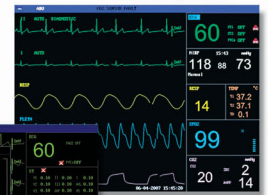




# M9 / M9A Patient Monitor

- 12.1"/10.4" color TFT display with maximum 13 waveforms
- Standard parameters: ECG, SpO<sub>2</sub>, Resp, NIBP, 2-Temp, PR, optional parameters: 2-IBP, CO, EtCO<sub>2</sub>, Multi-Gas/O<sub>2</sub> (Artema)
- 12 leads ECG analysis
- Respiration sidestream and mainstream EtCO<sub>2</sub> measurement for intubated and non-intubated patients
- Nellcor Oximax / EDAN SpO<sub>2</sub>
- SpO<sub>2</sub> pulse-tone modulation (Pitch Tone)
- OxyCRG for neonatal monitoring
- 96 hours graphic and tabular trends of all parameters
- 120 seconds full-disclosure waveforms review
- Bi-directional communications with EDAN central monitoring system by wireless or wire network
- Pacemaker detection
- USB data storage and review
- Nurse call
- Built-in rechargeable Li-ion battery



EtCO<sub>2</sub> Waveform



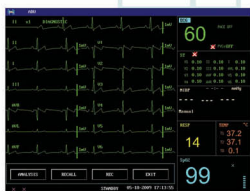
12 leads ECG analysis



Large font display



USB data storage and review



Maximum 13 Waveforms



Trend Screen Mode



OxyCRG for Neonatal Monitoring

# M9 / M9A Patient Monitor



## Technical Specifications

### Safety

IEC60601-1 approved, CE marking according to MDD93/42/EEC

### Dimension and Weight

Dimension: 322mm(W)x150mm(D)x285mm(H)  
Weight: M9 3.9kg M9A 3.6kg

### Operation Environment

Temperature: 5 ~ 40 °C  
Humidity: 25% ~ 93% (non-condensing)  
Power: AC 100 ~ 240 V, 50/60 Hz

### Performance Specifications

Display: 12.1" /10.4" color TFT ( M9 12.1", M9A 10.4")

Resolution: 800x600 dots

Waveforms: 13 waveforms maximum

Indicator: Alarm indicator

Power indicator

Charging indicator

QRS beep and alarm sound

Interface: Network port /USB port

Battery: Rechargeable Li-ion battery  
Maximum 4.5 hours with full capacity

Recall: 1-96 hours trend recall

Alarm: 3-level audible and visual alarm

Recorder: Built-in, thermal array

3 traces

Paper width: 48mm

ECG Record speed: 25mm/s, 50mm/s

Lead Mode: 3 Leads (R, L, F or RA, LA, LL),

5 Leads (R, L, F, N, C or RA, LA, LL, RL, V),

12 Leads (optional) (R, L, F, N, C1-C6 or RA, LA, LL, RL, V1-V6)

4 selectable plus: x0.25, x0.5, x1, x2 cm/mV, Auto

Sweep speed: 12.5mm/s, 25mm/s, 50mm/s

CMRR

Diagnosis >100 dB (no 50Hz/60Hz software wave trap)

Monitor >110 dB (has 50Hz/60Hz software wave trap)

Surgery >110 dB (50Hz/60Hz software wave trap)

HR Measuring and Alarm Range

Adult/Ped 15 bpm ~ 300bpm

Neo 15 bpm ~ 350bpm

Accuracy ±1% or ±1bpm, which is greater

Resolution 1 bpm

Sensitivity ≥ 300 μV P-P

Differential Input Impedance ≥ 5 MΩ

Electrode offset potential ±300mVd.c. ± 600mVd.c.

Leakage Current < 10 uA

ECG Signal Range ±6 mV (Vp-p)

ST Segment Monitoring Range

Measurement and Alarm -2.0 ~ +2.0 mV

Arrhythmia analysis: Yes

12 lead ECG analysis: 208 kinds diagnosis results  
pace detection: Yes

### RESPIRATION

Method Impedance between R-F (RA-LL), R-L(RA-LA)

Resp. Rate Measurement and Alarm Range:

Adult 0 rpm ~120rpm

Neo/Ped 0 rpm ~150rpm

Resolution 1 rpm

Accuracy ±2 rpm

Gain Selection x0.25, x0.5, x1, x2, x3, x4, x5

NIBP

Method Oscillometric  
Mode Manual, Auto, Continuous  
Measuring interval in AUTO Mode  
1/2/3/4/5/10/15/30/60/90/120/240/480Min

Cuff Pressure measuring Range 0~290mmHg

Pressure Resolution 1mmHg

Pressure Accuracy

Mean error ±5mmHg

Maximum Standard deviation ≤8mmHg

Overpressure protection Dual Overpressure protections

Adult 297±3mmHg

Pediatric 240±3mmHg

Neonatal 145±3mmHg

PR

Measuring rage 40~240bpm

Resolution 1bpm

Accuracy ± 3bpm or 3.5% the maximum

SpO<sub>2</sub>

Measuring Range 0 ~ 100 %

Alarm Range 0 ~ 100 %

Resolution 1 %

Accuracy

Adult (including Pediatric) ±2 (70%~100% SpO<sub>2</sub>)

