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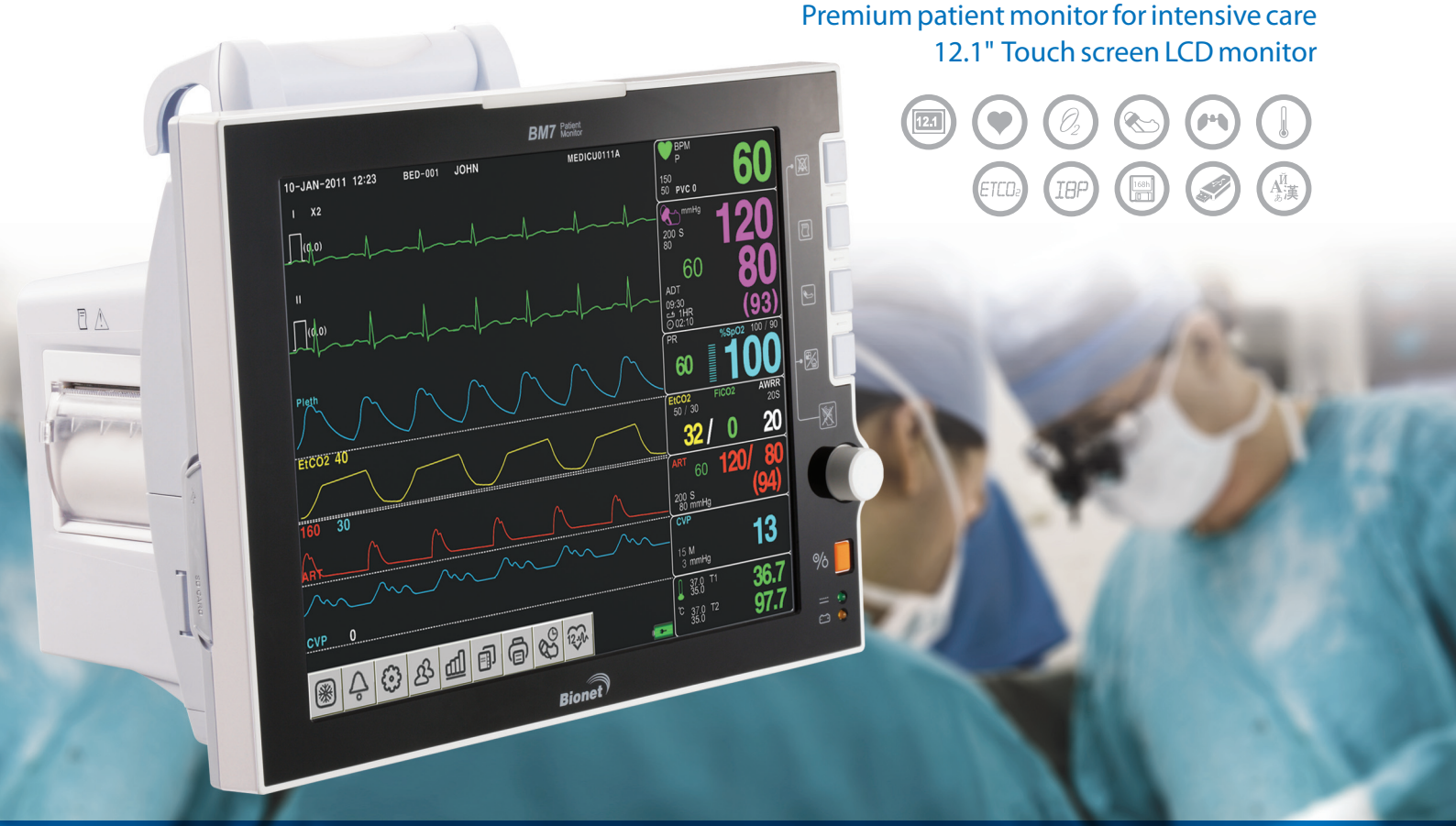
Patient Monitor

