

Specifications

Physical Specification

Display
15.6"/18.5" optional TFT Touch screen
Resolution: 1366 x 768
Number of traces: 10, up to 12 ECG waveforms
Dimension
15.6": 403x320x185mm(LxWxT)
19": 470x327x185mm(LxWxT)
Weight: < 10kg under standard configuration
LAN: 1 standard RJ45 port
WLAN: IEEE 802.11b/g/n
USB: 2 USB connectors
HDMI: 1 HDMI monitor connector
Output: 1 connector for Nurse call, Defib Sync Analog Output

ECG

Lead type: 3-lead, 5-lead, 12-lead (optional)
ECG waveform: 2 channels, 7 channels, 12 channels
Display sensitivity (wave gain):
1.25mm/mV (x0.125), 2.5mm/mV (x0.25), 5mm/mV (x0.5),
10mm/mV (x1.0), 20mm/mV (x2.0), 40mm/mV (x4.0), Auto
Wave sweep speed:
3.125mm/s, 6.25mm/s, 12.5 mm/s, 25 mm/s, 50 mm/s
Bandwidth

Diagnostic mode: 0.05Hz~150Hz
Monitor mode: 0.5Hz~40Hz
Surgery mode: 0.5Hz~25Hz
Strong filter mode: 5Hz~25Hz

CMRR > 100dB
Notch: 50/60Hz notch filter can be set to on or off
Differential input impedance > 5MΩ
Electrode polarization voltage range: ±400mV
HR range: 15 - 350 bpm
Baseline recovery time < 3s after defibrillation (in monitor and surgery mode)
Calibration signal: 1mV (peak - peak), accuracy ±3%

RESP

Measurement method: Thoracic electrical bioimpedance
Measuring lead: Lead I, II
Wave gain: x0.25, x0.5, x1, x2
Respiratory impedance range: 0.5-5Ω
Baseline impedance: 500-4000Ω
Gain: 10 grades
Scan speed: 3.125mm/s, 6.25mm/s, 12.5 mm/s, 25mm/s

TEMP

Accuracy: ±0.1°C or ±0.2°F (without probe)
Measurement range: 5~50°C (41~122°F)
Channel: Two channels
Resolution: 0.1°C
Parameters: T1, T2 and TD

SpO2

Measurement range: 0-100%
Parameter monitoring: Perfusion Index (PI)
Pleth Variability Index (PVI)

Resolution: 1%
Accuracy: ±2% or ±2bpm
Refreshing Rate: 1s
Pleth wave speed: 3.125mm/s, 6.25mm/s, 12.5 mm/s, 25mm/s

Masimo SET® SpO2 (Optional)

Measurement range: 0-100%
Resolution: 1%
Accuracy: ±2% (70-100%, Adult/Pediatric, non-motion, low perfusion);
±3% (70-100%, Neonate, non-motion);
±3% (70-100%, motion);
0-69%, unspecified
Refreshing Rate: 1s

Pulse Rate

Range: 35~300 bpm
Resolution: 1bpm
Accuracy: ±2bpm (non-motion)
±5bpm (motion)
Refreshing rate: 1s

NIBP

Measurement method: Automatic oscillometric method
Operating mode: Manual, automatic, continuous
Measurement unit: mmHg/kPa selectable
Typical measurement time: 20~40s
Measurement type: Systolic, Diastolic, Mean
Measurement range (mmHg)
Range of Systolic pressure:
Adult 40-270
Pediatric 40-200
Neonatal 40-135
Range of Diastolic pressure:
Adult 10-210
Pediatric 10-150
Neonatal 10-95
Range of Mean pressure:
Adult 20-230
Pediatric 20-165
Neonatal 20-105

Measurement accuracy
Maximum average error: ±5mmHg
Maximum standard deviation: 8mmHg
Resolution: 1mmHg
Interval: 1, 2, 3, 4, 5, 10, 15, 30, 60, 90, 120, 180, 240, 480 minutes
Overpressure protection: Software and hardware, double safety protection
Cuff pressure range: 0-280mmHg

IBP (Optional)

Channel: 2-channel or 4-channel
ART: 0 to 300 mmHg
PA: -6 to 120 mmHg
CVP/RAP/LAP/ICP: -10 to 40 mmHg
Measurement range: P1/P2 -50 to 300 mmHg
Resolution: 1mmHg
Accuracy:
±2% or ±1mmHg, whichever is greater (without sensor)
Sensitivity: 5uV/mmHg/V
Impedance range: 300 to 3000Ω

C.O. (Optional)

Method: Thermodilution
Range: C.O.: 0.2 to 20 L/min
TB: 23 to 45 °C
TI: -1 to 27°C
Accuracy: C.O.: ±5% or ±0.1L/min, whichever is greater
TB, TI: ±0.5°C (without sensor)

Northern Mainstream CO2 (Optional)

Measurement range: 0-19.7%, 150mmHg, or 0-20kPa
Resolution: 0.1mmHg
Measurement accuracy
0 - 40 mmHg: ± 2 mmHg
41 - 70 mmHg: ± 5% of reading
71 - 100 mmHg: ± 8% of reading
101 - 150 mmHg: ± 10% of reading
Respiration rate: 3-150 bpm
Respiration rate accuracy: 1% ±1bpm
Warm-up time: 97% within 8s, full accuracy within 20s