Undefined (0~70% SpO<sub>2</sub>)

Neonate ±3 (70%~100% SpO<sub>2</sub>)

Undefined (0~70% SpO<sub>2</sub>)

Pulse Rate

Measuring and Alarm Range 30~254bpm

Resolution 1bpm

Accuracy ±3bpm

Under Motional Condition ±5bpm

Nellcor module (optional)

Measuring Range 1 ~ 100 %

Alarm Range 1 ~ 100 %

Resolution 1 %

Accuracy

Adult and Low-perfusion ±2digits (70%~100% SpO<sub>2</sub>)

Undefined (0~70% SpO<sub>2</sub>)

Neonate ±3digits (70%~100% SpO<sub>2</sub>)

Undefined (0~70% SpO<sub>2</sub>)

Pulse Rate

Measuring and Alarm Range 20~300bpm

Resolution 1bpm

Accuracy ±3bpm

Low Perfusion 0.03 % ~ 20 %

TEMPERATURE (optional)

Channel 2

Measuring Range 0 ~ 50 °C

Sensor type YSI (B series) and CF-FI

Resolution 0.1 °C

Accuracy ±0.1 °C (20 ~ 45 °C)

±0.2 °C (0~25 °C, 45~50 °C)

IBP (optional)

Channel 2

Label ART, PA, CVP, RAP, LAP, ICP, P1, P2

Static Pressure Measuring Range

-50~+300 mmHg (up to 350 mmHg)

Static Pressure Accuracy

±2% or 1mmHg which is greater

Dynamical Pressure Measuring Range -50~+300 mmHg

Dynamical Pressure Accuracy

±2% or 1mmHg which is greater

Measuring and Alarm Range

ART 0 ~ 300 (mmHg) PA 6 ~ 120 (mmHg)  
CVP/RAP/LAP/ICP -10 ~ 40 (mmHg)

P1/P2 -50 ~ 300 (mmHg) Resolution 1 (mmHg)

CO<sub>2</sub> (optional)

Method Infrared Absorption Technique

Measuring mode Sidestream or mainstream

Measuring range

CO<sub>2</sub> 0 ~ 150 mmHg

AwRR 2 ~ 150 rpm

Unit mmHg, %, Kpa

Resolution 1 mmHg, 0.1%, 0.1Kpa

CO<sub>2</sub> 1mmHg

INSOCO 1mmHg

AwRR 1 rpm

Accuracy

CO<sub>2</sub> ±2 mmHg, 0 ~ 40 mmHg

Reading ±5%, 41 ~ 70 mmHg

Reading ±8%, 71 ~ 100 mmHg

Reading ±10%, 101 ~ 150 mmHg

± 1 rpm

AwRR Suffocation Alarm Delay

AwRR 10 ~ 40 seconds

Response time <3 seconds, includes transport time, risetime

Calculation Method BTPS (Body Temperature Pressure Saturated)

Sample Gas Flowrate 50ml/min

Stability

Short Term Drift Drift over 4 hours < 0.8 mmHg

Long Term Drift 120 hour period

O<sub>2</sub> Compensation

Range 0 to 100%

Resolution 1%

Default 16%

CO (optional)

Method Thermolulution Technique

Measuring range

CO 0.1 ~ 20L/min TB 23 ~ 43 °C

TI -1 ~ -27 °C

Resolution

CO 0.1L/min TB, TI 0.1 °C

Accuracy

CO ±5% or ± 0.2L/min TB ±0.1 °C

TI ±0.1 °C

Alarm range 23 ~ 43 °C

Multi-gas (optional)

Technology Infrared absorption characteristic

Gas Sorts CO<sub>2</sub>, N<sub>2</sub>O, Des, Iso, Enf, Sev, Hal, O<sub>2</sub>

(Galvanic oxygen sensor)

Measuring range

CO<sub>2</sub> 0~10% O<sub>2</sub> 0~100%

N<sub>2</sub>O 0~100%

AwRR 2 ~ 100rpm Halothane 0~5%

Isoflurane 0~5% Enflurane 0~5%

Sevoflurane 0~8% Desflurane 0~18%

Respiration rate 4~ 60 ±1 bpm

Other Up to 3 waveforms display

Agent mixture detection

MAC value display

Standard configurations: ECG, NIBP, RESP, EDAN SpO<sub>2</sub>, 2-TEMP, Li-ion Battery

Optional configurations: Nellcor SpO<sub>2</sub>, 2-IBP, CO, EtCO<sub>2</sub>, Multi-Gas/O<sub>2</sub>, Thermal Recorder



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