BM7

Premium patient monitor for intensive care
12.1" Touch screen LCD monitor



SUPERIOR ADVANTAGES

- ECG, SpO_2, NIBP, Respiration, 2IBP, 2Temperature, $EtCO_2$
- 12.1 color TFT LCD Touch screen with 6 waveforms
- Individual sweep speed setting for each parameter
- 168 full hours trend data are stored
- SpO_2 measurement with very low perfusion detection and pulse beep
- 4-split multiple display modes for diverse hospital environment
- Screen freeze ON/OFF
- OxyCRG, Drug Calculation
- External VGA output for large screen (Option)
- Connected to BM Central monitoring system using LAN or W-LAN
- Li-ion Battery with longer life time
  (1.5hrs for continuous operation / optional battery total 3hrs)

- Enhanced & extendible multi-parameter
  - Mainstream/Sidestream $EtCO_2$(Option)
  - 12Ch ECG Measurement Module (BM7 CX)
  - 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 (BM7 CX)
- Enhanced data management
  - Graphical and Tabular Trends
  - 20cases * 10 sec alarm waveform are stored, reviewed and printed
  - USB memory storage

SPECIFICATIONS

General

Display, Resolution	12.1″ color TFT, LCD, 800 x 600 pixels
Dimension, Weight	322(W) x 250(H) x 224.8(D) mm, Approx. 4.5kg
Trace	6 waveforms : 2*ECG, SpO_2, RR or $EtCO_2$, 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_2 pulse beep Percent(%) SpO_2 pitch tone Battery status, External Power LED Touch screen, Rotary knob
Interfaces	Power supply : AC 100-240V(50/60Hz) DC input connector : 18VDC, 2.5A 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 DC output : 5VDC, 1A Max USB Barcode Scanner USB & SD memory data storage
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(25-35cm)	1ea
	SpO_2 extension cable(2m)	1ea
	Reusable adult SpO_2 probe	1ea
	DC adapter(18VDC, 2.5A) 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 $EtCO_2$ module (Respironics) Mainstream $EtCO_2$ module (Respironics) Sidestream $EtCO_2$ airway adapter kit Mainstream $EtCO_2$ airway adapter kit 3-Lead patient cable 10-Lead patient cable NIBP cuff(Reusable/Disposable)	

Order Specification

Ordering Name	Function description
BM7	7Ch ECG, SpO_2, Suntech NIBP, 2TEMP, 2IBP, $EtCO_2$
BM7 CX	12Ch ECG, SpO_2, Suntech NIBP, 2TEMP, 2IBP, $EtCO_2$

Optional Module

Mainstream $EtCO_2$ module(Respironics)
Sidestream $EtCO_2$ module(Respironics)

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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 : 2/7 channels
Heart Rate Range	Adult : 30 to 300 bpm, 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, COUPLET, IRREGULAR, PAUSE, PVC, RONT,TRIGMINY, VBRADY, SHORTRUN
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 : 2/7 channels 10-lead : 12 channels
Heart Rate Range	Adult : 30 to 300bpm, Neonate/Pediatric : 30 to 350 bpm
Heart Rate Accuracy	± 1 bpm 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, COUPLET, IRREGULAR, PAUSE, PVC, RONT, TRIGMINY, VBRADY, SHORTRUN
Diagnostic analysis	120 kinds
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_2

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 SP10 : 1992 and 2002

Temperature

Channels	2
Measurement range	0 to 50℃ (32 to 122℉)
Accuracy	25℃ to 50℃ : ±0.1℃ 0℃ to 24℃ : ±0.2℃
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

Sidestream $EtCO_2$ - Respironics (Option)

Measurement range	0 to 150 mmHg, 0 to 19%
Accuracy	0 to 40mmHg ±2 mmHg, 41 to 70mmHg ±5% of reading, 71 to 100mmHg ±8% of reading, 101 to 150mmHg ±10% of reading
Respiration rate	2 to 150 breath per minute
Respiration accuracy	±1 breath per minute

Mainstream $EtCO_2$ - Respironics (Option)

Measurement range	0 to 150 mmHg, 0 to 19%
Accuracy	0 to 40mmHg ±2 mmHg, 41 to 70mmHg ±5% of reading, 71 to 100mmHg ±8% of reading, 101 to 150mmHg ±10% of reading
Respiration rate	0 to 150 breath per minute
Respiration accuracy	±1 breath 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.

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