

# Patient Monitor PM - 2000M

PAT



## Model PM-2000M

### Accurate Readings and Optimized Performance

The PM-2000M is a full modular monitor intended to be used for monitoring, storing, reviewing, and recording patients data during treatment in the hospital environment. It offers plug-and-play modules and an extensive modular rack that can be used in a wide range of parameters simultaneously, adapting from critical cares to anesthesia monitoring, with additional monitoring capabilities including ICG, RM and BIS.

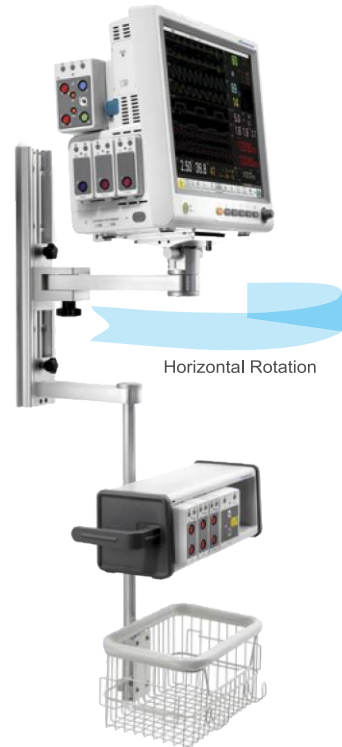


# PM-2000M

## Patient Modular Monitor

- Patient Modular Monitor
- High Resolution Color TFT LCD Display
- Numerical and waveform information
- Full touch-screen display, intuitive operation by clicking parameter or waveform
- Modular monitor
- Pacemaker detection
- Nurse Call function
- Defibrillation protection and synchronization
- OxyCRG, assessment of respiration and circulation for neonates
- Extended Full-disclosure trend information
- Comprehensive alarm system
- Multifunctional Rotary Knob
- Multiple Measurements Module ECG, Resp., SpO2, NIBP, & Temp.
- Functional Arterial Oxygen Saturation module (V-SpO2) (optional)
- Respironics® Carbon Dioxide mainstream module (CO2) (optional)
- Respironics® Carbon Dioxide sidestream module (CO2) (optional)
- Carbon Dioxide sidestream module (CO2)(optional)
- Anesthetic gas mainstream module (AG)(optional)
- Anesthetic gas sidestream module (AG)(optional)
- Cardiac Output module (CO)(optional)
- Invasive Blood Pressure module (IBP)(optional)
- Omron Non-Invasive Blood Pressure module (NIBP) (optional)
- Bispectral Index module (BIS)(optional)
- Impedance Cardiography (ICG)(optional)
- Respiration mechanics (RM)(optional)
- Thermal Recorder (optional)
- Bidirectional communication with Monitoring Central Station (CMS-2000)
- Wi-Fi (optional)
- HL7 communication via XML Files
- Barcode Scanner Support (optional)
- SD Card slot enables memory extension
- Bed-to-Bed viewing display (optional)
- Drug calculation and titration table
- USB & serial Ports, VGA & analog outputs and RJ-45
- Built in rechargeable battery
- Meet IEC 60601-1+A+A2 & IEC 60601-2+A Safety Standards.

Mounting Solution



Horizontal Rotation



# Patient Monitor

## PM - 2000TM Patient Monitor / Module

PM- 2000TM is lightweight and compact so you can easily carry it along with the babe during medical examinations and treatments . Quiet operation and also eliminates the accumulation of dust inside the unit which is essential for the Intensive Care Unit. With the PM-2000TM you can have a close look at the new born's cardiovascular and respiratory system by using the OxyCRG screen.



## Settings

- 2-channel temperature monitoring.
- ECG algorithm optimized for arrhythmia detection, pacemaker detection, and measurement of heart rate.
- Optional 2-channel invasive blood pressure function with overlapping waveforms.
- NIBP algorithm optimized for cardiac patients, patients hypertensive and neonatal patients.
- SpO2 algorithm with resistance to movement and performance perfusion low resistance.
- Signal intensity (SI) measuring as an indicator of blood perfusion.
- 12 -lead algorithm diagnostic with 208 types of ECG in the ECG settings and 12 optional derivations.



## Anesthetic Gas / O2 ( optional)

- Mainstream (IRMA AX+)
- CO2, N2O and anesthetic agent measurement and measuring probes .
- Complete gas analysis system contained within sensor head.
- Lower power consumption.

