Technical Specifications

ARTSENS Plus | ARTSENS Pen

Measurements Supported

- End-diastolic diameter: ✓ ✓
- Distension waveform: ✓ ✓
- Local vascular stiffness (β, AC, Ep, PWVβ): ✓ ✓
- Regional vascular stiffness (Carotid-Femoral PWV): ✓ ✓
- Central blood pressure: ✓ ✓
- Integreated brachial blood pressure module: ✓ ✓
- Resolution of distension: 10 um 10 um
- Resolution of end-diastolic diameter: <300 um <300 um
- Systolic blood pressure range: 40 - 260 mmHg -
- Diastolic blood pressure range: 20 - 200 mmHg -
- Accuracy of blood pressure: ± 5 mmHg -
- Scan depth: 5 - 40 mm 5 - 40 mm

Software Features

- Real time ultrasound signal analysis at 100 Hz: ✓ ✓
- Ultrasound signal analysis at 500 Hz: ✓ ✓
- Automated diameter cycle extraction: ✓ ✓
- Automated diameter and pressure cycle extraction: ✓ ✓
- Processed data export in xml / excel format for all readings: ✓ ✓
- Report generation & exporting: ✓ ✓
- Over the Air (OTA) software updates: ✓ ✓
- Raw data saving in host PC (Windows): ✓ ✓
- Beat to beat capture of distension waveforms: ✓ ✓

Hardware Features

- Ultrasound probe: 5MHz / 10 MHz, broad band, focused probe
- Pulse repetition frequency: upto 500 Hz upto 100 Hz
- Power supply: Internal Battery power Bus powered via USB 2.0
- Data communication interface: USB 2.0 USB 2.0
- Dimensions (hardware module): 240 mm x 170 mm x 60 mm 180 mm x 30 mm x 20 mm
- Weight (electronics hardware module): ~ 900 g ~ 55 g
- Host Tablet/Laptop / PC Minimum Requirements:
  - Intel i5 Processor, 4GB RAM, 128 GB ROM, Windows 10 OS, 1xUSB (type A) 2.0 port or higher
  - Intel i3 Processor, 4GB RAM, 64 GB ROM, Windows 10 OS, 1xUSB (type A) 2.0 port or higher

Environmental Conditions

- Operating Temperature: 0°C to 50°C 0°C to 50°C
- Storage Temperature (Commercial grade): 0°C to 70°C 0°C to 70°C
- Relative Humidity, non-condensing: 10 to 80% 10 to 80%

Regulatory Compliance

- IEC 60601-1-2: ✓ ✓
- IEC 60601-1: ✓ ✓