

Pisces

Bed-side Patient Monitor

12.1" color TFT LCD screen,wide and flat screen design

Configuration

ECG+SpO2+NIBP+2TEMP+PR+RESP, Li-ion battery

Optional

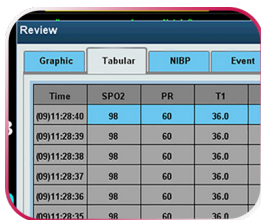
Masimo/Nellcor SpO2, EtCO2, C.O., 2-IBP, BIS, NMT, Thermal recorder



Masimo CO2/Multi-gas



Masimo SpO2



Graphical & Tabular Trend

120	Hours long trend
60	Mins short trend
1000	NIBP measurements
200	Alarm events



Northern Meditec



Committed to Excellence

Pisces

Bed-side Patient Monitor

- 12.1" color TFT LCD screen
- 8 waveform display, up to 12-lead ECG analysis
- Powerful calculation (Hemodynamic, Dose, Oxygenation, Ventilation)
- Pacemaker detection
- ST & arrhythmia analysis
- OxyCRGs
- Various mounting solutions
- Wired/Wireless CMS, support HL7 protocol to HIS
- SpO2 pulse-tone modulation (Pitch Tone)
- MEWS (Modified Early Warning Score)
- Graphical & tabular trend review (120 hours)
- 48h full disclosure wave review for each patient



Specifications

Physical Specification

Display
12.1" TFT Touch screen
Resolution: 800 x 600 (1024 x 768 optional)
Number of traces: 8, up to 12 ECG waveforms
Dimension: 310x292x174mm (WxHxD)
Weight: < 5 kg under standard configuration
LAN: 1 standard RJ45 port
WLAN: IEEE 802.11b/g/n
USB: 2 USB connectors
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:
2.5mm/mV (x0.25), 5mm/mV (x0.5), 10mm/mV (x1.0),
20mm/mV (x2.0)
Wave sweep speed:
3.125mm/s, 6.25mm/s, 12.5 mm/s, 25 mm/s, 50 mm/s
Bandwidth

Diagnostic mode: 0.05Hz~100Hz
Monitor mode: 0.5Hz~40Hz
Surgery mode: 1Hz~20Hz
Strong filter mode: 5Hz~20Hz
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
ST Measurement Range: -1.0 - +10 mv
Baseline recovery time < 3s after defibrillation (in monitor and surgery mode)
Calibration signal: 1mV (peak - peak), accuracy ±3%

TEMP

Accuracy: ±0.1°C or ±0.2°F (without probe)
Measurement range: 0~50°C
Channel: Two channels
Resolution: 0.1°C
Parameters: T1, T2 and TD

RESP

Measurement method: Thoracic electrical bioimpedance
Operation modes: Auto/Manual
Measuring lead: Lead I, II
Measurement range: Adult: 0~120 bpm;
Neonate/Pediatric: 0~150bpm
Resolution: 1 bpm
Apnea alarm delay: 10s, 15s, 20s, 25s, 30s, 35s, 40s
Apnea alarm: Selectable
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

Pulse Rate

Range: 30~300 bpm
Resolution: 1bpm
Accuracy: ±3bpm (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	40-280
	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: 0-300mmHg

SpO2 (Northern)

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 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

C.O. (optional)

Method: Thermodilution
Range: C.O.: 0.2 to 20 L/min
TB: 23 to 45 °C
T1: -1 to 27°C
Accuracy: C.O.: ±5% or ±0.1L/min, whichever is greater
TB, T1: ±0.5°C (without sensor)

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

Masimo ISA™ Sidestream CO2 (optional)

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

Masimo IRMA™ Mainstream CO2 (optional)

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

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

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

Operation Environment

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

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