

# OMNI III

VERSATILITY IN VITAL SIGNS



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**MASIMOSSET**

# OMNI III



## Intuitive

Designed for a fast paced work environment, the Infinium **Omni III™** patient monitor offers an extremely simple and adaptable user interface. Patient information along with vital sign settings can be quickly modified to meet the needs of a patients changing condition. The **Omni III** offers a high resolution 15 inch touch screen to optimize the speed of patient care. The user can therefore make quick screen adjustments, set default settings, alarm limits, and manage up to 72 hours of detailed patient data.

## Upgradable

From the general floor to high acuity surgeries, the Infinium Omni series patient monitors are designed to fit-in and move amongst many patient care areas. The **Omni III™** offers standard measurements of: non-invasive blood pressure, ECG with arrhythmia detection, Masimo SET® SpO2, Temperature, and Respiration rate. Masimo SET® (Signal Extraction Technology®) SpO2 provides industry standard Measure-through Motion and Low Perfusion™ Pulse Oximetry to Infinium patient monitors. End-tidal CO2, Anesthetic Agent measurement, Cardiac Output and Invasive blood pressure can added on-site by simply attaching our plug in modules. This field upgradability can allow the user to customize the monitor's acuity level while the patient's condition changes. If desired, the user can move from a basic vital signs monitor, to a continuous bed side monitor, to an operating room monitor while keeping the patient on a single monitor at all times.

## Connective

The **Omni III™** offers several connective solutions to network multiple monitors and/or manage patient data on an electronic medical records platform or a HL7 based hospital information system. The **Omni III** patient monitor offers Ethernet and RS-232 connections with an open source communication protocol. Infinium offers 2 levels of networking and connectivity. The **Omni III** is HL7 compliant. The HL7 network protocol will allow for all patient information and vital sign trends to be transferred and stored on a hospital information system. For non-HL7 medical facilities, there is the Infinium **Omniview™** central station which allows the real time remote monitoring and network of up to 32 **Omni** patient monitors. The **Omniview™** archives full disclosure of all patient vital sign trends. The patient data from the **Omniview™** can be very simply saved, stored, printed, and, transferred.

# A Field Upgradable Operating Room Solution

A MONITOR THAT CAN GROW WITH YOU...

Whether it be a basic outpatient procedure or a high acuity cardiac surgery the **Omni III™** can be upgraded and custom tailored on-site by the user. The **Omni III** is preconfigured with non-invasive blood pressure, 3/5 ECG with arrhythmia detection, impedance respiration, SpO<sub>2</sub>, and temperature. More advanced readings of End-tidal CO<sub>2</sub>, Anesthetic agent measurement, and Cardiac Output Invasive blood pressure can be activated by the user at anytime.

## Capnography & Anesthetic Agent Measurement plug in Module:

The Infinium **Entide™** module is a field upgradable plug in module that can measure End-tidal CO<sub>2</sub> alone or End-tidal CO<sub>2</sub> with the automatic identification of anesthetic agents (N<sub>2</sub>O, O<sub>2</sub>, Sevoflurane, Isoflurane, Desflurane, Halothane, Enflurane)

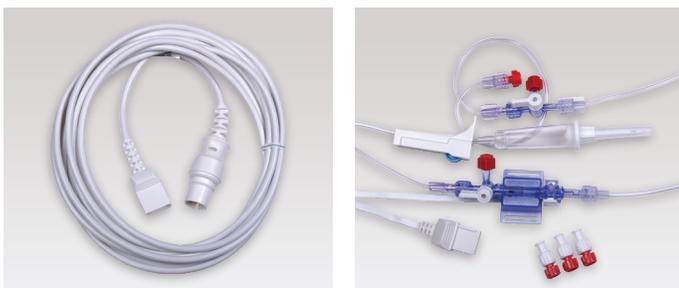
Both mainstream and sidestream modules are available for End-tidal CO<sub>2</sub> and agent measurement.

The **Entide™** utilizes a low flow (50ml/min) sidestream method that allows use for intubated and non-intubated applications. The **Entide™** sample line connection incorporates filter cells to eliminate the potential of cross contamination.



Simple connection sample lines allows the **Entide™** to be one of the Industry's lowest cost per patient End-tidal CO<sub>2</sub> and anesthesia measurement systems.

## Cardiac Output & Invasive Blood Pressure:



2 channels of invasive blood pressure and the facility for thermodilution cardiac output are standard on the **Omni III™**.

