

# X-5

Multi-parameter patient Monitor



12.1" color TFT touch screen, wide and flat screen design, multiple parameter options satisfy the need for ICU,CCU,NICU

## Configuration

## Optional

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

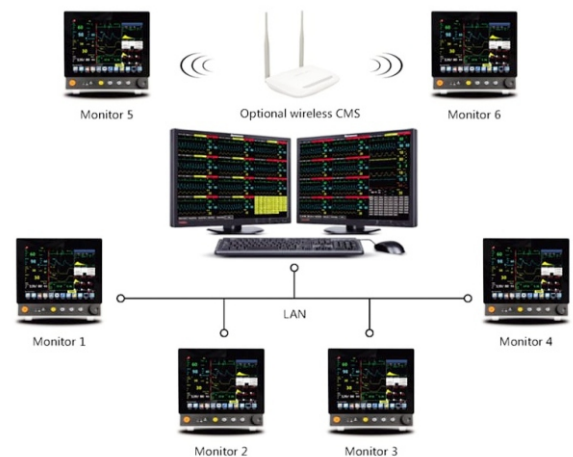
Masimo/Nellcor SpO2, EtCO2, CO, 2-IBP, AG, BIS, NMT, Thermal recorder



Graphical & Tabular Trend

Time	SPO2	PR	T1
(09)11:28:40	98	60	36.0
(09)11:28:39	98	60	36.0
(09)11:28:38	98	60	36.0
(09)11:28:37	98	60	36.0
(09)11:28:36	98	60	36.0
(09)11:28:35	98	60	36.0

CMS (Up to 64 beds)



BIS



MASIMO MULTI GAS ETCO2



MASIMO SPO2

# X-5

## Multi-parameter patient Monitor

- 12.1" color TFT LCD Touch screen
- 8 Waveform display, up to 12-lead ECG analysis
- Powerful calculation((Hemodynamic,Dose,Oxygenation, Ventilation)
- Pacemaker detection
- ST & arrhythmia analysis
- OxyCRGs



### Various mounting Solution



- BIS module, NMT module optional
- Wired/Wireless CMS, support HL7 protocol to HIS
- SpO2 pulse-tone modulation (Pitch Tone)
- Mews(Modified Early Warning Score)
- Graphical & tabular trend review(120hours)
- 48h full disclosure wave review for each patient

### 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: 310 x 292 x 174mm(WxHxD)  
Weight: < 5 kg under standard configuration  
LAN: 1 standard RJ45 port  
WLAN: IEEE 802 11b/g/n  
USB: 2USB connectors  
HDMI: 1HDMI monitor 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, 12.5mm/s, 25mm/s, 50mm/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 - +10mV  
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°C 'F(without probe)  
Measurement range: 0-50°C  
Channel: Two channels  
Resolutions: 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 0-120bpm,  
Neonate/Pediatric0-150bpm  
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  
Respiratory impedance: 500-4000Ω  
gain: 10 grades  
Scan speed: 3.125mm/s, 6.25mm/s, 12.5mm/s, 25mm/s

### Pulse Rate

Range: 30-300bpm  
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

Measurement range : 0-100%  
Parameter monitoring: perfusion Index(PI)  
Plath Variability Index(PVI)  
Resolution: 1%  
Accuracy: ± 2% or ± 2bpm  
Refreshing Rate: 1s  
Plath wave speed: 3.125 mm/s, 6.25 mm/s, 12.5 mm/s, 25 mm/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 20L/min  
TB: 23 to 45°C  
T1: -1 to 27°C  
Accuracy: C.O. ± 5% or ± 0.1 L/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 300mmHg  
Resolution: 1mmHg  
Accuracy:  
±2% or ±1mmHg, whichever is greater(without sensor)  
Sensitivity: 5uV/mmHg/V  
Impedance range: 300 to 3000Ω

### Masimo ISATM 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  
Management Range: 0-25%  
Rise time: 200ms, Typical at 50ml/min flowrate  
Total response time:  
within 3 seconds(with 2m momoline sampling line)  
AWRR Range: 0-150bpm

### Masimo IRMATM 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

### Drager AGM Monitoring (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 : 16dots/mm (25mm/s paper speed)  
Vertical resolution: 8dots/mm  
Paper speed: 12.5mm/s, 25mm/s, 50mm/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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