# 12.1 inch patient monitor(黑壳)

## Features

●12.1" Color TFT LCD Screen, optional touch screen, Display Resolution: 800*600

● 2 hours wave storage,720 hours Trend review,200 alarm events, 1000 NIBP measurement data review

● Standard interface: Maximum 9-channel waveforms display, the waveform color can be defined by user (7 colors)

● Optional interface: Maximum 14-channel waveforms display, the waveform color can be defined by user (7 colors)

●ST and 13 kinds arrhythmia analysis, pacemaker analysis, drug dose calculation

●Respiration monitoring with apnea alarms, alarm review, arrhythmia review

●Unique human voice alarm, Three Level: Low, medium and high,

Indication: Auditory and visual, All alarms can be silenced, Alarm Volume: The scope is 1~10

●Rechargeable high energy buil-in Li battery, AC/DC available, silent fanless design

●Anti - defibrillation design, NIBP over pressure protection

●Central station support Nurse Call by wire/wireless network

●Digital SpO2 with excellent performance

●Support multiple languages

●PVI (Pleth Variability Index)

●USB support PDF file export

## Technical Specifications

Quality Standards and Classification: ISO13485

ISO9001 ,CFDA,FSC

MDD classification: Class II b

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/Clinic/Ambulance/

Emergency Centers/Bedside Care Ward/Family Care

**Environment**

Temperature

Working: 0 ~ 40℃

Storage: -20 ~ 50℃

Humidity

Working: 15% - 90%

Storage: 15% - 90% (no coagulation)

Atmospheric pressure

Working: 86.0kPa ~ 106.0kPa

Storage: 86.0kPa ~ 106.0kPa

**Power Requirement**

External power required

AC: 100V ~ 240V, 50Hz/60Hz

DC: Builtin rechargeable battery

Battery: 14.8V, 2200mAh rechargeable Li-ion battery

3.5h operating after full charge

5min operating after low battery alarm

Input power: Pmax=90VA

FUSE: T1.5AL 250V

**Dimension and Weight**

Equipment: 320mm x 255mm x 125mm(about); 3. 4kg(about)

Package: 390mm x 310mm x 355mm; 5.5kg(about)

**Storage**

Trend 720 hours

NIBP review 1000 NIBP events

Wave review 2 hours

Alarm review 200 alarm events

All storage data are non volatile

**ECG**

5 Leads: RA, LA, LL, RL, V

lead mode: I, I,, II, AVR, AVL, AVF, V

3 Leads:R,L, For RA, LA, LL

Lead mode:I, II, II

Gain: 2.5mm/mV, 5.0mm/mV, 10mm/mV,20mm/mV, auto

Sweep speed: 12 .5mm/s, 25mm/s, 50mm/s

**Bandwidth**

Surgery:1 ~ 20Hz

Monitor: 0.5 ~ 40Hz

Diagnostic: 0.05 ~ 130Hz

Calibration Signal: 1(mVp-p), Accuracy: 5%

**CMRR**

Diagnostic Mode: >90dB

Monitor Mode: >110dB

Surgery Mode: >110dB

Electrode offset potential: ±300mV

Leakage Current: <10 uA

**HR Measure Range**

Adult: 15 ~ 300 bpm

Neonatal/Pediatric: 15 ~ 350 bpm

Accuracy:±1%

Resolution: 1bpm

Sensitivity: >200 (uVp-p)

Differential Input Impedance: >5 MΩ

**ST Segment**

ST Segment Monitoring Range

Measure and Alarm: -2.0 ~ +2.0mV

Accuracy: -0.8mV ~ +0.8mV

±0.02mV or ±10%， which is greater

**ARR Detecting**

Type: ASYSTOLE, VFIBNTAC, COUPLET, BIGEMINY,

TRIGEMINY, R ON T, VT>2, BRADY, MISSED BEATS,

PNP, PNC, Alarm Available, Review Available

**NIBP**

Method: Oscillometry

Mode: Manual, Auto, STAT

Measuring Interval in AUTO Mode: 1, 2, 3,4,5, 10, 15,

30, 60, 90,120, 180,

240, 480 (Min)

Measuring Period in STAT Mode: 5 Min

Pulse Rate Range: 40 ~ 240bpm

Alarm Type: SYS, DIA, MEAN

**Measuring and alarm range:**

Adult Mode: SYS 40 ~ 280mmHg

DIA 10 ~ 220mmHg

MEAN 20 ~ 240mmHg

Pediatric Mode: SYS 40 ~ 220mmHg

DIA 10 ~ 160mmHg

MEAN 20 ~ 170mmHg

Neonatal Mode: SYS 40 ~ 135mmHg

DIA 10 ~ 100mmHg

MEAN 20 ~ 110mmHg

Resolution: 1mmHg

Accuracy: Maximum Mean error ±5mmHg

Maximum Standard deviation 8mmHg

**Overpressure Protection**

Adult Mode: 300mmHg

Pediatric Mode: 240mmHg

Neonatal Mode: 150mmHg

Static pressure accuracy: 3mmHg

**SpO2**

Measuring Range: 0 ~ 100%

Resolution: 1%

Alarm Range: 0 ~ 100%

Accuracy: 70% ~ 100% ±2%

<69% unspecified

Actualization interval about: 1 Sec.

