

# 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

## 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: Qualcomm 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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