

Apogee 5300 Data Sheet

The iF-award designed ultrasound system Apogee5300 equips with the new image processing software package, which significantly improves image quality, while possessing value-added tool that allows clinicians easily practise confident scan across different applications.

Highlights

- *MFI*
- *Xbeam*
- *Panoscope*
- *VS-Flow*
- *Stress Echo*
- *CW*
- *Anatomic M mode*
- *ECG*
- *4D Pro*
- *Lumi 4D*
- *Elastography*
- *Needle Enhancement*
- *SIUI MAI Remote Service*



General Specification

Dimension

- Gross dimension
 - Carton: H 950mm * W 670mm * D 1200mm
 - Wooden: H 940mm * W 660mm * D 1190mm
- Net dimension
 - H 580mm * W 815mm * D 1280~1520mm

Weight

- Gross weight
 - 90kg (Carton Packing)
 - 105kg (Wooden case packing)
- Net weight
 - 60kg

Power Requirements

- Voltage: 100~240V $\pm$ 10%~ (230 $\pm$ 23V for EU countries)
- Frequency: 50Hz $\pm$ 1Hz; 60Hz $\pm$ 1Hz
- Rated Power: 300VA

Operation Conditions

- Ambient temperature: 0°C to +40°C
- Relative humidity: 30% to 85%
- Atmospheric Pressure: 700hPa to 1060hPa

Stored Conditions

- Ambient temperature: -20°C to +60°C
- Relative humidity: 15% to 93%
- Atmospheric Pressure: 500hPa ~ 1060hPa

Connectivity

- Video out port
- S-Video out port
- Audio in port
- Audio out port
- MIC
- VGA out port
- 4 USB port
- Printer control port
- AC power input port
- HDMI digital port
- Foot SW
- WIFI port

- ECG port: 1
- Gel warmer port: 1
- DVD ROM
- And others

Appearance

- Ergonomic appearance
- Swivel keyboard and monitor
- High resolution color monitor
- 19-inch high resolution monitor
- Visual Angle:
 - Left and right side: 178°
 - Up and down: 178°
- Resolution: 1280 $\times$ 1024
- 10.4-inch touch screen
- Backlit keyboard, 8 TGC
- Four active probe connectors
- Six probe holders
- Control panel
 - Left and right side rotation
 - Up and down adjust
- Hard disk 500 GB
- And others

System Overview

Applications

- Abdomen
- Urology
- Gynecology
- Obstetrics (1st Trimester, 2nd and 3rd Trimesters)
- Fetal echo
- Multifetation Gest
- Peripheral Nerve
- Thyroid
- Breast
- Testes
- Peripheral Vein
- Peripheral Arteries
- MSK
- Podiatry
- Superficial
- Carotid
- Cardiology
- Paediatrics Cardiac
- TCD

- And others

Transducer Types

- Electronic convex probe
- Electronic micro-convex probe
- Electronic linear probe
- Electronic trans vaginal probe
- Electronic phased array probe
- Electronic trans rectal probe
- Electronic biplane probe
- Electronic pencil probe
- 4D convex probe
- 4D vaginal probe
- And others

Probe Mode

- C3LC convex probe
- C3LC convex probe HD
- L8LC linear probe
- L8LC linear probe HD
- L10LC linear probe
- L5LC linear probe
- L10LC hockey stick probe
- U5LC linear probe(Special biopsy for urology)
- P3FC phased array probe
- P5FC phased array probe
- C6LC micro-convex probe
- C3IC micro-convex probe
- V6LC micro-convex probe
- V6LC trans vaginal probe
- U5LC trans rectal probe
- C5LF 4D convex probe
- V6LC 4D vaginal probe
- ECBP biplane dual micro-convex probe
- ECBP biplane probe (1 Linear,1 micro-convex)
- TR2-14 pencil probe
- TR5-14 pencil probe
- And others

Standard Features

- Auto-Fit: Automatic Optimization
- Nanoview : Speckled Reduction
- Trapezoidal/ Extend Imaging
- Tissue Harmonic imaging
- Edit the exam type and save the user-defined items
- MFI (Inversion THI)
- XBeam : Compound Imaging

