

BMO210D Multi-parameter Patient Monitor

(12.1 inches)



Features

Core

- Classic ARM9 main board based on embedded Linux
- Support storage of 720 hours trend table and graph review, 2 hours waveform review, 1000 groups NIBP review and 200 alarm events review

Body

- 12.1 inch high resolution LCD
- Support display up to 12 waveforms
- Support 7 channel ECG waveform display simultaneously

Printer

- Built-in high-speed 50mm thermal printer

Central System

- Wired or wireless connection
- Bed view

Alarm

- Three-level acousto-optic alarm
- Human voice alarm
- Sensor/probe/cuff - off alarm
- Sensor/probe/cuff - defect alarm
- Paper out alarm
- Low battery / no AC supply alarm
- Support alarm review
- Support alarm pause

Linux OS

- Support data export for EMR connectivity by USB
- Multi-display mode
- NIBP self-test mode
- Support Data Export by USB
- 13 types of Arrhythmia analysis and real-time S-T segment analysis and pacemaker detection
- Drug calculation and titration table
- Factory preset / user-defined protocols
- Hemodynamic calculation
- Multi-language display



Standard Display



Big Font Display



ECG Full Lead



Trend Table



NIBP Trend



Oxy CRG

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(12.1 inches)

- Release 2.2

Model Configuration

Standard Configuration:	12.1-inch LED, 3/5 Lead ECG, NIBP, SpO2, Pulse Rate, Temperature, Respiration
Optional Configuration:	2-Temperature, 1/2 IBP, EtCO2, Masimo SpO2, Nellcor SpO2, Bed View
Optional Accessories:	Touch Screen, Printer, Central Monitoring Station, Adult/Neo/Ped different sized accessories, Wall-mounting, BMV Trolley support on 5 braked wheels, basket & handle

CE/ISO/RoHS/CFDA

Performance Specifications

Dimension and Weight

- Dimension: 298mm*272mm*122mm

- Weight: 2.5 kg (excluding accessories)

Power Supply

- Voltage: AC100~240V, 50/60HZ, Power≤60W

Display

- 12.1" color TFT LED resolution: 800*600 pixels

Battery

- Type: Rechargeable lithium battery 14.8V/2200mAh

- Charge Cycle: ≥500 times

- Working time: 3.5 hours

Recorder (Option)

- Method: Thermal printer

- Paper width: 50 mm (1.97 in)

- Printing speed: 12.5/25/ 50 mm/s

- Trace: Max. 3 tracks

- Recording way: Real-time Recording, Review Printing, Periodic Recording, Alarm Recording

Alarm

- Level: Low, medium and high

- Indication: Auditory and visual

- Alarm volume adjustable

- Alarm pause time: 2min

- Parameter alarm type: Latch/ Unlatch

Input Device

- Standard: Knob /Keypress

- option: touch screen

System Output & Extensible Interface

- Ethernet Network: standard RJ45 socket 1 pc

- USB Port: 1pc

Operating Environment

- Temperature: 5 ~ 40 °C

- Humidity: 15% ~ 90% (non-condensing)

- Atmosphere pressure: 86 KPa ~ 110 KPa

Transportation and Storage

- Temperature: -20~50 °C

- Humidity: 10%~90% (non-condensing)

- Atmosphere pressure: 86 KPa ~ 110 KPa

Safety

- IEC60601-1 Approved, CE marking according to MDD93/42/EEC

- With reference to RoHS Directive 2011/65/EU recasting

Trend & Reviewing

- Trend: 720 hours

- ARR events: 128 groups of ARR events and associated waveform

- NIBP measurement reviewing: 1000 groups

- Waveform review: 2 hours

- Alarm event: 200 alarms events review

SpO2 (BMV Technology)

- Measurement Range: 0 ~ 100 %

- Resolution: 1 %

- Accuracy: ±2% (70% ~ 100%)
Unspecified (0% ~ 69%)

- Support Pitch tone and multi-level volume

- User-selectable waveform speed: 12.5, 25 mm/s

- PI range (Option): 0.075%-20%

Pulse Rate

- Measuring and Alarm Range: 20-300bpm

- Accuracy: ±2 bpm

- Resolution: 1 bpm

Respiration

- Method: Impedance between RA-LL, RA-LA

- Gain: ×0.25, ×0.50, ×1, ×2, ×4

- Respiration Rate: Adult 0 ~ 120 BrPM
Neonatal / Pediatric 0 ~ 150 BrPM

- Sweep speed: 6.25 mm/s, 12.5 mm/s, 25mm/s

- Resolution: 1 BrPM

- Accuracy: ±2BrPM or ±2% whichever is greater (7-150BrPM)
Unspecified (0%- 6BrPM)

- Apnea Alarm: 10 ~ 40 s

Temperature

- Technique: Thermistor probe (2.25K)

- Channel: Dual-channel, provide T1; T2; ΔT

- Measuring and Alarm Range: 0.0 °C ~ 50 °C (32°F ~ 122°F)

- Unit: Celsius (°C), Fahrenheit (°F)