## ECG:

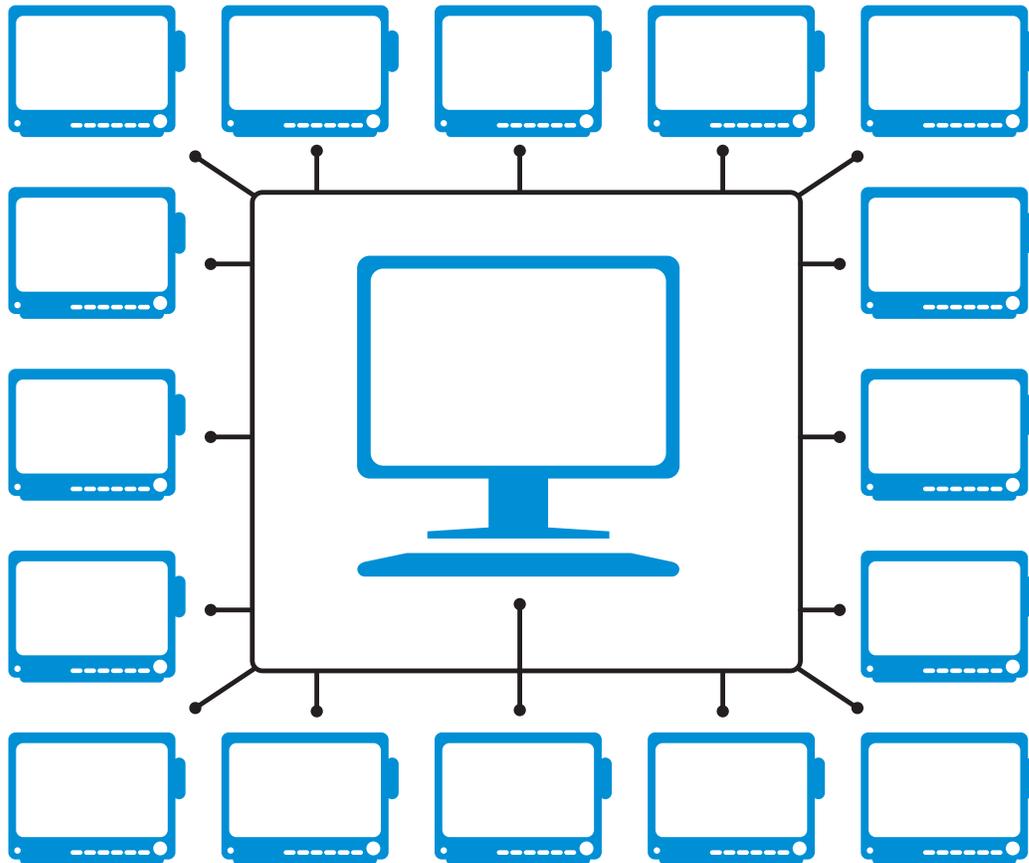


The **Omni III™** offers a 3, 5, and 12 lead ECG platform. Arrhythmia detection and ST are also standard and measurable on all lead sets.

- **3-Lead:** I, II, III
- **5-Lead:** I, II, III, aVR, aVL, aVF, V
- **12-Lead:** I, II, III, aVR, aVL, aVF, V1-V6 (factory installed)

# OMNIVIEW Central Station

SIMPLICITY IN CONNECTIVITY:



The **Omniview™** central station allows the wireless or hard-wired measurement for a network of up to 64 **Omni** patient monitors. The **Omniview™** archives full disclosure of all patient information and vital sign trends. In real time the **Omniview™** displays the patient's numeric vital signs along with waveforms. The patient data from the **Omniview™** can be transferred to an EMR as a supplement to the patient's file or integrated into a hospital information system.

The **Omniview™** gives a real time display of all patient vital signs: Heart rate, Last BP reading, SpO<sub>2</sub>, Temp, EtCO<sub>2</sub> and Respiration rate with waveforms.



# Mounting Solutions

A RELIABLE CONNECTION

Several mounting systems are available for the **Omni** series patient monitors.

## ROLLING STAND

Height and tilt adjustable with a large wheel base allows for smooth and stable mobility.

- Quick release slide mount
- Accessory basket
- Medical grade steel construction
- Lockable wheels



## WALL MOUNTS

Height and tilt adjustable wall mounts offer.

