TE Air Wireless Handheld Ultrasound

Performance Specifications

System Overview

The TE Air is a wireless handheld ultrasound system. The wireless transducer is paired with App on mobile devices over Wi-Fi.

Applications

- Cardiac
- Abdomen
- Thoracic/pleural
- Urology
- Cephalic

Transducer Types

- Phased array transducer

Imaging Modes

- B-Mode
- M-Mode
- Color Doppler Imaging
- Power Doppler Imaging
- Pulsed Wave Doppler
- TDI

Standard Features

- iClear™ (Speckle Suppression Imaging)
- iTouch™ (Auto Image Optimization)
- Smart Bladder

Optional Features

- Air Capsule charging case
  - Charging Cycle: about 2.5 times for a transducer
  - Wired charging: Type-C charging cable, charging time 4 hours
  - Wireless charging: wireless charging dock, charging time 8 hours
  - Wireless Charging Dock Model: It is recommended to use a 15 W or above power charging dock that supports the Qi protocol, HUAWEI
- Tissue Doppler (TDI)
- Auto EF
- Extended Connection (TE X)

Language Support

- English and Chinese

Transducer Specifications

Power Supply

- Input voltage: 5 V or 9 V
- Input current: 3 A max
- Adaptor:
  - Output interface: USB Type A
  - Output voltage: 5 V DC
  - Output current: ≥3 A

Built-in Battery

- Lithium-Ion battery: 3.85 V, 1650 mAh
- Support fast charging by adaptor and Air Capsule, charging time from 0% to 90%: ≤35mins

Fast charging environment

- Ambient temperature: 10-26° C
  - The transducer is temperature sensitive and will shut down if overheated (>hr. continuous use)
  - The transducer and Air Capsule should be stored in an open environment and protected from heat and direct sunlight
  - Wired charging: Type-C charging cable
  - Wireless charging: Air Capsule charging case
  - Total working time of no less than 90 minutes with fully charged battery in B mode

Operating Environment

- Ambient temperature: 0-35° C
- Relative humidity: 20%-85% (no condensation)
- Atmospheric pressure: 700 hPa-1060 hPa

Storage & Transportation Environment

- Ambient temperature: -20-45° C
- Relative humidity: 20%-85% (no condensation)
- Atmospheric pressure: 700 hPa-1060 hPa

User Interface

Comments

- Supports text input and arrow
- Covers various applications
- User defined

Body mark

- 80 body marks for versatile application

Number of exam mode presets

- 9 system exam modes

Screen information*

- Acoustic power
- Imaging parameters

*Not all items are listed here. For detail information, please refer to the user manual.

Imaging Parameters

Overview

- Up to 8-beamforming

B-mode

- A.Power
- TGC: 6 sliders
- Depth: 30 Levels
- Gain: 0-100, 1/step
- Image Quality
- Dyn Ra.: 30-240
- iClear: On/Off
- L/R Flip: Right, Left
- TIS/TIC/TIB
- iTouch: On/Off
- Zoom

M-mode

- A.Power
- Gain: 0-100, 1/step
- Depth: the same as B mode
- Image Quality: the same as B mode
- Speed: 20, 25, 35 ,50 ,75 ,145 mm/s
- Dyn Ra.: 30-240

Color Doppler

- A.Power
- Max velocity: 146 cm/s
- Gain: 0-100, 2/step
- Scale
- ROI Width: freely adjustable
- ROI Height: freely adjustable
- Image Quality: 3 levels
- iTouch: On/Off

Power Doppler Imaging

- A.Power
- Gain: 0-100, 2/step
- Scale: 30 levels
- ROI Width: random adjustable
- ROI Height: random adjustable
- Image Quality: 3 levels
- iTouch: On/Off

PW-Mode

- A.Power
- PW velocity:
  - max.1265.20 cm/s
  - min. 1.0 cm/s
- Gain: 0-100, 2/step
- Baseline: freely adjustable
- Scale: 30 levels
- Image Quality: 3 levels
- Speed: 20, 25, 35, 50, 75, 145 mm/s
- SV: 0.5-20 mm, random adjustable
- Dyn Ra.: 24-72, 2/step
- Angle: freely adjustable
- iTouch: On/Off

Tissue Velocity/Energy Imaging (included in TDI option)

- A.Power
- Gain: 0-100, 2/step
- Scale: 22 levels
- ROI Width: freely adjustable
- ROI Height: freely adjustable
- Image Quality: 2 levels

Tissue Velocity Doppler (included in TDI option)

- A.Power
  - Gain: 0-100, 2/step
  - Baseline: freely adjustable
- Scale
  - SVD: freely adjustable
  - Image Quality: 2 levels
  - Speed: 20, 25, 35, 50, 75, 145 mm/s
  - SV: the same as PW
  - Dyn Ra.: 24-72, 2/step
  - iTouch: On/Off

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Performance Specifications

Cine Review and Raw Data Processing

Cine Review

Available in all modes
Playback available
Maximum cine memory up to 125 frames
Freeze and real-time storage are available and length is customizable: 2-5 s

Post Processing

B-mode:
- Dyn Ra.
- iClear
- L/R Flip
- Zoom

M-mode:
- Speed
- Dyn Ra.

