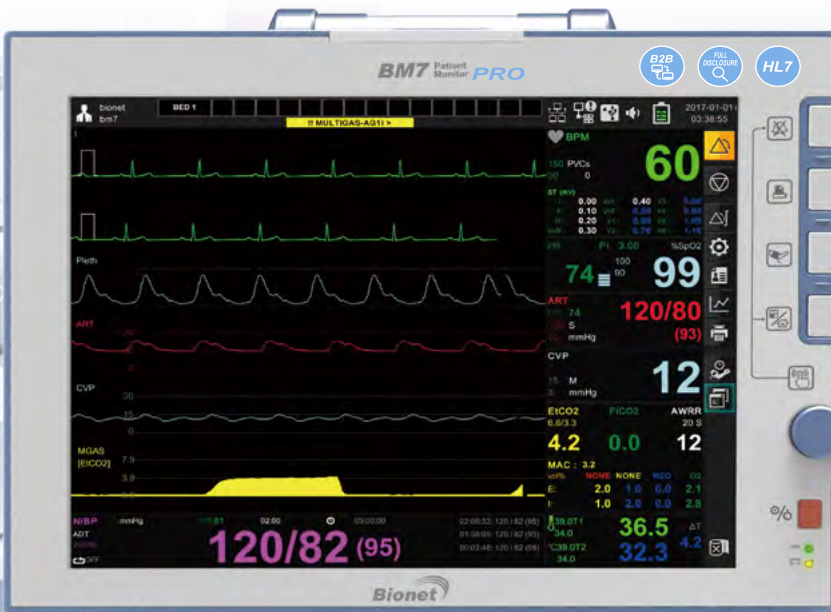


# BM7 PRO

Affordable and reliable  
Reasonable choice for OR/ICU  
12.1" Touch screen LCD monitor



## SUPERIOR ADVANTAGES

- ▶ ECG, SpO<sub>2</sub>, NIBP, Respiration, 2IBP, 2Temperature, EtCO<sub>2</sub>, Anesthetic GAS/ O<sub>2</sub>
- ▶ 12.1 color TFT LCD Touch screen with 8 waveforms
- ▶ Individual sweep speed setting for each parameter
- ▶ 168 full hours trend data are stored
- ▶ SpO<sub>2</sub> measurement with low perfusion detection and pulse beep
- ▶ 4-split multiple display modes for diverse hospital environment
- ▶ Screen freeze ON/OFF
- ▶ OxyCRG, Drug Calculation
- ▶ Li-ion Battery with longer life time (2hrs for continuous operation/ optional battery total 4hrs)
- ▶ External HDMI output for large screen
- ▶ Easy network connectivity, anytime anywhere simultaneously
- ▶ B2B Interconnection  
UP to 16 BM7 patient monitor can be controlled by others
- ▶ Full Disclosure  
48 hours of full disclosure waveforms provides
- ▶ EMR-direct HL 7 with Editable menu
- ▶ Enhanced & extendible multi-parameter
  - Mainstream/Sidestream EtCO<sub>2</sub> (Option)
  - Mains tream/Sidestream Anesthetic Gas/ O<sub>2</sub> (Option)
  - Automatic identification of five anesthetic agents
  - 12Ch ECG Measurement Module
  - High-performance Suntech NIBP
- ▶ High performance ECG detection and analysis
  - Enhanced Input impedance for dry skin or electrode patch
  - ST level, PVC count real-time display
  - 13 kinds of Arrhythmia analysis
  - Pacemaker detection function
  - 120 kinds of resting ECG analysis
- ▶ Enhanced data management
  - Graphical and Tagular Trends
  - 20cases \* 10 sec alarm waveform are stored, reviewed and printed
  - USB memory storage

