

CBit 5

Color Doppler System Datasheet

V2.0



General Information

Dimensions and Weight

- Dimensions of main unit (approx.): 806mm(Depth)*518mm(Width)*1462mm(Height)
- Net weight of main unit (approx): 55kg (no probe included)

Electrical Power

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

User Interface

Operation Panel

- Control panel
- 10.1 inch Touch screen
- 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 (Gynecology & Urology)
- Fetal/OB
- Small Organ (Breast, Testes, Thyroid)
- 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: 2-6.8MHz
- Linear transducer: D7L40L:4-15MHz
- Linear transducer: D12L40L:7-18MHz
- Linear transducer: D7L40L-REC:4-15MHz
- Trans-vaginal transducer: D6C12L:4-12MHz
- Trans-vaginal transducer: D7C10L:4-15MHz
- Phased array transducer: D3P64L:1.5-5.3MHz
- Volume transducer: V4C40L:2-6.8MHz
- Micro convex transducer: D6C15L:4-12MHz
- Micro convex transducer: D3C20L:2-6.8MHz

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
- Super Needle
- 4D
- HD 3D
- Virtual HD
- 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
- 1TB integrated hard disk
- 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

- Virtual HD/Depth View
- Niche/ Smart Volume Slice
- Free NT
- Elastography
- Super Needle
- Curved Panoramic
- Extended Cardiac Package: Free Steering M, Color M
- DICOM 3.0
- WIFI Function
- Biopsy kit: for convex/linear/TV/3.0 MHz Micro-Convex probe respectively

Hardware Option

- Footswitch
- Gel Warmer
- DVD-R/W

Peripherals

- Video Printer
 - MITSUBISHI P95D
 - SONY UP-D711MD
 - SONY UP-D25MD
 - Canon SELPHY CP1200
 - Canon SELPHY CP910
- PC Printer
 - HP Laserjet Pro M12a
 - EPSON L120 Series
 - EPSON L130 Series
 - EPSON L310 Series
 - EPSON L380 Series
 - EPSON L805 Series

- HP Officejet Pro 6230
- HP Deskjet 1010 series
- HP Color Laserjet Pro M252n
- HP Color Laserjet Pro M252dw
- HP Laserjet Professional P1102w
- HP Laserjet Professional P1108
- HP Laserjet 200 color M251n
- HP Laserjet 1020

Imaging

*Processing and
Presentation*

B Mode

- Gain: 0-255, 5/step
- Compound: 1, 2, off
- SRA: on/off
- Focus Number: 1-9
- Focus Position: 0-14, depend on the probes
- Full Screen: on/off
- X-contrast: Normal/Enhance/Suppress
- Persistence: 0-7
- Density: 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: maximum 45cm (depend on the probes)
- Zoom/Pan zoom: 0.05-20/step
- TGC: 8
- Center Line: on/off
- Trapezoidal Mode: on/off
- Biopsy: on/off
- Biopsy Level: 0-3
- Super Needle: on/off
- Needle angle: $\pm 30^\circ$, 5° /step
- Elastography: on/off
- 2D steer: $\pm 20^\circ$
- Gray levels: 256

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
- Persistence: 0-7
- 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
- Scale: depend on the probes
- Steer: -20--20 (only for linear probe)
- PRF: depend on the probes

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

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
- Auto Cal: on/off
- Freq: depend on the probes
- Baseline: -3-3
- PRF: depend on the probes
- Steer: -20--20 (only for linear probe)
- Speed: 1-3

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: -3-3
- PRF: depend on the probes
- Speed: depend on the probes

Cine loop

- Support 2D, M, PW, CFM, CPA, DPD, CW, Color M, Free Steering M
- Simultaneous and independent review in duplex mode
- Cine loop 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

- 1TB integrated 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

**Measurement
&
Calculation**

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
- Russian
- Other languages

Note: other languages for detailed, please contact CHISON.

Inputs & 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
- Digital channels: 165888

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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