

N20 Technical Specifications



1. General Information

A brand-new ultrasound diagnostic platform with Innovations in areas of digital electronics achieve a new level of ultrasound diagnostic precision and higher diagnostic confidence.

A revolutionary workflow control is provided with the user-centric architecture of the new software platform.

2. Main technical parameters and functions

2.1 Technical platform

- ★linux+ARM+FPGA, Low power and high stability system platform.
- ★Startup time: ≤ 12 seconds, the fastest in the world.
- ★Upgrade the system from the bootloader, system can be upgraded forever.
- ★ECG is optional, one machine dual-use.

2.2 Size and weight

Host:

size: 370mm (width) * 350mm(depth) * 70mm(thickness)

weight: 5.5kg(with no probe)

Including package:

Size: 465mm(width) × 465mm(depth) × 230mm(thickness)

weight: 9.5kg(host + 2 probes + power cable + adapter + manual + carton + foam)

2.3 Monitor

15-inch, high resolution, progressive scan, Wide Angle of view

Resolution:1024*768 pixels

Image display area is 640*480

★Adjustable angle of monitor: 135°

2.4 Control Panel

User-oriented design

Backlight design: panel buttons

Multiple user define keys

TGC: 8 segment slider controls

2.5 Hard disk

Internal ≥ 128 GB hard disk for patient database management

Allow storage of patient studies that include images, clips, reports and measurements

2.6 Transducer Ports

Probe ports: 2

2.7 I/O Port

USB 2.0 port: 2 (use for:u-disk、usb printer、[usb foot switch](#)、[usb keyboard](#)、usb mouse,etc)

Video output port: Video、S-Video、[HDMI](#)

Ethernet port: 1

Video print remote control port: 1

[ECG output port: 1](#)

2.8 Probe available

3C6A: 3.5MHz/R60/80, Convex array probe

7L4A: 7.5MHz/L38mm/80, Convex array probe

6E1A: 6.5MHz/R10mm/80, EndocavityConvex array probe;

6C15A: 6.5MHz/R15mm/80, Micro convex array probe;

6I7A: 6MHz/L64mm/80, IntrarectalLinear array probe;

3L15A: 3.5MHz/L146mm/80, back fat probe, Linear array probe,use for big animal;

2.9 Imaging modes

B-mode: Fundamental and Tissue harmonic imaging

Dual/Quard

Color Flow Mapping (Color)

★B/BC Dual Real-Time

Power Doppler Imaging (PDI)

PW Doppler

M-mode

2.10 frequency number

B/M: Fundamental wave, ≥ 3 ; harmonic wave: ≥ 2

Color/PDI: ≥ 2

PW: ≥ 2

2.11 Cine

B mode: ≥ 5000 frames

B+Color/B+PDI mode: ≥ 2300 frames

M、PW: ≥ 190 s

2.12 image zoom

available on live, 2B, 4B and reviewed images

up to 10X zoom

2.13 image save

format:

BMP、JPG、DCM、FRM(single image);

CIN、AVI(multiple images)

Support DICOM, conform to DICOM3.0 standard

★Built in workstation,support patient data search and browse

2.14 language

Support Chinese、English、Spanish、Czech、French、German、Russian

Can be easily extended to support other languages

2.15 battery

Built in large capacity lithium battery, working condition. Continuous working time ≥ 3 hours. Screen provides power display information

2.16 Other functions

Comment、BodyMark、Biopsy、PICC、Lito、★IMT、★Report template、★Support USB foot switch、USB keyboard、USB mouse, etc

3. imaging Parameters

3.1 B mode

Up to four frequencies in fundamental imaging

Up to two frequencies in Tissue harmonic imaging (probe dependent)