Alarm Delay: 10 Sec

**Pulse Rate**

Measuring and Alarm Range: 20 ~ 250bpm

Resolution: 1bpm

Accuracy: ±3bpm

**Perfusion Index**

Measure and Alarm Range: 0.02 ~ 20%

Resolution: 0.01%

**Respiration**

Method: Impedance between R-F(RA-LL)

Measuring Impedance Range: 0.3~3Ω

Base line Impedance Range: 200~4000Ω

Bandwidth: 0.3~2 5Hz

Resp rate: Measurement Range

Adult: 0~ 120 BrP

Neonatal / Pediatric: 0 ~ 150 BrPM

Resolution: 1 BrPM

Accuracy: 0 ~ 6 BrPM: unspecified

7 ~ 150 BrPM: ±2 BrPM

Apnea Alarm: 10~ 40 S

Gain 0.25,0.500,1,2,4

Differential Input Impedance: >2.5MΩ

Inspiriting current: <300 μA RMS max

**TEMP**

Channel: 2

Measuring and Alarm Range: 0 ~ 50℃

Resolution: 0.1℃

Accuracy: ±0.1℃ (0 ~ 50℃)

Actualization interval about: 1 Sec

Average Time Constant: <10 Sec

Sensor Type: 10K series, 2.25K series

**Standard Accessories Adult**

NIBP cuff & Extension tube, ECG cable & electrodes,

SpO2 sensor, TEMP probe, Lithium-ion battery,

Power cable,User manual

## Technical Specifications

**IBP (optional)**

Sensor

Reusable sensors: OHMEDA P23XL or BD, EDWARD compatible

Once usage: OHMEDA DT-4812 or BD, EDWARD compatible

Excitation voltage: +5Vdc ±2%

Sensitivity: 5uV/V/mmHg

Channels: 2 channels

Measure Range: -50~ 360(mmHg)

Resolution: 1mmHg

Accuracy(no sensor): ±2% or ±1mmHg, use the greater

Band Width

Normal mode: DC ~ 40Hz

Smooth mode: DC ~ 12.5Hz

Measurable parameter: ART, PA, CVP, LAP, RAP, ICP

**CO2(optional)**

Measure Range: 0% ~ 13%

Resolution: 1mmHg

Accuracy: 2mmHg @ < 5.0% CO2(at ATPS)

Breath Rate: 3 ~ 150 bpm

**Recorder (optional)**

Paper width: 50 mm

Paper length: 20 m

Speed: 6.25/12.5/25/50 mm/s

Wave channel: 3 channels

**Gas (optional)**

Range

FiCO2,EtCO2: 0 ~ 15%

RR: 0 ~ 0-1 50BPM

N2O: 0~ 100

Sevoflurane: 0 ~ 10%

Isoflurane: 0 ~ 8%

Enflurane: 0 ~ 8%

Desflurane: 0 ~ 22%

Accuracy

FiCO2,EtCO2:±(0.2% + 5% of reading)@(0 ~ 10%)

±(0.2% + 8% of reading)@(0 ~ 10%)

RR : ±1 BPM

N2O :±(2% + 3% of reading)

Sevoflurane : ±(0.15% + 5% of reading)@(5 ~ 10%)

±(0.3% + 10% of reading)@(5 ~ 10%)

Isofurane :±(0.15% + 5% of reading)@(0 ~ 5%)

±(0.15% + 10% of reading)@(5 ~ 8%)

Enflurane :±(0.15% + 5% of reading)@(0 ~ 5%)

±(0.3% + 5% of reading)@(5 ~ 8%)

Enflurane :±(0.15% + 5% of reading)@(0 ~ 10%)

±(0.3% + 10% of reading)@(5 ~ 22%)

**Standard:**3/5-Leads ECG、SpO2、NIBP、RESP、2-Temp、PR/HR

**Optional：** WIFI、AG、2-IBP、VGA 、CMS 、EtCO2、Nurse Call、Suntech Blood Pressure、Touch Screen、Nellcor Spo2、Wall Mount、Recorder、Rolling Stand、Depth of anesthesia、Children Accessories、Newborn Accessories、Disposable Spo2 Probe