- Quick release of monitor
- Medical grade construction
- Adaptable to anesthesia machines
- Adaptable to most wall rail systems

# OMNIVIEW CENTRAL MONITORING SYSTEM SPECIFICATIONS:

## MAIN FRAME

### Power Supply

AC100-240V 6A/3A

### Basic Configuration

20" or larger color display

Intel Pentium IV2.0G CPU

Windows XP professional operating system

512MB RAM

80GB Fixed Disk drive

### PERFORMANCE

#### Display

Size: color TFT display 20" or larger

Number of display: 1 or 2 sets (optional)

Resolution: 1280 x 1024

#### Waveform

ECG (I, II, III, aVR, aVL, aVF, V1-V6)

PLETH, RESP, CO2, IBP, Multi-gas

### Parameter

HR, ST, NIBP, IBP, SpO2, PR, RR, TEMP, EtCO2, Multi-gas

### Indicator

Up to 32-waveform presentation

12.5mm/s, 25.0mm/s, 50.0mm/s user-adjustable sweep speed

Alarm sound

### Alarm

High and Low limits alarm

Audible and visual alarm

### Record Type

8 seconds real-time recording

Freeze waveform recording

Trend data recording

Alarm strip recording

### Printer

External Laser Printer

### View

Up 128 waveforms for up to 64 bedside monitors (8 monitors per screen)

All waveform presentation for single patient

48 hours of trend display for all parameters

Multi-leads ECG waveform display

Waveform freeze

Wireless Networking

Industry standard 802.11b/g WLAN

Connected bedside number: up to 16 bedside monitors

### Review

240 hours trend review for each bedside monitor

720 items parameters alarm review for each bedside monitor

720 NIBP measurements review

120 hours of 64 channels full-disclosure waveforms store and review

### Connection methods

Wireless via transmitter

Hardwired via ethernet

Hardwired via RS-232

# OMNI III TECHNICAL SPECIFICATIONS:

## Application

Neonatal, pediatric and adult patients

## Performance Specifications

Display: 15 inch color touch screen

Trace: 8 waveforms

Indicator: Alarm indicator

Power indicator

QRS beep and alarm sound

Trend time: 1 - 120 hour

Recorder: Built-in, thermal array, 3 channels

Record width: 48mm

Recorder paper: 50mm

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

## ECG

Input: 5-lead ECG cable and standard AAMI line for connection

Lead Choice: I, II, III, aVR, aVF, aVL, V, V1-V6, TEST

Gain Choice: x0.5, x1, x2, x4

Frequency Characteristic: 0.05 ~ 35 Hz (+3dB)

ECG Waveforms: 7 channels

Penetration Voltage: 4000VAC 50/60Hz

Sweep Speed: 12.5, 25, 50 and 100 mm/sec (left to right or right to left)

HR Display Range: 30 ~ 300bpm

Accuracy:  $\pm 1$ bpm or  $\pm 1\%$ , whichever is greater

Alarm Limit Range Setting: upper limit 100 ~ 200bpm, lower limit 30 ~ 100bpm

## RESP

Measure Method: RA-LL impedance

Range: 0 ~ 120 rpm

Accuracy:  $\pm 3$  rpm

Alarm Limit Setting: upper limit 6 ~ 120 rpm, lower limit 3 ~ 120 rpm

Sweep Speed: 6.25, 25, 50 and 100 mm/sec (left to right or right to left)

## NIBP

Measuring Technology: automatic oscillating measurement

Cuff Inflating: <30s (0 ~ 300 mmHg, standard adult cuff)

Measuring Period: AVE<40s

Mode: Manual, Auto

Measuring Interval in AUTO Mode: 1 min ~ 240 min, intervals of 1 min

Pulse Rate Range: 30 ~ 250 (bpm)

Measuring Range:

Adult/Pediatric Mode: SYS: 40 ~ 250 (mmHg)

DIA: 15 ~ 200 (mmHg)

Neonatal Mode: SYS: 40 ~ 135 (mmHg)

DIA: 15 ~ 100 (mmHg)

Accuracy:

Maximum Mean error:  $\pm 5$ mmHg

Maximum Standard deviation: 8mmHg

Resolution: 1mmHg

Overpressure Protection: Adult Mode: 300 (mmHg)

Neonatal Mode: 160 (mmHg)

Alarm Limit Setting: SYS: 50 ~ 240 mmHg

DIA: 15 ~ 180 mmHg

## TEMP

Range: 25 ~ 50 (°C)

Accuracy:  $\pm 0.2^\circ\text{C}$  (25.0 ~ 34.9°C)

$\pm 0.1^\circ\text{C}$  (35.0 ~ 39.9°C)

$\pm 0.2^\circ\text{C}$  (40.0 ~ 44.9°C)

$\pm 0.3^\circ\text{C}$  (45.0 ~ 50.0°C)

