



MULTI-PARAMETER PATIENT MONITOR



TECHNICAL SPECIFICATIONS

Multi-parameter Patient Monitor

Quality Standards and Classification

- CE, ISO13485
- SFDA: Class IIb
- Anti-electroshock degree: Class I equipment (internal power supply)
- TEMP/SpO₂ /NIBP: BF
- ECG/Resp: CF

Application Range

- Adult/Pediatric/Neonatal/Medicine /Surgery/Operating Room/ICU/CCU

Display

- 15" real color TFT screen
- Resolution: 1024x768
- One alarm indicator (yellow/red)
- One working indicator (green)
- One battery charge state indicator (green)
- Three modes in accordance with the alarm state

Environment

Operating Environment :

- Temperature: 0 ~ 40 °C
- Humidity: ≤85%
- Altitude: -500~4600m

Transport and Storage Environment :

- Temperature: -20~60 °C
- Humidity: ≤93%
- Altitude: -500~13100m

Power Requirements

- AC: 100 ~ 240V, 50Hz/60Hz
- DC: Built-in rechargeable battery
- Battery: 5200mAh 11.1V lithium battery 4h operating after full charge (one piece) 5min operating after low battery alarm

Dimension and Weight

- Equipment: 300mm×286mm×155 mm (about); 4.5kg (about)
- Package : 350mm×380 mm×300mm (about); 6.5kg (about)

Date Storage

- Trend diagram/table: 7x24h
- NIBP review: 400 events
- Wave review: 100min
- Alarm review: 100 alarm events
- Support drug concentration titration analysis

ST Segment

- ST Segment Range: -2.0mV ~ +2.0mV
- Accuracy: 0.02mV

Pulse Rate

- Range: 20 ~ 300bpm
- Resolution: 1bpm
- Precision: ±3bpm

ECG

- 5 Leads: RA, LA, LL, RL, V
- Lead mode: I, II, III, aVR, aVL, aVF, V
- Increase: ×250, ×500, ×1000, ×2000
- Sensitivity: > 200 uV (Peak-to-peak value)
- Input impedance: > 5 (megohm)
- Bandwidth: Surgery 1 ~ 20 Hz
- Monitor 0.5 ~ 40 Hz
- Diagnostic 0.05 ~ 130 Hz
- CMRR 100dB
- Polarization Voltage: ± 300mV
- Baseline Recovering Time: After defibrillation < 3 seconds
- Signal Range: 8 mV (Peak-to-peak value)
- Calibrating Signal: 1mV, precision ±5%
- Heart rate range: 15-380bpm
- Heart rate accuracy: ±1%

RESP

- Method: RA-LL impedance
- Resp Impedance range: 0.3 ~ 3
- Base Impedance range: 200 ~ 4000
- Bandwidth: 0.1 ~ 2.5Hz
- Resp rate: Adult 0 ~ 120BrPM
- Neonatal/Pediatric 0 ~ 150BrPM
- Resolution: 1BrPM
- Precision: ±2 BrPM
- Asphyxia Alarm: 10 ~ 40 seconds

NIBP

- Method: Pulse wave oscillometry
- Work mode: Manual/ Auto/ STAT
- Measure interval of auto mode: 1, 2, 3, 4, 5, 10, 15, 30, 60, 90, 120, 180, 240, 480 minute(s)
- Measuring Time of STAT Mode: 5 minutes
- PR range: 30 ~ 250bpm
- Measure & alarm range: Adult
SYS 40 ~ 270mmHg
DIA 10 ~ 215mmHg
MEAN 20 ~ 235mmHg
Pediatric
SYS 40 ~ 200mmHg
DIA 10 ~ 150mmHg
MEAN 20 ~ 165mmHg
Neonatal
SYS 40 ~ 135mmHg
DIA 10 ~ 100mmHg
MEAN 20 ~ 110mmHg
- Static pressure range: 0 ~ 300mmHg
Precision: ± 3mmHg
- Pressure precision:
Max. average error: ±5mmHg
Max. standard deviation: ±8mmHg
- Overvoltage protection:
Adult 300mmHg
Pediatric 240mmHg
Neonatal 150mmHg