- Auto IMT
- Auto Volume
- Semi-Auto EF
- CFM/CPA/DPA
- VS Flow
- Pulse Wave Doppler
- Duplex / Triplex
- HPRF
- TEI index
- Free hand 3D
- Smarchive
- Auto automatic PW trace and calculate
- Semi auto PW trace and calculate

Optional Features

- Panoscope : Panoramic Imaging
- CW
- Color M mode
- Anatomic M mode (5 lines)
- ECG
- 4D Pro
- Lumi 4D
- TDI
- Elastography
- Needle Enhancement
- Stressecho
- SonoAir : transmit images to iPad/iPhone or the wireless Printer
- DICOM 3.0 (Stroage/Worklist/MPPS/Structured Report/Print)
- SIUI MAI: Remote online Demonstration/Training/ Course/Service
- Contrast Imaging
- And others

Standard Accessories

- Power Cable
- Operation Manual
- Potential equalization conductor
- Printer control cable
- S-Video cable
- Fuse
- BNC/RCA cable
- Dust-proof cover
- Recovery system CD
- Cupule
- Tray

Optional Accessories

- B/W or color Video printer
- LaserJet or inkjet printer
- Biopsy guide for convex or linear probe
- Biopsy guide for trans vaginal or transrectal probe
- Probe holder for pencil probe(DCYJG-R154)
- Foot switch (JT-3/JT-2)
- ECG cable
- Gel warmer(JRQ-B001)
- Wireless network antenna(If purchase WiFi or SIUI MAI function)
- Camera(If purchase SIUI MAI function)
- And others

Display Mode

- B, 2B, 4B mode
- M, B+M mode
- B+C+M
- B+C mode
- B+CPA, B+PDI mode
- B+VS Flow mode
- B+PW mode
- B+CFM+PW, B+VS+PW
- B+CPA+PW, B+DPA+PW
- B+CW mode
- B+CFM+CW
- B+E mode
- B+TDI, B+TDI+PW
- Split B/Color real time mode
- 3D, 4D mode
- And others

System Parameters

Zoom

- HD Zoom(with sample box): $\times 1.0 \sim \times 10.2$
- Full-View Zoom: $\times 1.0 \sim \times 10.0$
- Full Screen Zoom-The image area fills into whole screen
- Realtime Zoom mix times: $\geq \times 60.0$

Focus

- Continuous dynamic focus
- Dynamic apodization
- Dynamic aperture

- 1~8 selectable transmit focus
- Acoustic lens focus
- And others

Memory

- 2D avi record (60 min or 72000 frames)
- 2D cineloop record (max.2000 frames)
- M-mode (650 s)
- PW-mode (650 s)
- CW-mode (320 s)
- 4D-mode (50 cases)
- Hard disk 500 GB
- And others

2D Imaging Processing

- 8-step TGC slide pots
- Gain
- Depth
- Frequency
- Dynamic range adjustable
- Enhancement
- Smooth
- Nanoview
- Persistence
- Zoom
- Chroma
- Grayscale
- Power: $-\infty \sim 0\text{dB}$, 0~100%
- Scan angle
- B steer
- B rotation: $0^\circ \sim 270^\circ$
- Line density
- Inversion: left/right, up/down, rotate
- Focus number: 8
- XBeam
- And others

M Mode Imaging Processing

- Gain
- Sweep speed: 4 steps (L/M/H/Highest)
- Maps
- Chroma
- Display layout: 9 types (U/D, L/R, Single)
- AMM-angle: 360°
- AMM-line
- And others

Color/CPA Mode Imaging Processing

- Gain control
- Pulse repetition frequency
- Wall filter
- C Priority
- C Gate
- Median Filter
- Threshold
- Color Map
- Smooth
- Color persistence
- Line density
- Color enhancement
- Velocity
- Color frequency
- Power: 0~100%, -∞ dB ~ 0 dB
- Baseline
- Steer: -20° ~ +20°
- Tag Range
- Tag Location
- And others

PW Mode Imaging Processing

- Gain
- D map
- Frequency
- Chroma
- PRFd
- Velocity
- Basic line
- Wall filter
- Angle
- Sampling volume
- Volume
- D Speed
- Smooth
- Power: -∞ dB ~ 0 dB, 0~100%
- Steer
- Display layout: 9 types (U/D, L/R, Single)
- And others