- Resolution: 0.1°C or 1°F

- Accuracy: no sensor ± 0.1°C (25°C - 45°C) , ± 0.2°C (other)
include sensor ± 0.2°C (32°C - 42°C) ± 0.3°C (other)

ECG

- Lead mode: 3/5 Leads, I, II, III or I, II, III, AVR, AVL, AVF, V

- Protection: Breakdown Voltage 4000VAC 50/60Hz;

CMMR: >110 dB; Defibrillator proof

- Gain: 2.5mm/mV(×0.25), 5.0mm/mV(×0.5), 10mm/mV (×1),
20mm/mV (×2), 40mm/mV (×4)

- Sweep speed: 12.5mm/s, 25mm/s, 50mm/s

- ECG signal range: ±5 mV p-p

- Accuracy: ±1%

- Resolution: 1 bpm

- Leakage Current < 10 μA

- Baseline Recovery:

≤ 3s after defibrillation

- Bandwidth: Surgery 1 ~ 20Hz

Monitor 0.5 ~ 40 Hz

Diagnostic 0.05 ~ 130 Hz

- Indication of Electrode Separation: Every electrode (exclusive of RL)

Heart Rate

- Measure range: Adult: 15 ~ 300 bpm

Neo/Ped: 15 ~ 350 bpm

- Resolution: 1 bpm

- Accuracy: ± 1%

ST Measurement

- Range: -2.0 ~ +2.0 mV

- Accuracy: -0.8mV~+0.8mV: ±0.02mV or ±10%, whichever is greater, other range: unspecified

NIBP

- Method: Oscillometric

- Measure mode: Manual, Auto, STAT

- Measure Interval in AUTO Mode

1,2,3,4,5,10,15,30,60,90,120,180,240,480 min

- STAT mode cycle time: 5 minutes

- Measure and Alarm Range:

Adult: SYS: 40 ~ 280 mmHg

DIA: 10 ~ 220 mmHg

MEAN: 20 ~ 240 mmHg

Pediatric: SYS: 40 ~ 220 mmHg

DIA: 10 ~ 160 mmHg

MEAN: 20 ~ 170 mmHg

Neonate: SYS: 30 ~ 135 mmHg

DIA: 10 ~ 110 mmHg
MEAN: 20 ~ 110 mmHg

- Static pressure accuracy: ±3mmHg

- Resolution: 1mmHg

- Accuracy: Maximum Mean error ±5mmHg
Maximum Standard deviation ≤8mmHg

- Overpressure (for adult 300mmHg): Dual protection

EtCO2 (Mainstream/ Sidestream) (Option)

- Measure method: Non-dispersive infrared (NDIR)

- Measure Range: 0 ~ 19.7% (0 ~ 150 mmHg)

0 ~ 20 kPa

- Resolution: 0.1 mmHg

- CO2 Accuracy:

0 ~ 40 mmHg, ±2 mmHg

41 ~ 70 mmHg, ±5% of reading

71 ~ 100 mmHg, ±8% of reading

101 ~ 150 mmHg, ±10% of reading

at 760 mmHg, ambient temperature of 25°C)

- Respiratory Rate: Range: 3 ~ 150 BrPM

Accuracy: ±1 bpm

EtCO2 (Micro-stream) (Option)

- Measure method: Non-dispersive infrared (NDIR)

- Measure Range: 0 ~ 19.7% (0 ~ 150 mmHg)

0 ~ 20 kPa

- Sample Rate: 50 mL/min ±10mL/min

- Resolution: 0.1 mmHg (0 ~ 50 mmHg)

0.25 mmHg (50 ~ 114 mmHg)

- CO2 Accuracy: 0 ~ 40 mmHg, ±2 mmHg

41 ~ 70 mmHg, ±5% of reading

71 ~ 100 mmHg, ±8% of reading

101 ~ 150 mmHg, ±10% of reading

at 760 mmHg, ambient temperature of 35°C)

- Respiratory Rate: Range: 3 ~ 120 BrPM

Accuracy: ±1 bpm

IBP (Option)

- Max Channel: 2

- Measurement way: Thermal resistance way

- Press Sensor: Sensitivity 5 uV/V/mmHg, ±2%

Impedance 300 to 3000Ω

- Resolution: 1 mmHg

- Unit: mmHg, kPa, cmH2O

- Transducer sites:

Arterial Pressure (ART)

Pulmonary Arterial (PA)

Left Arterial (LAP)

Right Arterial (RAP)

Central Venous Pressure (CVP)

Intracranial Pressure (ICP)

P1/ P2

- Measuring and alarm range:

ART 0 ~ +350mmHg

PA -10 ~ +120 mmHg

CVP/ RAP/ LAP/ ICP -10 ~ +40 mmHg

P1/ P2 -50 ~ +350mmHg

- Accuracy:

Static: ±1mmHg or ±2%, whichever is greater

(exclusive of transducer)

±4mmHg or ±4%, whichever is greater

(inclusive of transducer)

Dynamic: ±4mmHg or ±4%, whichever is greater

** Specifications subject to change without prior notice