SpO₂

- Range: 0 ~ 100%
- Resolution: 1%
- Precision: 70% ~ 100%: ±2 DIGIT
0% ~ 69%: ±no definition given

TEMP

- Channel 2
- Measure & alarm range: 0 ~ 50 °C
- Resolution: 0.1 °C
- Precision (no sensor): ±0.1 °C

IBP (Optional)

- Label ART, PA, CVP, RAP, LAP, ICP, P1, P2
- Measuring and alarm range
- ART 0 ~ 300 mmHg
- PA -6 ~ 120 mmHg
- CVP/RAP/LAP/ICP -10 ~ 40 mmHg
- P1/P2 -10 ~ 300 mmHg
- Press Sensor
- Sensitivity 5 uV/V/mmHg
- Impedance 300-3000
- Resolution: 1 mmHg
- Accuracy: ±2% or ±1mmHg, which great
- Actualization interval: about 1 Sec.

CO₂ (Optional)

- Side/Main stream
- Warm-up time: when the ambient temperature is 25 °C, the carbon dioxide curve (capnogram) can be displayed within 20/15 seconds, and all the specifications can be fulfilled within 2 minutes.
- Measurement range: 0-150mmHg, 0-19.7%, 0-20kPa (at 760mmHg), atmospheric pressure provided by the host.
- Resolution 0.1mmHg : 0-69mmHg
0.25mmHg: 70-150mmHg
- Precision 0-40mmHg: ±2mmHg
41-70mmHg: ±5% (reading)
71-100mmHg: ±8% (reading)
101-150mmHg: ±10% (reading)
- Respiratory rate range 0- 150 BPM
- Respiratory rate accuracy: ±1 BPM

Standard Accessories

- NIBP cuff & tube
- ECG cable & electrodes
- SpO₂ sensor
- TEMP probe
- Lithium-ion battery
- Power cable
- Operator's manual

Optional

- Etco₂
- C.O. modular
- BIS modular
- IBP modular
- Touch screen
- Trolley bracket
- Hanging bracket
- Monitor recorder
- Wifi



Multi-parameter Patient Monitor



- ▶ Various interfaces: large font, full/half screen seven channel, ST, QRS analysis



- ▶ 15inch LCD screen display

- ▶ Long time data storage, review of patient history

- ▶ Central monitoring system and supports other bed observation functions

- ▶ Stand function: ECG, NIBP, SpO2, RESP, 2-TEP
Optional: IBP modular, Etco2 modular, BIS modular, AG module, Necllor Spo2, Touch screen, Inside recorder

Advanced technology:

- Dual slot design, IBP module, ETCO(Mainstream and Sidestream) module, AG module, etc.
- support VGA and HDMI expansion.
- 5200mAh lithium battery, more than 4 hours back up time, lower power consumption, longer product life and more stable & reliable.

Product advantages:

-  support for external USB storage

-  No fan design, avoiding secondary pollution, noiseless and quieter

-  Automatic sound and light dual alarm, anti defibrillation, anti high-frequency knife

-  Data storage least 400 NIBP measurement, trend chart review at least 96 hours, and trend table data review for the last 96 hours of NIBP.

