

CBit 9

Color Doppler System Datasheet

V3.0

 Order here!



General Information

Dimensions and Weight

- Dimensions of main unit (approx.): 806mm(Depth)*543mm(Width)*1423mm(Height)
- Net weight of main unit (approx): 53kg (no probe included)

Electrical Power

- Power supply voltage: Auto adaptable for AC100-240V
- Power supply frequency: 50-60 Hz
- Max Power consumption: 600 VA

User Interface

Operation Panel

- Control panel
- 10.1 inch Touch screen
- Gel Warmer
- Alphanumeric keyboard
- 8 TGC Slides
- Interactive backlit keys
- High resolution color LED
 - Diagonal dimension: 21.5 inch
 - Brightness and contrast adjustment
- Integrated speaker
 - Volume adjustable

System Overview

Applications

- Abdominal(ABD,ABD(difficult),kindney,ABD&Kindey)
- Fetal/OB (Mid-late Pregnancy,Early Pregnancy,Fetal Heart)
- Small Parts(Breast,Thyroid,Scrotum)
- Pediatric

- Peripheral Vascular
- Musculo-skeletal Conventional & Superficial
- Cardiac (adult & pediatric)
- Transvaginal

Scanning Method

- Electronic convex
- Electronic linear
- Electronic micro convex
- Electronic phased array
- Volume convex

Transducer Types

- Convex transducer: D3C60L
- Linear transducer: D7L40L
- Linear transducer: D12L40L
- Linear transducer: D7L40L-REC
- Trans-vaginal transducer: D6C12L
- Trans-vaginal transducer: D7C10L
- Phased array transducer: D3P64L
- Phased array transducer: D5P64L
- Volume transducer: V4C40L
- Volume transducer:V6C10L
- Micro convex transducer: D6C15L
- Micro convex transducer: D3C20L
- Micro convex transducer: D5C20L
- Single crystal linear transducer: M8L40L
- High density transducer: D8L50L
- TEE transducer: T5P64L
- Intra-operative transducer: D10L30L
- High density transducer:M8L60L
- Bi-plane probe: D7BC8

- Pencil probe: D2D16L

Image Modes

- B Mode
- B/M mode
- M mode
- 2B Mode
- 4B Mode
- CFM Mode
- 2D Steer
- PD Mode
- DPD Mode
- PW Mode
- B/BC Mode
- Triplex
- Quadplex
- CW Mode
- Free Steering M Mode
- TDI
- Color M Mode
- Curved Panoramic Imaging
- Trapezoidal imaging
- Compound
- SRA
- Elastography
- Stress echo
- ECG
- Super Needle
- 4D
- Virtual HD
- Sono Crystal
- FHI mode
- AIO

Display Mode

- Quad/Dual display

- Duplex mode
- Triplex mode
- Quadplex mode

Display Annotation

- Hospital name
- Date/Time
- Patient Name and Patient ID
- System status
- Gray/Color bar
- Cine guide
- Scanning direction
- Measurement summary window
- Measurement results window
- Transducer type
- Frequency
- Application name
- Menu indication
- Trackball functions indication
- Imaging parameters displayed on the screen

Standard Configuration

- 21.5 inch LED monitor
- 10.1 inch touch screen
- 4 active transducer ports
- 500G integrated hard disk
- DVD-R/W
- USB ports:6
- 4D module
- CW module
- TGC, LGC
- B, 2B, 4B, B/M, B/BC, CFM, PW, Power Doppler/Directional PD, Instant

- Triplex, Duplex, Quadplex, Trapezoidal, Chroma B&M&PW, Full Screen
- Automatic PW trace and measurement in real time
- Super Image module: FHI, Multiple Compound Imaging, SRA (Speckle Reduction Algorithm), AIO
- Q-Image (intelligent image optimization), X-contrast, Q-beam, Q-Flow
- Measurement & calculation software packages: General, OB&GYN, Cardiac
- 2D Steer
- Cardiovascular: CW, TDI, IMT

Software Options

- 4D
- 2D Steer
- DICOM
- ECG
- Depth View
- VirtualHD
- HD Niche/ Smart Volume Slice/SonoCrystal
- Free M
- Color M
- TDI
- HPRF
- HIPPA
- IMT(Auto)
- Curved Expanding
- Curved Panoramic
- Super Needle
- SonoNeedle

- Elastography
- SonoColor
- Ultra Remote
- Intelligent Doppler
- Stress Echo
- Free NT
- SonoAI OB
- Auto Breast
- Srtain
- Color Panoramic
- Static 3D
- HD 3D

