

# PM-2000XL

Portable monitoring solution for emergency / intermediate care / recovery care/ clinical transportation

### Safety Standards

CE Marking in accordance to Council Directive 2007/47/EC concerning Medical Devices IEC 60601-1+A1+A2, IEC 60601-1-2+A1;

### Physical Specification

Device dimension: 260 mm (L) x 140 mm (W) x 205 mm (H)  
Weight: Standard Configuration 3.6 kg

### Display

Color TFT LCD 8.4" Touchscreen Optional  
Resolution: 800 X 600 dpi  
Traces Displayed: up to 8  
Waveforms Displayed: up to 11  
Various Working Interface Selectable:  
Standard Monitoring Display  
Large Font Intensive Care Display  
Trend Graph/Monitoring Co-Display  
Bed to Bed view Display (Optional)  
OxyCRG Dynamic View Display  
Drug Dose Calculation Interface  
Sweep Speed: 6.25mm/s, 12.5mm/s, 25mm/s, 50mm/s

### Operation Environment

Ambient Temperature: -20 - 55°C (-4 - 131° F)  
Humidity: 15%-95% non-condensing

### Power Supply

External Power Supply  
100-240V AC, 50/60Hz  
Pmax=80VA  
Internal Battery Power Supply  
Type: Rechargeable Li-ion  
Voltage: 14.8 V DC  
Capacity: 2100 mAh (4200 mAh optional)  
Battery working period:  
up to 6 hours  
Recharging time  
< 150 minutes (2100mAh)  
< 360 minutes (4200mAh)

### Resp

Method: Trans-thoracic impedance  
Operation mode: Auto/Manual  
RR Measurement range:  
Adult: 0-120 rPM  
Neonate/Pediatric: 0-150 rPM  
Resolution: 1 rPM  
Apnea alarm threshold:  
10s, 15s, 20s (default), 25s, 30s, 35s, 40s  
Alarm: 3 levels of audible and visual alarm, alarm events recallable  
Band width: 0.2-2.5Hz (-3dB)  
Sweep speed: 6.25mm/s, 12.5mm/s, 25mm/s, 50mm/s

### ECG

Lead type: 5-lead and 3-lead selectable  
3 leadwire cable: RA; LA; LL or R; L; F  
5 leadwire cable: RA; LA; RL; LL; V or R; L; N; F; C

Lead selection: 3-lead: I, II, III; 5-lead: I, II, III; aVR; aVL; aVF; V  
Gain selection: x0.125; x0.25; x0.5; x1; x2; x4; auto  
Sweep speed: 6.25mm/s, 12.5mm/s, 25mm/s, 50mm/s  
ECG HR Range:

Adult/Pediatric: 15-300bpm;  
Neonate: 15-350bpm  
Resolution & accuracy: ±1bpm or ±1%, whichever is greater

### Filter:

Diagnostic mode: 0.05-150Hz  
Monitoring mode: 0.5-40 Hz  
Surgical mode: 1-20Hz

Protection: Withstand 5000VAC/50Hz voltage in isolation against Defibrillation and electrosurgical interference  
ST-Segment Detection:

Measurement range: -2.0 mV-2.0mV  
Alarm range: -2.0 mV-2.0mV  
ST-Segment Arrhythmia analysis and categorization: Yes  
ARR Alarm: 3 levels of audible and visual alarm, alarm events recallable  
Pace maker detection: Yes, and 5 types abnormal status detectable  
IEC 60601-2-25, AAMI EC 11/EC 13  
IEC 60601-2-27

### NIBP

Method: Automatic Oscillometric  
Operation modes: Manual/Automatic/Continuous  
Auto measurement time interval: Adjustable  
1/2/3/4/5/10/15/30/60/90/120/240/480 Minutes  
Measurement unit: mmHg/kPa selectable  
Measurement types: Systolic, Diastolic, Mean  
Pressure range for Adults:  
Systolic: 40 - 270 mmHg  
Diastolic: 10 - 215 mmHg  
Mean: 20 - 235 mmHg  
Pressure range for Pediatrics:  
Systolic: 40 - 200 mmHg  
Diastolic: 10 - 150 mmHg  
Mean: 20 - 185 mmHg  
Pressure range for Neonates:  
Systolic: 40 - 135 mmHg  
Diastolic: 10 - 100 mmHg  
Mean: 20 - 110 mmHg

Leak test and pressure auto calibration: Yes  
Over-pressure protection: Dual Safety protection  
Resolution: 1mmHg  
Accuracy: Max mean error ± 5 mmHg  
Max standard deviation ± 8 mmHg  
Alarm: Systolic, Diastolic, Mean  
PR from NIBP: Measurement 40-240 bpm  
Resolution 1 bpm  
Accuracy ±3bpm or 3% whichever is greater  
Leak test and pressure auto calibration: Yes  
IEC 60601-2-30

### SpO2

Measurement & Alarm Range: 0 - 100%  
Resolution: 1%; Accuracy: ±2% (70-100%, Adult/Pediatric); ±3% (70-100%, Neonate)  
PR Measurement and Alarm Range: 30 - 300bpm  
Resolution: 1 bpm,  
Accuracy: 3bpm  
Refresh rate: 2s  
ISO 9819

### Nellcor SpO2 (optional)

Measurement & Alarm Range: 0 - 100%  
Resolution: 1%  
Accuracy: ±2-3% (70-100%, Adult/Pediatric); ±3-3.5% (70-100%, Neonate)  
PR Measurement and Alarm Range: 20 - 300 bpm  
Resolution: 1 bpm,  
Accuracy: 3bpm (depends on probe)  
Refresh Rate: 1s  
ISO 9819