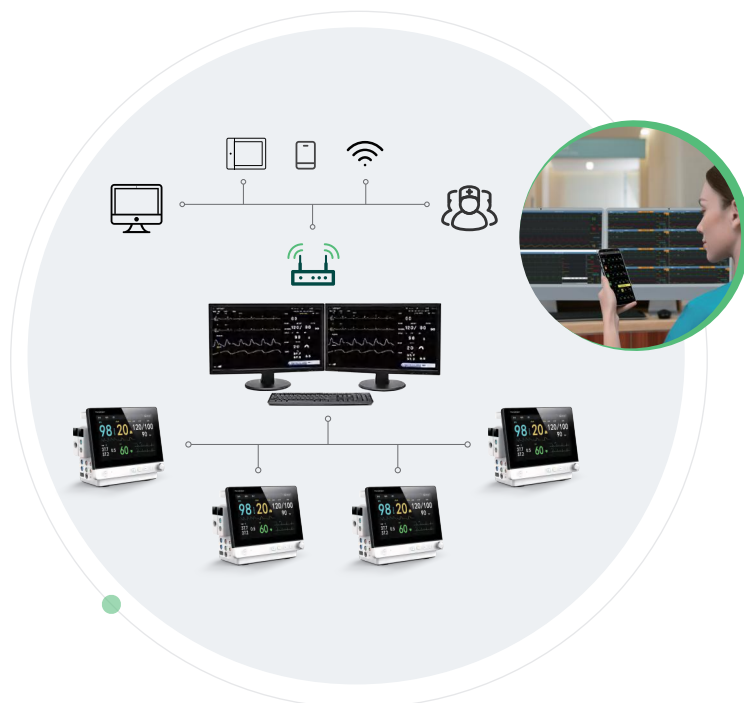
Standard Accessories

Multi-parameter Patient Monitor

- ✓ ECG Cable
- ✓ Spo2 sensor
- ✓ Temperature sensor
- ✓ Nibp cuff & tube
- ✓ Power cord
- ✓ Ground wire
- ✓ User Manual



Central Monitor System



WIFI with smart IT solutions

- Wireless integration with Central Monitoring Station
- Dynamic trends provide up to 240 hours of useful information for review
- 8 traces per monitor and 16 monitors on one screen
- View up to 64 maximum bed on one platform in real-time
- Review and manage patient data anytime and anywhere in and pre-hospita

Option

Thermal Recorder

- ECG, Nibp, Spo2
- Method: Thermal dot array- Paper
- width: 50 mm (1.97 in)
- Paper Speed: 12.5/25/50 (mm/sec)
- Traces Maximum: 3 tracks

IBP

- Label
ART, PA, CVP, RAP, LAP, ICP, P1, P2
- Measuring and alarm range
ART 0~300mmHg
PA -6~120mmHg
CVP/RAP/LAP/ICP -10~40mmHg
P1/P2 -10~300mmHg

EtCO2

- Method: Thermal dot array- Paper
- Range 0~19.7%(0~150 mmHg)
- Unit: %, mmHg: kP
- Respiration Rate Range 2~150 bpm

GAS

Mainstream

- CO2 0~5.3vol% $\pm(0.26\text{vol}\%)$
5.4~20vol% $\pm(8\% \text{ of Reading})$
- RR 3~150bpm $\pm 1\text{bpm}$
- N2O 0~100vol% $\pm(2\text{vol}\%+2\% \text{ of Reading})$
- SEV 0~8vol% $\pm(0.15\text{vol}\%+5\% \text{ of Reading})$
- ISO 0~8vol% $\pm(0.15\text{vol}\%+5\% \text{ of Reading})$
- ENF 0~8vol% $\pm(0.15\text{vol}\%+5\% \text{ of Reading})$
- HAL 0~8vol% $\pm(0.15\text{vol}\%+5\% \text{ of Reading})$
- DES 0~22vol% $\pm(0.15\text{vol}\%+5\% \text{ of Reading})$



Repeatably airway adapter for adult

Sidestream

- CO2 0~5.3vol% $\pm(0.26\text{vol}\%)$
5.4~20vol% $\pm(8\% \text{ of Reading})$
- RR 3~150bpm $\pm 1\text{bpm}$
- N2O 0~100vol% $\pm(2\text{vol}\%+2\% \text{ of Reading})$
- SEV 0~8vol% $\pm(0.15\text{vol}\%+5\% \text{ of Reading})$
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- DES 0~22vol% $\pm(0.15\text{vol}\%+5\% \text{ of Reading})$



L-Connector



Sampling line



Water filter