Hardware Option

- Footswitch
- ECG Lead
- Gel Warmer

Peripherals

- SONY UP-D898MD/X898MD
- SONY UP-D711MD
- SONY UP-D25MD
- MITSUBISHI P95D
- HP Officejet Pro 6230
- HP Laserjet Professional P1108
- HP Laserjet Professional P1102w
- HP Laserjet Pro M12a
- HP Laserjet 200 color M251n
- HP Laserjet 1020
- HP Deskjet 1010 series
- HP Color Laserjet Pro M252n
- HP Color Laserjet Pro M252dw
- EPSON L805 Series
- EPSON L380 Series
- EPSON L310 Series

- EPSON L130 Series
- EPSON L120 Series
- Canon SELPHY CP910
- Canon SELPHY CP1200

Imaging Processing and Presentation

B Mode

- Gain: 0-255, 5/step
- Compound: 1, 2, 3,4,off
- SRA: on/off
- Focus Number: 1-9
- Focus Position: 0-15, depend on the probes
- Full Screen: on/off
- X-contrast: Normal/Enhance/Suppress
- Q-image: 0-4
- Persistence: 0-7
- Density: Low , High, depend on the probes
- 2D Map: 1-20
- Noise Reject: 0-255
- Scan Width: 6-100%, 6/step
- Image Rotate: 0, 90, 180, 270
- Gamma: 0-8
- Chroma: 1-29, user
- Smooth: 0-7
- Edge enhance: 0-6
- A.power: 0-100%
- Frequency: depend on the probes
- Dynamic: 20-290, 18/step
- Depth: depend on the probes
- Zoom: 0.05-20, 0.05/step
- TGC: 8
- Center Line: on/off
- Trapezoidal Mode: on/off (only for linear probe)
- Biopsy: on/off
- Biopsy Level: 0-3
- Super Needle: on/off
- Needle angle: $\pm 30^\circ$, $\pm 20^\circ$,
- Curved panoramic: on/off (only for linear probe)
- Elastography: on/off
- 2D steer: $\pm 20^\circ$
- Invert: on/off
- SonoContract: on/off , depend on the probes
- SonoNeedle: on/off
- Stress Echo: on/off (only for Phased array probe)
- ECG: on/off (only for Phased array probe)
- TDI: on/off (only for Phased array probe)
- LGC: on/off (only for Phased array probe)
- Curved Expanding : on/off (only for Convex probe)

M Mode

- Gain: 0-255, 5/step
- Layout: LR/UD
- Display Format: 1:2, 1:1, 2:1
- Chroma: 1-29, user
- Free M Mode: off, 1, 2, 3
- Color Map: 1-9, user
- 2D map: 1-20
- Dynamic: 20-290, 18/step

- Speed: 1-4

Color Mode

- Gain: 0-255, 5/step
- Color Map: 1-20, user
- Color Invert: on/off
- Q-flow: on/off
- Q-beam: on/off
- Color Mode: Velocity, Variance
- Wall Filter: 0-3
- Density: Low/High
- Wall Thre: 0-15
- Blood Efection: Smooth, HRes, HRes2, HRes3
- B/BC: on/off
- Frequency: depend on the probes
- Baseline: -3-3
-
- Steer: -20-20 (only for linear probe)
- PRF: depend on the probes
- Color Panoramic: on/off (only for linear probe)
- Intelligent Doppler: on/off (only for linear probe Carotid Preset)

CPA/DPD Mode

- Gain: 0-255, 5/step
- Wall Filter: 0-3
- Q-beam: on/off
- Q-flow: on/off
- Wall Thre: 0-15
- Persistence: 0-7
- Frequency: depend on the probes
- PRF: depend on the probes
- Steer: -20-20 (only for linear probe)

- Color Map: 1, user
- Color Panoramic: on/off (only for linear probe)
- Density: Low/High

PW Mode

- Gain: 0-255, 5/step
- 2D Map: 1-20
- Wall Filter: 0-3
- Spectrum Enhance: 0-3
- Dynamic Range: 46-67, 3/step
- Invert: on/off
- Display format: 1:2, 1:1, 2:1
- Triplex: on/off
- Quadplex: on/off
- Auto Cal Parameter: on/off
- DTrace Smooth: 0-3
- Threshold: 1-5
- DVmean: on/off
- DVmax: on/off
- Trace area: above, below, all
- Audio: 0-100%
- Color Map: 1-29, user
- QuickAngle: on/off
- Angle: -80-80 (1/step or 2/step or 5/step)
- Auto Cal: on/off
- Freq: depend on the probes
- Baseline: -5-5
- PRF: depend on the probes
- Steer: -20-20 (only for linear probe)
- Speed: 1-3
- Display Format: 1:2, 1:1, 2:1
- Intelligent Doppler: on/off (only for linear probe Carotid Preset)