Northern Sidestream CO2 (Optional)

Measurement range: 0-20% (0-150mmHg)
Accuracy: < 5.0% CO 2: ± 2 mmHg
> 5.0% CO 2: < 6% of reading
Respiration rate: 2 ~ 150 BPM
Respiration rate accuracy: 1% ±1BPM
Warm-up time: 97% within 45s, full accuracy within 10 min
Rise times (t10-90%): About 100ms, when flow is 100 ml/min, adult water trap, 1.5m sampling tube
Delay time: < 3sec when flow is 100 ml/min, adult water trap, 1.5m sampling tube

Recorder (Optional)

Built-in, Thermal dot array
Horizontal resolution: 16 dots/mm (25 mm/s paper speed)
Vertical resolution: 8 dots/mm
Paper speed: 12.5mm/s, 25 mm/s, 50 mm/s
Number of waveform channels: 3

Masimo ISA™ Sidestream CO2 (Optional)

Warm-up time: Full accuracy within 10 seconds
Sampling flow rate: 50ml/min (+/-10/min)
Measurement Range: 0 -25%
Accuracy: 0~15% (±0.2% of the reading)
15~25%, unspecified
Rise time: 200ms, typical at 50ml/min flow rate
Total response time:
within 3 seconds (with 2 m Momoline sampling line)
AWRR Range: 0-150bpm
AWRR Accuracy: ±1 breath

Masimo IRMA™ Mainstream CO2 (Optional)

Measurement Range: 0 -25%
Accuracy: 0~15% (±0.2% of the reading)
15~25%, unspecified
Warm-up time: Full accuracy within 10 seconds
AWRR Range: 0-150bpm
AWRR Accuracy: ±1 breath

Masimo Multi-gas ISA OR+ /IRMA AX+ CO2 (optional)

Gas: CO2, N2O, HAL, ISO, ENF, SEV, DES with automatic identification
Warm-up time: Full accuracy within 20 seconds for IRMA AX+ CO2 Accuracy: 0-10%: ±(0.2%+2% of the reading)
0-15%: ±(0.3%+2% of the reading)
N2O Accuracy: 0-100%: ±(2%+2% of the reading)
HAL, ISO, ENF: 0-8%: ±(0.15%+5% of the reading)
SEV: 0-10%: ±(0.15%+5% of the reading)
DES: 0-22%: ±(0.15%+5% of the reading)
Agent identification time: < 20s (typical < 10s)
AWRR range: 0-150bpm
AWRR accuracy: +/-1bpm
Apnea time: 20~60s

Aspect BISx module (Optional)

Parameter Measurement:
BC: 0-30 (Only limited to the combined use of an external sensor with a BIS module)
EMG: 30~55dB (bar chart) with intensity between 30dB and 80dB (tendency chart)
BIS: 0~100
SQI: 0%~100%
SR: 0%~100%
SEF: 0.5Hz~30Hz
TP: 40~100dB
EEG Measurement:
Input impedance > 5MΩ
Noise (RTI) < 2μV (0.25~50Hz)
Input signal range: ±1mV
EEG bandwidth between: 0.25Hz~110Hz

NMT (Optional)

Microprocessor-controlled
Stimulation Mode: TOF, TOFS, PTC, 1Hz Twitch, 0.1Hz Twitch, DBS DBS3.3 and 3.2 (Double Burst), Tetanic Stimulation (Burst), 5s - 50Hz or 100Hz
Output (accuracy ±5% of full scale value)
Surface electrodes:
Constant current, 0-60mA (0-12/18μC) up to 5KOhm.
Monophasic, 200μs or 300μs pulse width
Needle electrodes:
Constant current, 0-6mA (0-0.24μC) up to 5KOhm.
Monophasic, 40μs pulse width
Acceleration transducer: Accuracy ±5% of full scale value
Temperature sensor: Range 20.0-41.5°C (accuracy ±5°C)

Operation Environment

Power: AC 100-250V, 50/60Hz
Temperature: 5-40°C
Humidity: < 80%
Patient Range: Adult, Pediatric, Neonate



Committed to Excellence



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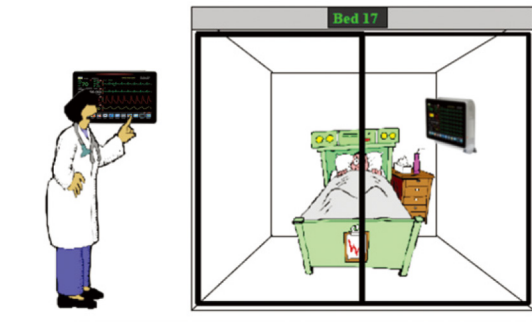
Gemini