# SPECIFICATIONS

## General

Display, Resolution	12.1" color TFT, LCD, 1024x768 pixels
Dimension, Weight	322(W)x250(H)x224.8(D) mm, Approx. 4.5kg
Trace	6 waveforms : 2*ECG, SpO <sub>2</sub> , RR or EtCO <sub>2</sub> , 2*IBP Sweep speed : 6.25, 12.5, 25, 50 mm/sec
Indicators	Categorized alarms (3 priority levels) Visual alarm lamp handle QRS beep & SpO <sub>2</sub> , pulse beep Percent(%) SpO <sub>2</sub> , pitch tone Battery status, External power LED Touch screen, Rotary knob
Interfaces	Power supply : AC 100-240V(50/60Hz) CD input connector : 18VDC, 2.8A Defibrillator Sync. Output : - Signal Level : 0 to 5V pulse - Pulse width : 100 ± 10ms LAN digital output for transferring data Nurse Call System connection : -0.3A at 125 VAC     -1A at 24 VDC External VGA monitor connection USB Barcode Reader USB memory data storage / Software Upgrade
Battery	Rechargeable Li-ion battery, 1.5hours for continuous operation (option : Using additional battery total 3hrs)
Thermal printer(option)	Speed : 25,50mm/sec, paper width : 58mm
Data Storage	168hours trends, 20cases of 10sec alarm waveform
Language	English, French, Spanish, Italian, German, Chinese, Russian, Czech, Polish, Turkish, Romanian, Portuguese Bulgarian, Hungarian, Korean

## Accessory

standard	5-lead patient cable	1ea
	Electrodes	10ea
	NIBP extension hose(3m)	1ea
	Reusable adult cuff(23-33/27.5-36.5 cm)	1ea
	SpO <sub>2</sub> extension cable(2m)	1ea
	Reusable adult spO <sub>2</sub> probe	1ea
	DC adapter(18VDC, 25A) with power cord	1ea
Optional	Paper roll(2 rolls are included in printer type) Reusable temperature probe (Surface/Rectal) IBP transducer set (Disposable/Reusable) Sidestream EtCO <sub>2</sub> module Mainstream EtCO <sub>2</sub> module Sidestream EtCO <sub>2</sub> airway adapter kit Mainstream EtCO <sub>2</sub> airway adapter kit 3-Lead patient cable 10-Lead patient cable NIBP cuff(Reusable/Disposable)	

## Order Specification

Ordering Name	Function description
BM7 ICU7	7Ch ECG, SpO <sub>2</sub> , Suntech NIBP, 2TEMP, 2IBP, EtCO <sub>2</sub> (Anesthetic GAS)
BM7 ICU12	12Ch ECG, SpO <sub>2</sub> , Suntech NIBP, 2TEMP, 2IBP, EtCO <sub>2</sub> (Anesthetic GAS)

## Optional Module

Mainstream EtCO <sub>2</sub> module(Respironics)
Sidestream EtCO <sub>2</sub> module(Respironics)
Anesthetic GAS/O <sub>2</sub> modul(phasein)



บริษัท ลาโบตรอน เมดิคอล จำกัด

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แขวงท่าแร้ง เขตบางเขน กรุงเทพมหานคร 10230

Labotron call center ☎  
02-3624567

## Performance

### ECG

Leads Type	3-lead, 5-lead
Lead Selection	3-lead : I, II, III 5-lead : I, II, III, aVR, aVL, aVF, V
ECG waveforms	3-lead : 1 channel 5-lead : 1/2/7 channels
Heart Rate Range	Adult : 30 to 300bpm, Neonate/Pediatric : 30 to 350 bpm
Heart Rate Accuracy	± 1bpm or ± 1%, whichever is greater
Sweep speed	6.25, 12.5, 25, 50 mm/sec
Filter	· Diagnosis : 0.05 to 150 Hz     · Monitoring : 0.5 to 40 Hz · Moderate : 0.5 to 25 Hz     · Maximum : 5 to 25 Hz
S-T segment detection range	2.0 to 2.0 mV
Arrhythmia analysis	ASYSTOLE, VTACH, VFIB, BIGEMINY, ACCVENT, COUPLE, IRREGULAR, PAUSE, PVC, RONT, TRIGMINY, VBRADY, SHORTTRUN
Pacemaker Detection Mode	Indicator on waveform display (user selectable)
Protection	Against electrosurgical interference and defibrillation