Display Resolution: 0.1°C

Alarm Limit Setting: upper limit 0 ~ 50°C, lower limit 0 ~ 50°C

Channel: 2 channels

## Masimo SET Pulse Oximetry (standard) SpO2

Measurement range: 0% to 100%

Resolution: 1%

Accuracy:

70% to 100%, +/-2%, Adult/ Pediatric, Non-motion conditions

70% to 100%, +/-3%, Neonate, Non-motion conditions

70% to 100%, +/-3%, Adult/ Pediatric/Infant/Neonate, Motion conditions

70% to 100%, +/-2%, Adult/ Pediatric/Infant/Neonate, Low perfusion conditions

Averaging time: 2~4 sec, 4~6 sec, 8 sec, 10 sec, 12 sec, 14 sec, 16 sec (user selectable)

Sensitivity settings: Normal, Maximum, APOD (user selectable)

## Pulse Rate

Measurement range: 25 to 240 bpm

Accuracy: +/-3 bpm, Adult/Pediatric/Infant/ Neonate, Non-motion conditions

5 bpm, Adult/Pediatric/Infant/ Neonate, motion conditions

Resolution: 1 bpm

## Perfusion Index (PI)

Measurement range: 0.02 ~ 20%

## Any other SpO2 (optional)

## IBP

Measurement Range: -50 ~ 300mmHg

Channel: 2 channels

Pressure Transducer: sensitivity, 5µV/V/mmHg

Impedance Range: 300 ~ 3000Ω

Transducer Sites: ART, PA,CVP, RAP, LAP, ICP

Unit: mmHg/kPa selectable

Resolution: 1mmHg

Accuracy:  $\pm 1$ mmHg or  $\pm 2\%$ , whichever is greater

Alarm Range: -10 ~ 300mmHg

## EtCO2

CO2 Measurement Range: 0 ~ 99mmHg

Accuracy:  $\pm 2$ mmHg (0 ~ 38mmHg)

39-99mmHg  $\pm 5\%$  of reading +0.08% for every 1mmHg (above 38mmHg)

Sampling Rate: 50 ml/min

Initialization Time: 30 seconds (typical), reaches  $\pm 5\%$  steady-state accuracy within 3 minutes.

Respiration Rate: 0 ~ 150 breaths/min

Mode: adult, neonate

Measurement Method: Thermodilution Method

Measurement Range: C.O. 0.1 to 20 L/min

TB 23 to 43

TI 0 to 27

Resolution: C.O. 0.1 L/min

TB, TI 0.1

Accuracy: C.O.  $\pm 5\%$  or  $\pm 0.1$  L/min, which-

ever is greater, as measured using electronically generated flow curves.

TB, TI  $\pm 0.1$  (without sensor)

Alarm Range: TB 23 to 43

C.O.  $\pm 2\%$  or  $\pm 0.1$  L/min, which-

ever is greater, as measured using electronically generated flow curves.

## Anesthetic Agents

Method: Infrared absorption

Gas Sorts: Halothane, Isoflurane, Enflurane, Sevoflurane, Desflurane, CO2, N2O, O2 (optional Automatic Agent ID)

Measurement Range:

Halothane, Isoflurane: 0 ~ 8.5%

Enflurane, Sevoflurane: 0 ~ 10%

Desflurane: 0 ~ 20%

CO2: 0 ~ 10%

N2O: 0 ~ 100%

O2: 0 ~ 100%

Bias:

Halothane, Isoflurane, Enflurane,

Sevoflurane, Desflurane:  $\pm(0.15 \text{ Vol}\% + 15\% \text{ rel.})$

CO2:  $\pm(0.5 \text{ Vol}\% + 12\% \text{ rel.})$

N2O:  $\pm(2 \text{ Vol}\% + 8\% \text{ rel.})$

O2:  $\pm 3 \text{ Vol}\%$

## Networking

Industry standard 802.11b/g wireless network

## Power

Source: External AC power or internal battery

AC Power: 100 ~ 240VAC, 50/60Hz, 150VA

Battery: Built-in & rechargeable lithium ion

Operating Time: 3+ hours

## Environmental Specifications

Temperature:

Operating: 5 ~ 40 °C

Storage: -10 ~ 45 °C

Humidity range:

Operating:  $\leq 80\%$

Storage:  $\leq 80\%$

## Other Standard Features

OxyCRG, drug dose calculation, cascading ECG, On

screen NIBP trends (up to 250 readings),

user set defaults (up to 6), Arrhythmia detection, ST

segment, Pause Monitoring Feature, HL7 networking,

Infinium Smart NIBP.



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