CW Mode Imaging Processing

- Gain
- Map
- Speed
- Volume
- Power: -∞ dB ~ 0 dB, 0~100%
- Smooth

- Chroma
- Wall filter
- Angle
- Scale
- Display layout: 9 types (U/D, L/R, Single)
- And others

TDI Mode Imaging Processing

- C Gain
- C PER
- C Freq
- PRFc
- Wall filter
- Baseline
- C Map
- Thred
- C Prior
- C PWR
- C SMO
- C Gate
- M Filter
- C LD
- C Speed
- C ENH
- And others

ECG Mode Imaging Processing

- Gain
- Position
- Interval
- ESP
- Color
- Hide
- Heart rate display
- And others

4D Pro Image Processing

- Zoom
- Color
- Smooth
- Scan Rate: Low, Mid, High
- Opacity Map
- Opacity Pos
- nSlice
- Planes
- Space
- Q Cut (2D sample line with curve editable)

- Any Cut (4D volume image tissue/noise remove)
- And others

Lumi 4D Imaging Processing

- Rotate angle
- Light source angle: Spatial free position
- Light source quick angle: 0~9
- Color:
- Zoom
- Threshold
- X/Y/Z
- Smooth
- Gloss
- Opacity Map
- And others

Elastography Imaging processing

- Dual live with E and B mode
- Compressure pilot lamp
- Compressure guide with motion curves
- Clarity
- Smooth
- Map
- Persistence
- Dynamic range
- Frequency
- Gain
- And others

Needle Guide

- Guide position: L/R, Rotation, translation
- Guide line: Intensity control
- Guide line display: one/dual lines
- Angle adjust (depend on biopsy guide)
- Needle enhancement
- Enhance angle adjust
- And others

Stress Echo

- Analysis section: PLAX/SAX MV/SAX PM/SAX Apex/A4C/A2C/A3C
- Analysis and score number of LV segments: 16
- Basal Ant/Ant Sept/Infer Sept/Infer /Infer Lat/Ant Lat
- Mid Ant/Ant Sept/Infer/Infer Sept/Infer Lat/Ant Lat

- Apical Ant/Sept/Infer/Lat
- Protocol: Rest/Exercise/Exercise Extra Peak/Exercise Extra Peak and Recovery/Pharma
- Protocol template edit available
- Rest and peak rawdata storage and repick available
- Peak status consecutive storage available
- Report analysis available
- Bull's-eye analysis and score available
- And others

SIUI MAI Remote Value-Added

Service

- Ultrasound device SIUI MAI platform support
- SIUI MAI client-side APP: Android and iOS device
- Remote service support: Demonstration/Training/Course/After sales service
- Realtime live broadcast:
 - Ultrasound image/Interface/function/Camera image/Voice/Text transfer
 - Client-side camera image/Voice/Text transfer
- SIUI MAI registration: Support global cell-phone number
- And others

General Measurement

- B Mode
- M Mode
- Color Mode
- PW/CW Mode

Calculation Package

- Abdomen
- Urology
- Gynecology
- Obstetrics (2nd and 3rd Trimesters)
- Thyroid
- Breast
- Eye Ball
- Testes
- Neonate
- Pediatrics (Orthopedics)
- TCD(Transcranial)

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- Emergency
 - Carotid
 - Peripheral vascular
 - Cardiology

Identification

Quality Standards

- ISO 9001:2015
- ISO 13485:2016

Conformance Standards

- UL 60601-1
- EN 60601-1 and IEC 60601-1
- EN 60601-1-1 and IEC 60601-1-1
- EN 60601-1-2 and IEC 60601-1-2
- EN 60601-1-4 and IEC 60601-1-4
- EN 60601-1-6 and IEC 60601-1-6
- EN 60601-2-37 and IEC 60601-2-37
- EN 62304 and IEC 62304

CE Declaration

The Certification Body of TÜV SÜD Product Service GmbH declares that the aforementioned manufacturer has implemented a quality assurance system for design, manufacture and final inspection of the respective devices / device categories in accordance with MDI Annex II.

FDA Clearance

- PMN/510(k)