Anesthesia Patient Monitor

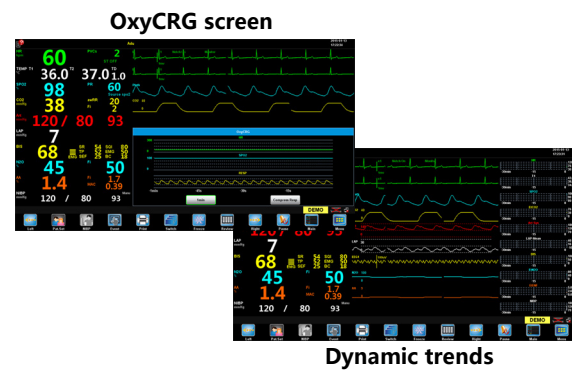
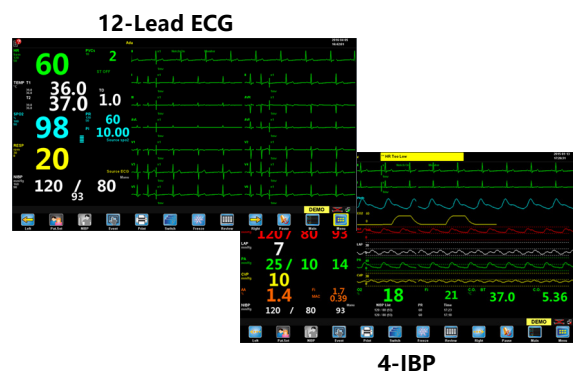


- 15.6"/17"/19" switchable TFT LCD Touch screen
- Aluminum material shell
- Fanless design allows for quiet care environment
- 10 waveform display, up to 12-lead ECG analysis
- Powerful calculation (Hemodynamic, Dose, Oxygenation, Ventilation)
- SpO2 support PVI and PI, low perfusion 0.2%

- BIS module, NMT module optional
- Wired/Wireless CMS, support HL7 protocol to HIS
- SpO2 pulse-tone modulation (Pitch Tone)
- Support VGA/HDMI external display
- Graphical & tabular trend review (120 hours)
- 48H full disclosure wave review for each patient



Multiple-parameter options & Flexible screen size options



Configuration

5-lead ECG, SpO2, NIBP, TEMP, Resp, PR; Li-ion battery

Optional

12-Lead ECG, Masimo/Nellcor SpO2, IBP, C.O., EtCO2, Multi-gas, BIS, NMT; HDMI, Thermal Recorder, Wired/Wireless CMS



Masimo SET® SpO2
Measure-through Motion and Low Perfusion pulse oximetry delivers accurate and reliable oxygenation



Bispectral Index™ by Aspect
Monitor the level of consciousness of the patient under general anesthesia or sedation. provides BIS, SQI, EMG, SR, SEF, TP, PC value and EEG wave.



Masimo Gas Technology
IRMA™ Mainstream & ISA™ Sidestream Analyzers
Allows selection of the modality best suited to the application



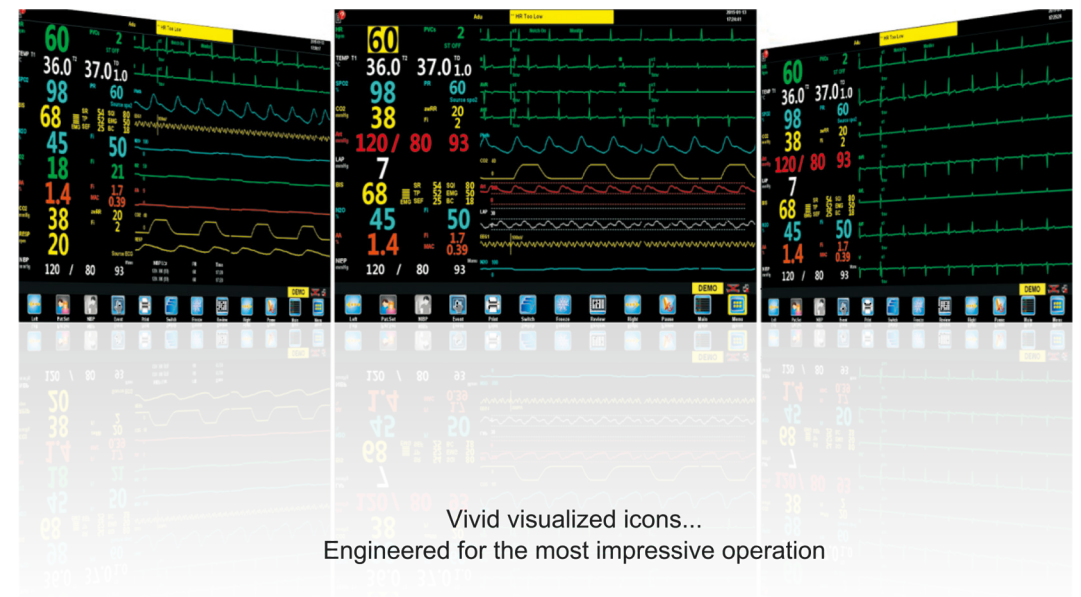
NMT
Neuromuscular monitoring



IBP
2-4 Channel, support IBP waveform overlapping display



C.O.
Cardiac Output



Vivid visualized icons...
Engineered for the most impressive operation