Mediblu

MM 15

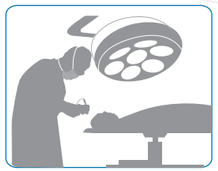
Patient Monitor

MM15

Patient Monitor

Features:

- Transport Monitor/XM Module
  Standard: 3/5-lead ECG, NIBP, SpO2, 2-TEMP
  Optional: Nellcor OxiMax™ SpO2, 12-lead ECG, 2-IBP
- V-SpO2 Module (Nellcor OxiMax™ SpO2)
- V-NIBP Module (Omron ® NIBP)
- V-IBP Module (Maximum 8-IBP)
- V-C.O. Module (Thermal Dilution Cardiac Output)
- V-ICG Module (Impedance Cardiography)
- V-CO2 Module (Respironics Mainstream/ Sidestream, G2 Sidestream)
- V-RM Module (Respiration Mechanics)
- V-AG Module (Masimo Mainstream/Sidestream)
- V-BIS Module (Bispectral Index)



Anesthesia Monitoring

The latest respiratory gas and brain activity monitoring technology backs you up with the most reliable performance during surgeries.

Respiratory Monitoring

The industry-leading CO2 & RM monitoring technology provides the most flexible and accurate solutions for both the intubated and non-intubated patients.

Cardiac Monitoring

Mediblu's unique iSEAP™/SEMIP ECG algorithm, together with the application of ICG technology, brings flexible choices and reliable measurements on even the extreme cardiac cases.

Intensive/Emergency Cares

The modular design and the expanded parameter configurations extend possibilities in ICU/ER monitoring on a case-to-case basis.

Technical Specifications

Physical Specification

Size:	333 mm (L) × 211 mm (W)× 289 mm (H)
Weight:	<6.2 kg

Display

12.1" Full Touch-screen Color TFT

Resolution:	1280×1024 dpi

Environment Requirement

Ambient Temperature:	-20ºC - 55ºC(-4 -131ºF)
Humidity:	15%-95% non-condensing

Power Supply

External Power Supply:	100-240V AC, 50/60HZ
Internal Battery Power Supply:	Rechargeable Li-ion 4200 mAh 14.8 V DC 2100 mAh (optional)

RESP

Method:	Trans-thoracic impedance
Operation mode:	Auto/ Manual
RR Measurement range:	Adult: 0~120 rPM Neonate/Pediatric: 0~150 rPM
Resolution:	1rPM
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, 12-lead optional
3 leadwire cable:	RA; LA; LL or R; L; F
5 leadwire cable:	RA; LA; RL; LL; V or R; L; N; F; C
12-lead:	(including 3/5-lead) optional
Input:	10 leadwire cable: RA; LA; RL; LL; V1-V6 or R; L; N; F; C1-C6
Lead selection:	3-lead: I; II; III;
5-lead:	I; II; III; aVR; aVL; aVF; V
12-lead:	I; II; III; aVR; aVL; aVF; V1-V6
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: 15-300bpm Pediatric / Neonate: 15-350bpm
Resolution & accuracy:	±1bpm or ±1%, whichever is greater
Filter Diagnostic mode:	0.05-100Hz or 0.05-150Hz (optional 12-lead)
FIlter 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 catergorization: Yes

Alarm:	3 levels of audible and visual alarm, alarm events recallable
12 lead ECG analysis	208 Reference Diagnostic Results
Pace maker detection:	Yes, and 5 types abnormal status detectable Arrhythmia verification compliant with AHA and MIT–BIH databases

IEC 60601-2-25 / EN 60601-2-25 / AAMI EC 11 / EC 13
IEC 60601-2-27 / EN 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 Diastolic10 - 215 mmHg Mean: 20 - 235 mmHg
Pressure range for Pediatrics:	Systolic:40 - 200 mmHg Diastolic10 - 150 mmHg Mean: 20 - 165 mmHg
Pressure range for Neonates:	Systolic:40 - 135 mmHg Diastolic10 - 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 ±5mmHg
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 / EN 60601-2-30 /
EN 1060-1 / EN 1060-3 / EN 1060-4 SP10:2002

NIBP (By Omron M3600)

Measurement Ranges

Adult/Pediatric:	Pulse Rate:	40 - 200bpm
	Systolic Pressure:	60 - 250mmHg
	Diastolic Pressure:	40 - 200mmHg
	Mean Arterial Pressure:	45 - 235mmHg
Neonate:	Pulse Rate:	40 - 240bpm Systolic
	Pressure:	40 - 120mmHg
	Diastolic Pressure:	20 - 90mmHg
	Mean Arterial Pressure:	30 - 100mmHg
Measurement Accuracy:	Pulse Rate: ±2bpm or 2% of reading whichever is greater Blood Pressure: Complies with ANSI/ AAMI SP10:2002	
Modes of Measurement:	Manual, Long-term automatic, Short-term automatic, Smart Inflation, Smart measurement, High speed	
Pressure Transducers:	Two independent solid-state	
Deflation Methods:	Dynamic Linear Deflation rate specific to pulse rate	

Technical Specifications (Cont.)

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
Resoluton: 1bpm
Accuracy: 3bpm Refresh 1s
ISO 9919

SpO2 (By Nellcor OxiMaxTM)

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 - 300bpm
Resoluton: 1bpm
Accuracy: 3bpm (depends on probe)

Temperature (2 Channels, 1 probe by default)

Measurement range: 0~50ºC (32-122°F)
Resolution: 0.1ºC
Accuracy: ±0.1ºC (without probe)
Channel: Dual-channel. Provide T1; T2; ΔT
IEC 12470-4

IBP (Multi-channel extendable)

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

CO2 (Mainstream / Sidestream)

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

Cardiac Output

Method: Thermodilution Technology
Measuring range: CO: 0.1 ~ 20L/min
TB: 23ºC ~ 43ºC
TI: - 1ºC ~ 27ºC
Alarm range 23ºC ~ 43ºC

Anesthetic GAS/O2

Technology Infra-red absorption characteristic
Paramagnetic Oxygen: Optional
Gas CO2, O2,N2O, Des, Iso, Enf, Hal, Sev
Warm-up time: (IRMA AX+) Iso accuracy mode: 45s
Full accuracy mode: 60s
(ISA OR+ / AX+) <20s
Sample flow rate (for ISA OR+ / AX+) 50 ±10 ml/min
Measuring range: CO2: 0 ~ 15%
N2O: 0 ~ 100%
Hal/Iso/Enf: 0 ~ 8% Sev: 0~10%
Des: 0 ~ 22%
O2: 0 ~ 100%(ISA OR+/AX+)
Respiratory Rate: 0-150bpm ±1bpm
MAC Value displayed
ISO 21647

Thermal Recorder

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

I/O Interface

8-USB Ports
SD Card Socket
RS-232 Serial Port
RJ-45 Ethernet Port. IEEE 802.3 DVI output
VGA output
Analog and Nurse Call output Defibrilation Synchronization Output
WLAN Access Point 802.11g 54Mbps (optional)

Wi-Fi

IEEE 802.11b/g/n
Frequency Band 2.4 GHz ISM band
Modulation OFDM with BPSK, QPSK, 16-QAM, and 64-QAM
802.11b with CCK and DSSS
Typical Transmit Power (±2 dBm) 17 dBm for 802.11b DSSS
17 dBm for 802.11b CCK
15 dBm for 802.11g/n OFDM

Mediblu

Mediblu offers quality products.
We provide integrated solutions
for all your medical needs.

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