

# TECHNICAL SPECIFICATION

## PHYSICAL CHARACTERISTICS

Dimension	301mm*231mm*84mm
Weight	2.87kg (configuration standard)
Protection level	IPX0 for the main unit IP68 for the transducer
Crystals	12
Cable length	Power cord: 3m 6mm grounding post ground wire: 3m Remote event marker: 3m Fetal stimulator: 2m Ultrasound transducer: 2.5m TOCO transducer: 2.5m
Transducer weight	150g without cable
Transducer dimension	91.0mm x 76.0 mm x 20.0 mm

## DISPLAY SCREEN

Screen	Screen Medical-grade color TFT LED, capacitive touch screen
Size	8 inches
Resolution	800 x 600
Rotation Angle	0-60°

## WIRELESS TRANSDUCER

Wireless Transducer Roaming	15 min
Transmission Distance	20m
Smart Transducer Reassignment	Support

## FHR

Pulse repetition rate	(2±10 %) kHz
Pulse duration (92±10%) us	(92±10 %) us
Ultrasound frequency	(1±10 %) MHz
FHR ultrasound signal range	3.5 $\mu$ V Vpp ~ 350 $\mu$ V Vpp
Peak negative acoustic pressure	P <sub>-</sub> < 1 MPa
Intensity of output beam	I <sub>ob</sub> < 3.5 mW/cm <sup>2</sup>
Spatial peak-temporal average intensity	I <sub>spta</sub> < 100 mW/cm <sup>2</sup>
Spatial average temporal average intensity	I <sub>sata</sub> < 3.5mW/cm <sup>2</sup>
Derated spatial-peak pulse-average intensity	I <sub>spta.3</sub> < 190mW/cm <sup>2</sup>
Derated spatial-peak temporal-average intensity	I <sub>spta.3</sub> < 94mW/cm <sup>2</sup>
Maximum output power	<15mW
Effective radiating area	1000 mm <sup>2</sup> ±15 %
FHR measurement range	50-240 bpm
FHR measurement resolution	1 bpm
FHR measurement accuracy	±2 bpm
FHR Alarm	The device can generate continuous alarm signal. It takes not greater than 30s to start the FHR alarm after the FHR exceeds the alarm limits.
Alarm range and error	Alarm range: 50 - 240bpm ; Error: ±1bpm



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# Fetal Monitors

CF3 · CF3R

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Imported and distributed by :  
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## TOCO

TOCO Range	0-100 %
Non-linear error	±10 %
Resolution	1 %
Baseline drift - temp	1 unit
Zero Mode	Manual/ Automatic (TOCO value becomes 0 automatically if the measurement value is 0 for 30s.)
TOCO Alarm	When the TOCO value is more than 50 units, a prompt to disable NIBP measurement will be displayed.

## FETAL MOVEMENT

FM Mode	Manual or Automatic (only applicable to FHR 1.)
Automatic FM mode	Trace or Black Mark
Display range	0-999

## FETAL SIMULATOR

Fast Mode (Fast)	Vibration duration: 0.2s, vibration cycle : 1.4s (frequency 0.714Hz)
Slow Mode (Slow)	Vibration duration: 0.8s, vibration cycle: 2s (frequency 0.5Hz)
Manual Mode	The Fast or Slow mode vibrates for 3 cycles and then stops.

## WI-FI

Main unit Wi-Fi module	Standard: IEEE 802.11 a/b/g/n
	Frequency band: 2.4G & 5G
Transducer Wi-Fi module	Standard: IEEE 802.11 a/b/g/n
	Frequency band: 2.4G & 5G
NFC Specification	Working frequency: 13.56MHz

## DATA REVIEW

Data review	The monitor data shall be stored once every 10 minutes. The storage duration of a single case is 24 hours, after which another case is formed.
Data storage	500 files or 5000h

## ALARM SYSTEM (Meet standard of IEC60601-1-8.)

Audible indicator	3 different alarm tones
Visible indicator	Red/Yellow/Cyan/Prompt message
Volume level	1 to 10

## INTERFACES

Multi-function output interface	1
USB 2.0 Interface	2 (support barcode scanner, keyboard, mouse)
Network interface	1
AC power connector	1
Ground cable connector	1

## RECORDER

Type	Built-in; Thermal array
Paper	Z-fold, Thermo-sensitive
Paper Width	152mm / 150mm
Effective Printing	Width 110mm (American Standard) 120mm (International Standard)
FHR Printout Width	70mm (American Standard) 80mm (International Standard)
FHR Scaling	30bpm/cm (American Standard) 20bpm/cm (International Standard)
TOCO Printout Width	40mm
TOCO Scaling	25%/cm
Printing Speed	Standard Speed (Real-Time Traces): 1/2/3 cm/min Fast Print Speed (Stored Traces): Up to 25mm/sec

Paper Expenditure	Based on a 10-year validity period: <ul style="list-style-type: none"> <li>• The total printed paper is 150 pages.</li> <li>• Printing speed is 3 cm/min.</li> <li>• A 20-minute report contains 7 waveform data pages + 3 report pages.</li> <li>• One report consists of 10 pages.</li> <li>• One roll of paper can be used for 15 pregnant.</li> <li>• The printer needs to be turned off to replace the printer paper roll.</li> </ul>
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Accuracy of Data	± 5% (X-Axis) ± 1% (Y-Axis)
Resolution	8 dots/mm
Record Information	FHR1 waveform and mark, FHR2 waveform and mark, TOCO waveform, AFM waveform and mark, fetal movement mark, event mark (and annotation), AUTO-zero symbol, alarm indicator, SOV alarm indicator, Fetal heart signal loss alarm indicator, wireless transducer wireless signal loss alarm indicator, date, time, printing speed, ID, name, FHR2 Offset, CTG analysis results etc.

Alarm record	Yes
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## OPERATION ENVIRONMENT

Working Temperature	Working conditions: 0-40°C Transportation and Storage conditions: -20°C-60°C
Relative humidity	Working conditions: 15% ~ 95%, non-condensing Transportation and Storage conditions: 15% ~ 95%, non-condensing
Atmospheric pressure	Working conditions: 86-106 kPa Transportation and Storage conditions: 70-106 kPa

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## POWER SUPPLY

Battery 11.1V 2200mAh, rechargeable Lithium-ion battery

Charging time Power off: ≤ 4 hours to 90%.  
 Power on: ≤ 5.5 hours to 90%.

Operating time ≥3 hours (Condition: installed with a new fully charged battery, at a temperature of 20°C-30°C, performing monitoring when connected with a US transducer and TOCO transducer, real-time printing at the paper speed of 3cm/min and with level-1 screen brightness).

Power voltage 100-240 V

Power frequency 50 Hz / 60 Hz

Input current 0,85-0,45 A

## WIRELESS TRANSDUCER BATTERY

Battery specification 3.8V 1900mAh, rechargeable Lithium-ion battery

Charging mode Wireless charging

Charging time ≤ 8 hours (standby or off status)

Operating time ≥9 hours

## BOX CONTENT

- Main unit with probe storage compartment
- 2 FHR probes (wired/wireless, depending on the model selected)
- 1 TOCO probe
- 1 event marker (3 m)
- 1 reusable gray belt
- 1 Z-fold paper pack (150x90mm, 150 sheets)
- 1 power cable
- 1 user manual

