



## Intensive Care Patient Monitor

# BM5

- \* ECG, SpO<sub>2</sub>, NIBP, Respiration, 2 Temp, 2 IBP
- \* Diverse Options for diverse hospital environment
  - Main/Side/Micro Stream EtCO<sub>2</sub>
  - 12Ch ECG
  - High-performance Suntech NIBP
- \* High-performance ECG analysis
  - ST level, PVC count display
  - 13 kinds of Arrhythmia analysis
  - 120 kinds of resting ECG analysis (option)
- \* 10.4" color TFT screen with maximum 6 waveforms
- \* Visible alarm lamp handle
- \* SpO<sub>2</sub> pitch tone
- \* SpO<sub>2</sub> technology with very low-perfusion detection
- \* 58mm built-in chart recorder
- \* Graphical and Tabular Trends of printing
  - 120 full hours of trend data stored
  - 20 cases \* 10 sec alarm waveform are stored
  - Direct DC input for vehicle transport
  - Li-ion Battery with longer life time
  - Connected to BMCentral monitoring system using LAN or W-LAN



# SPECIFICATIONS

## General >>>

### ■ Monitor Performance Specifications

<b>Display, Resolution</b>	10.4" color TFT, 800 x 600 pixels
<b>Dimension, Weight</b>	270(W) x 250(H) x 184.5(D) mm, Approx. 4.0kg
<b>Trace</b>	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
<b>Indicators</b>	Categorized alarms (3 priority levels) Visual alarm lamp handle Heart beat tone SpO <sub>2</sub> pulse pitch tone Battery status, External power LED
<b>Interfaces</b>	DC input connector : 12 to 18VDC, 2.5A Defibrillator Sync. Output : - Signal Level : 0 to 5V pulse - Pulse width : 100 ±10 ms LAN digital output for transferring data Nurse call system connection : - 0.3A at 125 VAC - 1A at 24 VDC DC output : 5VDC, 1A Max
<b>Battery</b>	Rechargeable Li-ion battery, 2hours of continuous operation
<b>Thermal Printer (option)</b>	Speed : 25, 50mm/sec, Paper width : 58mm
<b>Data Storage</b>	120hours trends 20cases of 10sec alarm waveform
<b>Language</b>	English, French, Spanish, Italian, Germany, Chinese, Russian, Czech, Polish, Turkish, Romanian, Portuguese, Bulgarian

### ■ Accessory

<b>Standard Accessory</b>	5-lead patient cable	1ea
	Electrodes	10ea
	NIBP extension tube(3m)	1ea
	Reusable Adult Cuff, 25-35cm	1ea
	SpO <sub>2</sub> extension cable(2m)	1ea
	Reusable Adult SpO <sub>2</sub> probe	1ea
	DC adapter(18VDC, 2.5A)	1ea
<b>Optional Accessory</b>	3-lead patient cable	
	Temperature probe (Skin)	
	Temperature probe (Rectal)	
	IBP disposable pressure transducer kit	
	IBP reusable pressure transducer kit	
	Microstream CO <sub>2</sub> FilterLine set	
	Mainstream CO <sub>2</sub> Airway Adapter set	
	Sidestream CO <sub>2</sub> FilterLine set	

### ■ Order Specification

Ordering Name	function description
<b>BM5</b>	ECG, SpO <sub>2</sub> , Bionet NIBP, 2TEMP, 2IBP, EtCO <sub>2</sub>
<b>BM5 / XP</b>	ECG, SpO <sub>2</sub> , Suntech NIBP, 2TEMP, 2IBP, EtCO <sub>2</sub>
<b>BM5 / CS</b>	12Ch ECG, SpO <sub>2</sub> , Bionet NIBP, 2TEMP, 2IBP, EtCO <sub>2</sub>
<b>BM5 / CX</b>	12Ch ECG, SpO <sub>2</sub> , Suntech NIBP, 2TEMP, 2IBP, EtCO <sub>2</sub>

### ■ Optional Module

<b>120200-011400</b>	Mainstream CO <sub>2</sub> module
<b>120200-011500</b>	Sidestream CO <sub>2</sub> module
<b>110321-010000</b>	Microstream CO <sub>2</sub> module