PW:
- Baseline
- Speed
- Dyn Ra.
- Angle

Measurement

General

Distance
Ellipse
Depth
Angle
Double Dist
Volume
Velocity
Time
Slope
Heart Rate (HR)
PS/ED
Simpson

Exam Storage and Management

Exam storage

Direct digital storage of single frame and cine 2D, color and Doppler

Exam management

iStation™ workstation dedicated for patient exam management
Patient exam query/retrieve
Support review of current and past exam
Export images as JPG format; export cine as MP4 format
Support data encryption and transmission encryption

Connectivity

Wireless

802.11 a/b/g/n/ac

DICOM 3.0

DICOM basic
Store - Media Exchange
DICOM Worklist
Q-path

Transducers

Phased array

i3P

Application:	Cardiac, Abdomen, Thoracic/ Pleural, Urology, Cephalic
Bandwidth:	2.0-4.0 MHz
Number of Elements:	64
Field of View (max):	90°
Depth:	2-38 cm
Physical Footprint:	44.7 mm × 31.2 mm
Footprint:	24.2 mm × 15.6 mm
B-mode Frequencies:	2.0, 2.5, 4.0 MHz
Harmonic Frequencies:	2.6, 3.0, 3.3 MHz
Color Frequencies:	2, 2.3, 2.5 MHz; TDI: 2.5, 3.3 MHz
PW Frequencies:	2, 2.3, 2.5 MHz; TDI: 2.5, 3.3 MHz
Biopsy Guide:	not available

Safety and Conformance

Quality standards

ISO 9001
ISO 13485

Design standards

EN 60601-1 and IEC 60601-1
EN 60601-1-2 and IEC 60601-1-2
EN 60601-1-6 and IEC 60601-1-6
EN 60601-2-37 and IEC60601-2-37
EN 62304 and IEC 62304
EN 62366 and IEC 62366
EN ISO 17664 and ISO 17664

Operating Environment

The operating condition is the minimum configuration.

Hardware Configuration

For iOS platform

Processor:	Apple A10 processor
Hard disk:	128 GB
Storage space:	2 GB
Display size:	4.7" (diagonal)
Display resolution:	1224 x 750
Display brightness:	400 nit

For Android platform

Processor:	Qualcom Cellulon 855
Hard disk:	256 GB
Storage space:	8 GB
Display size:	6.41" (diagonal)
Display resolution:	2340 x 1080
Display brightness:	400 nit

Software Environment

Apple platform required 13.0 version or above, with the function of automatically optimizing the screen brightness according to the ambient light.
Android platform required 9.0 version or above.

Compatible Devices

Apple iPad

2020	iPad 8th
2021	iPad 9th
2022	iPad 10th
2019	iPad Air 3th
2020	iPad Air 4th
2022	iPad Air 5th
2019	iPad mini 5th
2021	iPad mini 6th
2018	iPad Pro 3th
2020	iPad Pro 4th
2021	iPad Pro 5th
2022	iPad Pro 6th
2018	iPad Pro 1th
2020	iPad Pro 2th
2021	iPad Pro 3th
2022	iPad Pro 4th

Apple iPhone

2016	iPhone 7
2016	iPhone 7 Plus
2017	iPhone 8
2017	iPhone 8 Plus
2017	iPhone X
2018	iPhone XS
2018	iPhone XS Max
2018	iPhone XR
2019	iPhone 11
2019	iPhone 11 Pro
2019	iPhone 11 Pro Max
2020	iPhone 12
2020	iPhone 12 Mini
2020	iPhone 12 Pro
2020	iPhone 12 Pro Max
2021	iPhone 13
2021	iPhone 13 Mini
2021	iPhone 13 Pro
2021	iPhone 13 Pro Max
2022	iPhone 14
2022	iPhone 14 Plus
2022	iPhone 14 Pro
2022	iPhone 14 Pro Max
2023	iPhone 15
2023	iPhone 15 Plus
2023	iPhone 15 Pro
2023	iPhone 15 Pro Max
2020	iPhone SE2
2022	iPhone SE3

Android Pad

Samsung Galaxy Tab S7
Samsung Galaxy Tab S7+
Samsung Galaxy Tab S7 FE(LTE)
Samsung Galaxy Tab S8(5G)

Android Phone

Samsung Galaxy Note20
Samsung Galaxy S21
Xiaomi MIX 4

Notice:

Not all features or specifications described in this document may be available in all configurations. Mindray reserves the right to make changes in specifications and features shown herein, or discontinue the product at any time without notice or obligation. Contact Mindray Representative for the most current information.

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