### 12 Channel ECG (Option)

Lead type	3-lead, 5-lead, 10-lead
Lead Selection	3-lead : I, II, III 5-lead : I, II, III, aVR, aVL, aVF, V 10-lead : I, II, III, aVR, aVL, aVF, V1, V2, V3, V4, V5, V6
ECG waveforms	3-lead : 1 channel 5-lead : 1/2/7 channels 10-lead : 1/2/7/12 channels
Heart Rate Range	Adult : 30 to 300bpm, Neonate/Pediatric : 30 to 350 bpm
Heart Rate Accuracy	± 1bpm or ± 1%, whichever is greater
Sweep speed	6.25, 12.5, 25, 50 mm/sec
Filter	· Diagnosis : 0.05 to 150 Hz     · Monitoring : 0.5 to 40 Hz · Moderate : 0.5 to 25 Hz     · Maximum : 5 to 25 Hz
S-T segment detection range	2.0 to 2.0 mV
Arrhythmia analysis	ASYSTOLE, VTACH, VFIB, BIGEMINY, ACCVENT, COUPLE, IRREGULAR, PAUSE, PVC, RONT, TRIGMINY, VBRADY, SHORTTRUN
Pacemaker Detection Mode	Indicator on waveform display (user selectable)
Protection	Against electrosurgical interference and defibrillation

### Respirations

Method	Thoracic impedance
Channel Selection	RA-LA or RA-LL
Measurement Range	5 to 120 Breath per minute
Accuracy	±1 breath per minute
Apnea alarm	Yes

### SpO<sub>2</sub>

Saturation range	0 to 100%
Saturation accuracy	70 to 100% ± 2 digits, 0 to 69% unspecified
Pulse rate range	30 to 254 bpm
Pulse rate accuracy	± 2 bpm

### NIBP-Suntech

Method	Oscillometry
Operation mode	Manual / Automatic / Continuous
Pressure range	0 to 300mmHg (accuracy : ±3mmHg)
Safety pressure	Adult : 300 mmHg Neonate : 150 mmHg
Measurement Range	Adult Pressure : 20 to 260 mmHg Pulse Rate : 30 to 220 BPM Pediatric Pressure : 20 to 160 mmHg Pulse Rate : 30 to 220 BPM Neonate Pressure : 20 to 130 mmHg Pulse Rate : 30 to 220 BPM
Accuracy	Meets accuracy requirements of ANSI/AAMI/ISO 81060-2:2013

### Temperature

Channels	2
Measurement range	0 to 50°C (32 to 122°F)
Accuracy	25°C to 50°C : ±0.1°C 0°C to 24°C : ±0.2°C
Compatibility	YSI Series 400 temperature probes

### IBP (Option)

Channels	2
Measurement range	-50 to 300mmHg
Accuracy	<100mmHg : ±1mmHg >=100mmHg : ±1% of reading
Pulse rate range	0 to 300bpm
Zero balancing	Range : ±200mmHg Accuracy : ±1mmHg Drift : ±1mmHg over 24hours
Transducer sensitivity	5µV/mmHg

### Mainstream EtCO<sub>2</sub>, Sidestream EtCO<sub>2</sub> - Respironics (Option)

Measurement range	0 to 150 mmHg, 0 to 19%
Accuracy	0-40mmHg ±2mmHg, 41-70mmHg ±5% of reading 71-100mmHg ± 8% of reading, / 101-150mmHg ± 10% of reading
Respiration rate	0 to 150 breath per minute (Mainstream EtCO <sub>2</sub> ) 2 to 150 breath per minute (Sidestream EtCO <sub>2</sub> )
Respiration accuracy	±1breath per minute

### Anesthetic GAS / O<sub>2</sub>-Phasein (Option)

Method	Infra-red absorption characteristic
Mainstream	IRMA AX +
Sidestream	ISA OR+ / AX+
Gas	CO <sub>2</sub> , O <sub>2</sub> , N <sub>2</sub> O, Des, Iso, Enf, Hal, Sev
Warm-up time	Main stream (IRMA AX+) Iso accuracy mode : 45s Full accuracy mode : 60s Side stream (ISA OR+ / AX+) : <20s
Sample flow rate(for ISA OR+ / AX+)	50 ± 10ml/min
Measuring Range	CO <sub>2</sub> : 0-15% N <sub>2</sub> O : 0-100% Hal/Iso/Enf : 0-8% Sev : 0-10% Des : 0-22% O <sub>2</sub> : 0-100%(ISA OR+)
Respiratory Rate	0-150bpm ± 1bpm

\* Specifications can be changed without prior notification

\* You may have distortion or signal noise when you use nonstandard or other brand's accessories

\* We strongly recommend you use only the authorized accessories which we supply

\* The ST algorithm has been tested for accuracy of the ST segment data

The significance of the ST segment changes need to be determined by a clinician