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## Performance >>>

<b>■ ECG</b>	
<b>Lead type</b>	3-lead, 5-lead
<b>Lead Selection</b>	3-lead : I, II, III 5-lead : I, II, III, aVR, aVL, aVF, V
<b>ECG waveforms</b>	3-lead : 1 channel 5-lead : 2 / 3 / 7 channels
<b>Heart Rate Range</b>	Adult : 30 - 300 bpm, Neonate/Pediatric : 30 - 350 bpm
<b>Heart Rate Accuracy</b>	±1bpm or ±1%, whichever is greater
<b>Sweep speed</b>	6.25, 12.5, 25, 50 mm/sec
<b>Filter</b>	Diagnosis : 0.1 ~ 150 Hz Monitoring : 0.1 - 40 Hz Moderate : 0.1 - 20 Hz Maximum : 5 - 20 Hz
<b>S-T segment detection range</b>	-2.0 to 2.0 mV
<b>Arrhythmia analysis</b>	ASYSTOLE, VTACH, VFIB, BIGEMINY, ACCVENT, COUPLET, IRREGULAR, PAUSE, PVC, RONT, TRIGEMINY, VBRADY, SHORTRUN
<b>Pacemaker Detection Mode</b>	Indicator on waveform display (user selectable)
<b>Protection</b>	Against electrosurgical interference and defibrillation
<b>■ 12Channel ECG (Option)</b>	
<b>Lead type</b>	3-lead, 5-lead, 10-lead
<b>Lead Selection</b>	I, II, III, aVR, aVL, aVF, V1, V2, V3, V4, V5, V6
<b>ECG waveforms</b>	3/12 Channel
<b>Heart Rate Range</b>	Adult : 30 - 300bpm; Neonate/Pediatric : 30 - 350bpm
<b>Heart Rate Accuracy</b>	±1bpm or ±1%, whichever is greater
<b>Sweep speed</b>	6.25, 12.5, 25, 50mm/sec
<b>Filter</b>	Diagnosis : 0.1 ~ 150 Hz Monitoring : 0.1 - 40 Hz Moderate : 0.1 - 20 Hz Maximum : 5 - 20 Hz
<b>S-T segment detection range</b>	-2.0 to 2.0mV
<b>Arrhythmia analysis</b>	ASYSTOLE, VTACH, VFIB, BIGEMINY, ACCVENT, COUPLET, IRREGULAR, PAUSE, PVC, RONT, TRIGEMINY, VBRADY, SHORTRUN
<b>Diagnostic analysis</b>	120 kinds
<b>Pacemaker Detection Mode</b>	Indicator on waveform display(user selectable)
<b>Protection</b>	Against electrosurgical interference and defibrillation
<b>■ Respiration</b>	
<b>Method</b>	Thoracic impedance
<b>Channel selection</b>	RA-LA or RA-LL
<b>Measurement range</b>	5 - 120 Breath per minute
<b>Accuracy</b>	±1Breath per minute
<b>Apnea alarm</b>	Yes
<b>■ SpO<sub>2</sub></b>	
<b>Saturation range</b>	0 to 100%
<b>Saturation accuracy</b>	70 to 100% ±2 digits, 0 to 69% unspecified
<b>Pulse rate range</b>	0 to 254 bpm
<b>Pulse rate accuracy</b>	±2 bpm
<b>■ Bionet NIBP</b>	
<b>Method</b>	Oscillometry
<b>Operation Mode</b>	Manual/Automatic/Continuous
<b>Measurement range</b>	Adult Pressure : 20 to 260 mmHg Pediatric Pressure : 20 to 230 mmHg Neonate Pressure : 20 to 120 mmHg
<b>Accuracy</b>	mean error : less than ±5 mmHg standard deviation : less than 8 mmHg
<b>■ Suntech NIBP</b>	
<b>Method</b>	Oscillometry
<b>Operation Mode</b>	Manual/Automatic/Continuous
<b>Measurement range</b>	Adult Pressure : 20 to 260 mmHg Pulse Rate : 30-220 BPM Pediatric Pressure : 20-160 mmHg Pulse Rate : 30-220 BPM Neonate Pressure : 20-130 mmHg Pulse Rate : 30-220 BPM
<b>Accuracy</b>	The static pressure measurement is within ±3 mmHg throughout the full pressure and temperature range. Measurement accuracy will not be affected by operating altitude.
<b>■ Temperature</b>	
<b>Measurement range</b>	15 to 45°C (59 to 113°F)
<b>Accuracy</b>	±1°C
<b>Compatibility</b>	YSI Series 400 temperature probes
<b>■ IBP</b>	
<b>Channels</b>	2
<b>Measurement range</b>	-50 to 300mmHg
<b>Accuracy</b>	<100mmHg : ±1mmHg >=100mmHg : ±1% of reading
<b>Pulse rate measurement range</b>	0 to 300bpm
<b>Zero balancing</b>	Range : ±200mmHg Accuracy : ±1mmHg Drift : ±1mmHg over 24hours
<b>Transducer sensitivity</b>	5 <sub>2</sub> V/mmHg
<b>Pulse rate measurement range</b>	0 to 300bpm
<b>■ Microstream CO<sub>2</sub> (Option)</b>	
<b>Measurement range</b>	0 to 99 mmHg
<b>Accuracy</b>	0-40 mmHg ±2 mmHg 41-76 mmHg ±5% of reading, 77-99 mmHg ±10% of reading
<b>Respiration rate</b>	0 to 150 breath per minute
<b>Respiration accuracy</b>	±1breath per minute
<b>■ Sidestream CO<sub>2</sub> (Option)</b>	
<b>Measurement range</b>	0 to 150 mmHg, 0 to 19%
<b>Accuracy</b>	0-40mmHg ±2 mmHg, 41-70mmHg ±5% of reading, 71-100mmHg ±8% of reading, 101-150mmHg ±10% of reading
<b>Respiration rate</b>	2 to 150 breath per minute
<b>Respiration accuracy</b>	±1breath per minute
<b>■ Mainstream CO<sub>2</sub> (Option)</b>	
<b>Measurement range</b>	0 to 150 mmHg, 0 to 19%
<b>Accuracy</b>	0-40mmHg ±2 mmHg, 41-70mmHg ±5% of reading, 71-100mmHg ±8% of reading, 101-150mmHg ±10% of reading
<b>Respiration rate</b>	0 to 150 breath per minute
<b>Respiration accuracy</b>	±1breath per minute

\*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.