- SV: 0.5mm , 1mm, 2mm, 3mm, 5mm, 10mm, 15mm, 20mm

CW Mode

- Gain: 0-255, 5/step
- 2D Map: 1-20
- Spectrum Enhance: 0-3
- Dynamic: 46-67, 3/step
- Audio: 0-100%
- Wall Filter: 0-3
- Color Map: 1-9, user
- QuickAngle: on/off
- Baseline: -5-5
- PRF: depend on the probes
- Speed: 1-3
- Angle: -80-80 (1/step or 2/step or 5/step)
- Display Format: 1:2, 1:1, 2:1

Cineloop

- Support 2D, M, PW, CFM, CPA, DPD, CW, Color M, Free Steering M
- Simultaneous and independent review in duplex mode
- Cineloop auto/manual
- Variable cine playback speed
- User-define start and end frame of cine storage
- User-define start and end frame of cine review
- storage in hard disk and display in real-time modes
- Slide show: slide show function

Storage

- 500GB internal hard drive
- DVD-R/W driver

- USB ports
- Still images storage format: IMAG
- Still images export format: BMP, JPG, DCM, PNG, TIFF
- Cine loops storage format: CINE
- Cine loops export format: AVI
- Fast storage setting

EasyView

- Image review Layout: 1×1, 2×2
- Image management

Exam Review

- Search Exam
- Exam review: patient view, study view
- Exam management
 - Delete selected exam
 - Export selected exam
 - Backup selected exam
 - Recover from the backup exam
 - Selected all
 - Expand all
 - Collapse all
 - Edit selected Exam
 - Review selected Exam
 - Continue selected Exam

Transducer Specifications

- **D3C60L**

Array type: Convex

Applications:

Abdominal, OB, GYN, Chest

Freq. B: 2.0/3.0/3.5/4.0/5.3MHz

Freq. H: 3.0/3.5/4.0/4.5/6.8MHz

Freq. C: 2.0/3.0/3.5/4.0/5.3MHz

Freq. D: 2.0/3.0/3.5/4.0/5.3MHz

Field of view: 94°

Scanning depth: 4.17-45.57 cm

Footprint: 73mm×16mm

Biopsy kit:BC04-A

- **D7L40L**

Array type: Linear

Applications:

Vascular, Small Parts, Nerve, MSK,

Pediatrics ,Orthopedics,Chest

Freq. B: 4.0/6.5/7.5/8.5/10MHz

Freq. H: 6.0/7.8/9.0/10.2/15.0MHz

Freq. C: 4.0/6.5/7.5/8.5/10MHz

Freq. D: 4.0/6.5/7.5/8.5/10MHz

Field of view: 3.71cm

Scanning depth: 0.99-14.78 cm

Footprint: 44 mm x 11 mm

Biopsy kit: BL03-A

- **D12L40L**

Array type: Linear

Applications:

Vascular, Small Parts, Nerve, MSK,

Pediatrics ,Orthopedics,Chest

Freq. B: 7.0/8.5/10.0/12.0/15.0MHz

Freq. H: 8.4/10.2/12.0/14.4/18.0MHz

Freq. C: 7.0/8.5/10.0/12.0/15.0MHz

Freq. D: 7.0/8.5/10.0/12.0/15.0MHz

Field of view: 3.73cm

Scanning depth: 0.99-14.78 cm

Footprint: 44 mm x 11 mm

Biopsy kit: BL03-A

- **M8L40L**

Array type: Linear

Applications:

Vascular, Small Parts, Nerve, MSK,

Pediatrics ,Orthopedics,Chest

Freq. B: 5.0/6.5/7.5/8.5/10MHz

Freq. H: 6.0/7.8/9.0/10.2/12.0MHz

Freq. C: 5.0/6.5/7.5/8.5/10MHz

Freq. D: 5.0/6.5/7.5/8.5/10MHz

Field of view: 3.47cm

Scanning depth: 0.99-14.78 cm

Footprint: 44 mm x 11 mm

Biopsy kit: BL07-A

- **D3P64L**

Array type: Sector

Applications:

Cardiac, Abdominal, FAST,Special,Chest

Freq. B: 1.5/2.5/3.0/4.0MHz

Freq. H: 3.0/3.6/4.2/5.3MHz

Freq. C: 1.5/2.5/3.0/4.0MHz

Freq. D: 1.5/2.5/3.0/4.0MHz

Field of view: 83°

Scanning depth: 5.91-36.47 cm

Footprint: 24mm×18mm

- **D5P64L**

Array type: Sector

Applications:

Cardiac, Pediatrics

Freq. B: 2.0/4.5/6.0/8.0MHz

Freq. H: 2.4/5.4/7.2/9.6MHz

Freq. C: 2.0/4.5/6.0/8.0MHz

Freq. D: 2.0/4.5/6.0/8.0MHz

Field of view: 80°

Scanning depth: 3.94-19.71 cm

Footprint: 12.1mm×11.6mm

- **D6C12L**

Array type: Convex

Applications:

GYN,OB,URO

Freq. B: 4.0/5.3/6.0/8.0/10.0MHz

Freq. H: 4.8/6.4/7.2/9.6/12.0MHz

Freq. C: 4.0/5.3/6.0/8.0/10.0MHz

Freq. D: 4.0/5.3/6.0/8.0/10.0MHz

Field of view: 148°

Scanning depth: 3.28-16.09 cm

Footprint:40mm×12mm

Biopsy kit:BT03-A

- **D7C10L**

Array type: Convex

Applications:

GYN,OB

Freq. B: 4.0/5.3/6.4/7.5/10.7MHz

Freq. H: 4.8/6.4/7.7/9.0/15.0MHz

Freq. C: 4.0/5.3/6.4/7.5/10.7MHz

Freq. D: 4.0/5.3/6.4/7.5/10.7MHz

Field of view: 210°

Scanning depth: 2.91-15.72 cm

Footprint: 37mm×12mm

Biopsy kit: BT04-A

- **D6C15L**

Array type: Convex

Applications:

Pediatrics

Freq. B: 4.0/6.0/8.0/10.0/12.0MHz

Freq. H: 4.8/7.2/9.6/12.0/14.4MHz

Freq. C: 4.0/6.0/8.0/10.0/12.0MHz

Freq. D: 4.0/6.0/8.0/10.0/12.0MHz

Field of view: 120°

Scanning depth: 3.44-14.28 cm

Footprint: 26mm×11mm

Biopsy kit: BC03-A

- **D5C20L**

Array type: Convex

Applications:

Abdominal ,FAST,Chest

Freq. B: 4.0/4.5/5.3/6.4/8.0MHz

Freq. H: 4.2/4.8/6.4/7.7/10.7MHz

Freq. C: 4.0/4.5/5.3/6.4/8.0MHz

Freq. D: 4.0/4.5/5.3/6.4/8.0MHz

Field of view: 112°

Scanning depth: 3.95-15.22 cm

Footprint: 34mm×14.5mm

- **D3C20L**

Array type: Convex

Applications:

Abdominal ,FAST,Chest

Freq. B: 2.0/3.0/4.0/5.3/6.4MHz

Freq. H: 3.0/4.2/4.8/6.4/6.8MHz

Freq. C: 2.0/3.0/4.0/5.3/6.4MHz

Freq. D: 2.0/3.0/4.0/5.3/6.4MHz

Field of view: 144°

Scanning depth: 4.88-28.53 cm

Footprint: 42mm×15.5mm

Biopsy kit: BC06-A

- **D7L40L-REC**

Array type: Linear

Applications:

Urology, Phantom

Freq. B: 4.0/7.5/10.0/12.0/15.0MHz

Freq. H: 4.8/9.0/12.0/14.4/16.0MHz

Freq. C: 4.0/7.5/10.0/12.0/15.0MHz

Freq. D: 4.0/7.5/10.0/12.0/15.0MHz

Field of view: 3.71cm

Scanning depth: 3.94-10.84 cm

Footprint: 44 mm x 11 mm

Biopsy kit: BT02-A

- **V4C40L**

Array type: Convex

Applications:

Abdominal ,OB

Freq. B: 2.0/3.0/3.5/4.5/5.3MHz

Freq. H: 3.0/3.6/4.2/4.8/5.8MHz

Freq. C: 2.0/3.0/3.5/4.5/5.3MHz

Freq. D: 2.0/3.0/3.5/4.5/5.3MHz

Field of view: 62°

Scanning depth: 5.12-28.78 cm

Footprint: 56mm×45mm

- **D8L50L**

Array type: Linear

Applications:

Vascular, Small Parts, Nerve, MSK

Pediatrics

Freq. B: 6.0/9.6/10.8/14.4/18.0MHz

Freq. H: 5.0/8.0/9.0/12.0/16.0MHz

Freq. C: 6.0/9.6/10.8/14.4/18.0MHz

Freq. D: 6.0/9.6/10.8/14.4/18.0MHz

Field of view: 48.8mm

Scanning depth: 3.12-9.70cm

Footprint: 56mm×10mm

- **T5P64L**

Array type: Sector

Applications:

Abdominal ,OB

Freq. B: 2.0/3.0/3.5/4.5/5.3MHz

Freq. H: 3.0/3.6/4.2/4.8/5.8MHz

Freq. C: 2.0/3.0/3.5/4.5/5.3MHz

Freq. D: 2.0/3.0/3.5/4.5/5.3MHz

Field of view:62°

Scanning depth: 5.12-28.78 cm

Footprint: 56mm×45mm

• **V4C40L**

Array type:Convex

Applications:

Abdominal ,OB

Freq. B: 2.0/3.0/3.5/4.5/5.3MHz

Freq. H: 3.0/3.6/4.2/4.8/5.8MHz

Freq. C: 2.0/3.0/3.5/4.5/5.3MHz

Freq. D: 2.0/3.0/3.5/4.5/5.3MHz

Field of view:62°

Scanning depth: 5.12-28.78 cm

Footprint: 56mm×45mm

• **V4C40L**

Array type:Convex

Applications:

Abdominal ,OB

Freq. B: 2.0/3.0/3.5/4.5/5.3MHz

Freq. H: 3.0/3.6/4.2/4.8/5.8MHz

Freq. C: 2.0/3.0/3.5/4.5/5.3MHz

Freq. D: 2.0/3.0/3.5/4.5/5.3MHz

Field of view:62°

Scanning depth: 5.12-28.78 cm

Footprint: 56mm×45mm

• **V4C40L**

Array type:Convex

Applications:

Abdominal ,OB

Freq. B: 2.0/3.0/3.5/4.5/5.3MHz

Freq. H: 3.0/3.6/4.2/4.8/5.8MHz

Freq. C: 2.0/3.0/3.5/4.5/5.3MHz

Freq. D: 2.0/3.0/3.5/4.5/5.3MHz

Field of view:62°

Scanning depth: 5.12-28.78 cm

Footprint: 56mm×45mm

• **V4C40L**

Array type:Convex

Applications:

Abdominal ,OB

Freq. B: 2.0/3.0/3.5/4.5/5.3MHz

Freq. H: 3.0/3.6/4.2/4.8/5.8MHz

Freq. C: 2.0/3.0/3.5/4.5/5.3MHz

Freq. D: 2.0/3.0/3.5/4.5/5.3MHz

Field of view:62°

Scanning depth: 5.12-28.78 cm

Footprint: 56mm×45mm

Measurement and Calculations

General Measurement Package

- Software packages for various specific clinical use
- Comprehensive analysis methods
- Clinical analysis reports

General measurement package

- B mode normal measurement
 - Distance
 - Length__Area (Ellipse)
 - Length__Area (Trace)
 - Volume (1 Distance)
 - Volume (2 Distance)
 - Volume (3 Distance)
 - Volume (1 Ellipse)
 - Volume (2 Ellipse)
 - Volume (1 Distance 1 Ellipse)
 - Ratio
 - Angle
 - Strain Ratio
- M mode normal measurement
- PW mode Normal measurement

Clinical Analysis Packages

- OB
- GYN
- URO
- Cardiac
- Vessel

- Small parts
- Pediatrics
- TCD
- Breast

System Setup

By using system setup, users could

- Customize hospital information
- Customize language
- Customize fast storage time
- Customize color map
- Customize functions to Footswitch, P1 key, Print key
- Customize functions to alphanumeric 0~9
- Customize PC and Video Print Option
- Customize Measure
- Customize Comment library
- Customize Report

User Define Functions

By user-define function, users could customize user-define preset, including

- Applications name, Presets name
- Applications exam type
- Imaging parameters

Multi-language Display Interface

- English
- Chinese
- Other languages

Note: other languages for detailed, please contact CHISON.

Inputs and outputs

- AC Power In: 1
- AC power Out: 1

- Power Button: 1
- USB Port: 6
- Ethernet: 1
- Remote Control: 1
- S-Video Out: 1
- Audio: L,R
- DVI: 1
- VGA Out: 1
- Video Out: 1
- Footswitch Port: 2
- Ground pole: 1

Operating conditions

- Ambient temperature: 10°C to 40°C
- Relative humidity: 30% to 75% (no condensation)
- Atmospheric pressure: 700 hPa to 1060 hPa

Storage and Transport conditions

- Ambient temperature: -5°C to 40°C
- Relative humidity: ≤80% (no condensation)
- Atmospheric pressure: 700 hPa to 1060 hPa

Not all features or specifications described in this document may be available.

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