### Temperature (2 Channels, 1 probe by default)

Measurement / Alarm range: 0-50°C (32-122° F)  
Probe type: YSI (B Series) and CF-FI  
Resolution: 0.1°C  
Accuracy: ±0.1°C (without probe)  
Channel: Dual-channel. Provide T1; T2; AT  
IEC 12470-4

### Quick Temperature (Optional)

Measurement / Alarm range: 25-45°C  
Probe type: Oral/Axillary/Rectal  
Resolution: 0.1°C  
Accuracy: ±0.1°C (without probe)  
Typical measurement time <15s  
IEC 12470-4

### IBP (2-Channels, optional)

Measured Pressure:  
ART, PA, CVP, RAP, LAP, ICP, P1, P2  
Measurement range:  
-50 - 300 mmHg. Resolution: 1 mmHg  
Accuracy: ±2% or ±1 mmHg, whichever is greater (without probe)  
Sensitivity: 5 µV/mmHg, Impedance range: 300-3000 Ω  
IEC 60601-2-34

### CO2 (Mainstream and Sidestream, optional)

By Philips Respiration CAPNOSTAT 5® & LoFlo™ Technology  
Range: 0 - 150mmHg  
Accuracy: ±2% 0 - 40mmHg,  
±5% 41-70mmHg,  
±8% 71-100mmHg,  
±10% 101-150 mmHg  
AwRR Accuracy: ±1 rpm  
Convenient design for intubated and non-intubated applications  
Possible to work at low sample flow rate: 50ml / minute  
Detailed specification refer to the user manual of Respiration  
ISO 21647

### Recorder (optional)

Built-in, direct thermal pixel array recorder  
2 channels printing and 1, 2 channels selectable  
Up to 3 channels and 1, 2, 3 channels selectable (to be released)  
Print speed: 25mm/s  
Paper width: 50 mm/Record width: 48mm

### I/O Interface

2-USB Ports  
SD Card Socket  
RJ-45 Ethernet Port. IEEE 802.3  
VGA Output  
Analog & Nurse Call output  
Defibrillation Synchronization output  
WLAN Access Point 802.11g 54Mbps (optional)

# patient MONITOR

## PM-2000XL



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Distributor:

# PM-2000XL

The new generation of Advanced patient monitors PM-2000XL provides perfect transportation solution. The multi-functional all-in-one parameter module and new application platform greatly enhance the efficiency of full clinical parameter monitoring for patient transfer.

## External Interface



- ◆ 8.4" color TFT display with maximum 11 waveforms
- ◆ Pacemaker detection, electrosurgical interference proof
- ◆ Defibrillation protection and defibrillation synchronization
- ◆ Full touchscreen enables intuitive operation by clicking on the specific parameters or the waveform in real time, standard configuration includes the navigation knob
- ◆ OxyCRG available to judge the respiration and circulation function for neonates
- ◆ Large font display
- ◆ Arrhythmia and S-T segment analysis
- ◆ Built-in rechargeable Li-ion battery
- ◆ Nurse Call function and bi-directional communication with CMS-2000 central station
- ◆ SD card slot enables memory extension for large data storage
- ◆ USB and serial ports enables abundant future upgrades
- ◆ VGA output and analog output
- ◆ Complete and flexible mounting solution for different scenarios
- ◆ Standard parameters: 3/5-lead ECG, SpO<sub>2</sub>, RESP, NIBP, 2-Temp, PR,  
Optional: Touchscreen, Thermal Recorder, WLAN accessory, Nellcor-SpO<sub>2</sub>,  
2-IBP, Respiration CO<sub>2</sub> (for intubation and non-intubation application),  
12V DC input

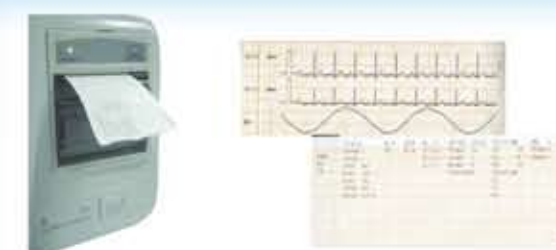


## TouchScreen Operations



Easy to input and edit patient information  
Rich functions access by navigation panel at touch

## Complete documentation



Built-in thermal recorder provides fully annotated printouts that simultaneously document up to 3 waveforms and numeric figures for active vital signs.

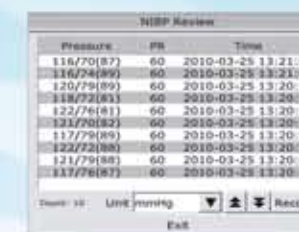
## Internal review system



Graphical & Tabular Trend (up to 120hrs)



Alarm Review



NIBP Review



Multi-waveform display



Large Font



NIBP Table



OxyCRG View

## Flexible system configuration

Mode	Functions	Standard functions	Nellcor SpO <sub>2</sub>	Respironics CO <sub>2</sub>	Quick Temperature	2-IBP	Touch Screen
PM-2000XL	ECG RESP NIBP	4200mAh Rechargeable battery	Optional	Optional	Optional	Optional	Optional
PM-2000XL (Economic)	SpO <sub>2</sub> TEMP	2100mAh Rechargeable battery	X	X	X	Optional	X

Note: Quick Temperature and CO<sub>2</sub> function are not selectable in one configuration



Built-in bedrail-hook providing an ideal bedside set-up even during transport.