format and asa™ format

A user-friendly and straightforward way to obtain reliable results

1. Start the process!
   Start the process by loading one of the predefined waveguard electrode layouts or your custom layout.

2. Register the fiducials
   Correlate the patient with the head model by indicating 3 fiducial points as reference: the nasion, left and right ear position.

3. Generate head shape points
   Acquire head shape points for exceptional registration accuracy by moving the pointer tool along the subject’s head. With the acquired points the head model is transformed to a realistic head shape based on the geometry of the acquired points.

4. Register electrode positions
   Digitize electrode position in real-time! The intuitive guiding electrode selection tool gives instant suggestions on the matching position, making the process straightforward and simple.

5. Export electrode positions
   The acquired electrode positions are ready for export to ASCII format or asa™ format.