Dynamic range	0-100% ,5% step
SpeckleReduction	8 levels(0-7)
ScanDensity	H, M, L
Gain	0~100 % ,2% step
TGC	eight TGC controls
FrameAverage	8 levels(0-7)
LineAverage	8 levels(0-7)
Edge Enhance	8 levels(0-7)
Gray Maps	15 types(0-14)
Pseudocolor Maps	7 types(0-6)
Thermal Index	TIC,TIS,TIB
Invert (U/D) and transposed (L/R)	/
Focus Number	4
Focus Depth	16 levels (depth and probe dependent)
FOV	5 levels
Image depth up to 35 cm in 0.5~4cm increments (depth dependent)	
Phase inversion harmonic imaging technique is available for all probes	

3.2 Color mode

Frequency	2 levels
Gain	0~100% ,2% steps
Wall filter	8 levels(0-7)
Sensitivity	H,M,L
Flow	H,M,L

Packet Size1	5 levels(0-4)
FrameAverage	8 levels(0-7)
PostProc	4 levels(0-3)
Invert	On/Off
Baseline	7 levels(0-6)
Color Maps	4 levels(0-3)
Color/PDI Width	10%-100%, 10%
Color/PDI Height	0.5-30cm(probe dependent)
Color/PDI Center Depth	1-16cm(probe dependent)
Steer	-12° -7° ,0° 7° ,12° (linear probe)

3.3 PDI mode

Frequency	2 levels
Gain	0~100% ,2% steps
Wall filter	8 levels(0-7)
Sensitivity	H,M,L
Flow	H,M,L
Packet Size1	5 levels(0-4)
FrameAverage	8 levels(0-7)
PostProc	4 levels(0-3)
Invert	On/Off
Baseline	7 levels(0-6)
PDI Maps	2 levels(0-1)
Color/PDI Width	10%-100%, 10%
Color/PDI Height	0.5-30cm(probe dependent)
Color/PDI Center Depth	1-16cm(probe dependent)
Steer	-12° -7° ,0° 7° ,12° (linear probe)

3.4 PW mode

Frequency	2 levels
Sweep speed	5 levels(0-4)
Scale	16 levels(0-15) (depth and probe dependent)
Scale Unit	cm/s,KHz
Smooth	8 levels(0-7)
Pseudocolor Maps	7 types(0-6)
Dynamic range	24-100, 2 step
Gain	0-100%, 2% step
Wall filter	4 levels(0-3)
Dynamic range	24-100, 2 step
Gain	0-100%, 2% step

Wall filter	4 levels(0-3)
Angle correction	-89+89,1 step
Gate size	8 levels(0-7mm)
Wall filter	5 levels(0-4)
Invert	On/Off
Baseline	7 levels
Real-time auto Doppler trace: maximum velocity, mean velocity	

3.5 M Mode

Frequency	Up to 3 fundamental and 2 harmonic imaging frequencies
Edge enhance	8 levels(0-7)
Dynamic range	0-100%,step 5%
Gain	0-100, step 2
Gray Maps	15 levels(0-14)
Pseudocolor Maps	7 (0-6)
Sweep speed	5 levels(0-4)

3.6 image parameter save and restore

user can press one key to save image parameters in screen

user can press one key to restore image parameters to default status.

4. Ergonomic Design

Frequently used controls centre around the trackball

Control panel is backlighted, waterproof and antisepticed

Two USB port are at the left side of the system, which is more convenient for use

5. Exam Modes

Abdomen

Obstetrics

Gynecology

Fetal Heart

Small parts

Urology

Carotid

Thyroid

Breast

Vascular

Kidney

Pediatrics

6. Product configuration

6.1 Standard configuration

Host(Built-in 128GB hard disk)
3C6A convex array probe
7L4Alinear array probe
Power adapter
User's Manual
Power cable

6.2 Optional Accessories

6E1A Endocavity Convex array probe
6C15A Micro convex array probe
6I7A Intrarectal Linear array probe
3L15A: back fat probe
USB report printer
B/W or color Video printer
Puncture rack
Trolley
[USB foot switch](#)
[ECG component](#)
[Bar code reader](#)
[Dustproof film](#)