## Sidestream (ISA AX+ / ISA OR+)

- Low sample flow 50ml/min for all type of patients.
- Extremely low power consumption and weight.
- Warm-up time 20 seconds before full performance.

## Paramagnetic Oxygen

- Fast response, totally linear.
- High stability and accuracy.
- Long operational life.
- Low maintenance requirements.

Barcode Scanner Support

## Technical Specifications

Safety Standards	Safety Standards	IEC 60601-1+A1+A2; IEC 60601-2+A1; IEC 60601-1-8 (Alarm)
Physical Specifications	Dimensions Weight	17" 425mm (L) x 245mm (W) x 384mm (H) / 15" 384mm (L) x 213mm (W) x 320mm (H) 17" Standard configuration 14kg / 15" 7,5 kg Includes TM module
Display	Display Resolution Waveforms Displayed Selectable Interface	17" or 15" Color TFT LCD Touch-screen 1280X1024dpi Up to 15 Standard screen monitoring, Trend / Monitoring , Co - Display , bed to bed view (optional ) OxyCRG screen with dynamic view, calculation of drug dosages interface.
Environment Requirement	Ambient Temperature Humidity	-20 °C ~ 55°C (-4 ~ 131°F) 15% - 95% without condensation
Energy Supply	Power Supply Internal Battery Battery Working Period Recharging Time	100-240V CA, 50/60HZ Rechargeable Li -Ion 4200 mAh 2 hours max. (2 batteries 4200mAh) ≤350 minutes (4200 mAh)
Resp	Method Operation Mode Rr Measurement Range Resolution Apnea Alarm Threshold Alarm Band Width Sweep Speed	Impedance between RA- LL , RA -LA Auto / Manual Adult: 0-120rpm / Neonate-Pediatric: 0-150rpm 1rPM 10s, 15s, 20s (default), 25s, 30s, 35s, 40s 3 levels of audible and visual alarm, Alarms events recallable 0.2-2.5Hz (-3dB) 6.25mm/s, 12.5mm/s, 25mm/s, 50mm/s
ECG	Lead Type  Gain Selection Sweep Speed ECG Hr Range Resolution & Accuracy Filter St-Segment Detection	3 - Leads: I, II , III / 5 - Leads: I, II , III, aVR , aVL, aVF, V / 12, Derivations : I, II , III , aVR, aVL, aVF, V1, V2, V3 , V4, V5 , V6 x0.125, x0.25, x0.5, x1, x2, x4 6.25mm/s, 12.5mm/s, 25mm/s, 50mm/s Adult:15-300bpm // Pediatric-Neonate: 15-350bpm ±1bpm or ±1%, whichever is greater Diagnosis mode: 0.05-150Hz / Monitoring mode: 0.5-40Hz / Surgical mode: 1-20Hz Measurement range: -2.0mV ~ 2.0mV / Alarm range: -2.0mV ~ 2.0mV Comes with St-segment Arrhythmia Analysis and Pacemaker detection
NIBP	Method Operations Modes Auto Measurement Time Interval Measurement Unit Measurements Types Pressure Range Adults Pressure Range Pediatrics Pressure Range Neonates Resolution Accuracy Alarm Pr From PANI Resolution Accuracy	Oscillometric Manual / Automatic/ Continuous 1/2/3/4/5/10/15/30/60/90/120/240/480 minutes.  MmHg/kpa Selectable Systolic, Diastolic, Mean Systolic: 40 - 270 mmHg / Diastolic: 10 - 215 mmHg / Mean: 20 - 235 mmHg Systolic: 40 - 200 mmHg / Diastolic: 10 - 150 mmHg / Mean: 20 - 165 mmHg Systolic: 40 - 135 mmHg / Diastolic: 10 - 100 mmHg / Mean: 20 - 110 mmHg 1mmHg Max mean error ±5mmHg / Max standard deviation ±8mmHg Systolic, Diastolic, Mean Measurement 40-240 bpm 1 bpm ±3bpm or 3.5% whichever is greater Comes with leak test and pressure auto calibration
NIBP (Optional OMRON® M3600)	Measurement Range Adults/Pediatric Neonates Accuracy	OMRON® is registered mark Systolic: 60 - 250 mmHg / Diastolic: 40 - 200 mmHg / Mean: 45 - 235 mmHg Systolic: 40 - 200 mmHg / Diastolic: 20 - 90 mmHg / Mean: 30 - 100 mmHg ±2bpm or 2% of the reading
SPO <sub>2</sub>	Measurement/Alarm Range Resolution Accuracy PR Measurement Alarm Range Resolution Accuracy Refresh	0 - 100% (SpO <sub>2</sub> ) 1% ±2% (70-100% Adult/Pediatric); / ±3% (70-100% Neonate) 25 ~ 300 bpm 30 ~ 300 bpm 1bpm ±2bpbmm 1s
SPO <sub>2</sub> (Optional, Nellcor Oximax™)	Measurement/Alarm Range Resolution Accuracy	20 ~ 300bpm 1bpm ± 3bpm (20bpm ~ 250bpm)

## Technical Specifications

Temperature (2 Channels, 1 Probe By Default)	Measurement Resolution Range Accuracy	0-50°C (32-122°F) 0.1°C ±0.1°C (without probe)
IBP	Technology Measurement Resolution Accuracy Sensitivity Impedance Range Filter	Invasive direct measurement ART, PA, CVP, RAP, LAP, ICP, P1, P2 1 mmHg ± 2% or ± 1 mmHg (whichever is greater) 5µ V/V / mmHg 300 ~ 3000 Ω DC ~ 12.5Hz; DC ~ 40Hz
BIS	Primary Parameter Secondary Parameter  Scan Speed Wave Scale Bis Trend Length Attenuation Range EEG Band Width BIS Alarm Range	Bispectral index, power spectrum analysis, measurement parameters BIS 0 ~100 SQI/SR 0% ~100% / EMG 30dB ~80Db / SEF 0.5Hz ~ 30.0Hz / TP 40dB ~100dB / BC (applicable only to BIS™ Extend Sensor ) 0 ~ 30 6.25mm/s, 12.5mm/s, 25mm/s, 50mm/s 50µv, 100µv, 200µv, 500µv 6min, 12min, 30min, 60min 10s, 15s, 30s 0.25Hz~50Hz 0~100
CO <sub>2</sub>	Technology Rango EtCO <sub>2</sub> Precision	Infrared Absorption 0~ 150mmHg ± 2% - 0~ 40mmHg / ±5% - 41~70mmHg / ±8% - 71~100mmHg / ±10% - 101~150 mmHg / ± 12% of reading, FR more than 80 rpm (sidestream)
C.O.	Method Measurement Range TB Alarm Range	Thermodilution technology CO: 0.1~ 20L/min / TB: 23°C~43°C (73.4°F~109.4°F) / TI: -1°C~27°C (30.2°F~80.6°F) 23°C~43°C (73.4°F~109.4°F)
Anesthetic Gas/O <sub>2</sub>	Technology Paramagnetic Oxygen Gas Warm-Up Time	Infrared Absorption Optional CO <sub>2</sub> , O <sub>2</sub> , N <sub>2</sub> O, Des, Iso, Enf, Hal, Sev (IRMA AX+) Precision mode ISA : 10s / mode full precision: 20s / ( ISA OR + / AX + ) < 20s / Sampling flow ( for ISA or + / AX + ) 50 ± 10 ml / min MAC Visualization of the value
Printer	Printing Speed Paper Width	Dot Matrix printer You can record up to three waveforms, selectable by the user. Waveform recording and real-time 12.5mm/s, 25mm/s, 50mm/s 50 mm
I/O Interface	Peripherals	4-USB Port SD card socket RS-232 serial port RJ-45 ethernet port, IEEE 802.3 VGA output Analog and nurse call output Defibrillation synchronization output PAM connector DVI connector Network interface

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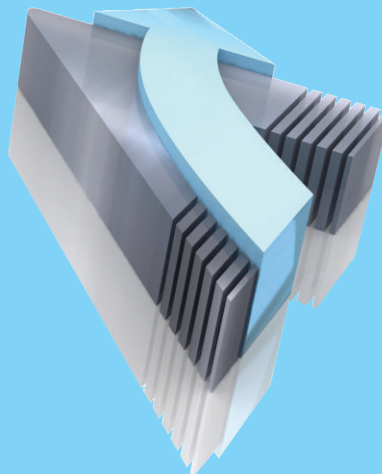
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