

OMNI SERIES

PATIENT MONITORS



OMNI SERIES

Omni III
15 inch
High Acuity
Patient Monitor



Omni II
12.1 inch
Patient Monitor



Omni K
10.5 inch
Portable
Patient Monitor



Omni
10.1 inch
Portable
Patient Monitor



Omni Express
7 inch
Transport
Patient Monitor



Intuitive

Designed for a fast paced work environment, the Infinium Omni series patient monitors offer 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 series patient monitors include high resolution touch screens 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 series patient monitors provide 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 series patient monitors offer 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 series patient monitors offer Ethernet and RS-232 connections with an open source communication protocol. Infinium can provide connective compatibility on multiple levels. The Omni patient monitors can interface with a basic EMR system or and advanced HL-7 hospital system. 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 series patient monitors** can be upgraded and custom tailored on-site by the user. The **Omni series patient monitors** are preconfigured with non-invasive blood pressure, 3/5 ECG with arrhythmia detection, impedance respiration, SpO2, and temperature. More advanced readings of End-tidal CO2, 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 module is a field upgradable plug in module that can measure End-tidal CO2 alone or End-tidal CO2 with the automatic identification of anesthetic agents (N2O, O2, Sevoflurane, Isoflurane, Desflurane, Halothane, Enflurane)

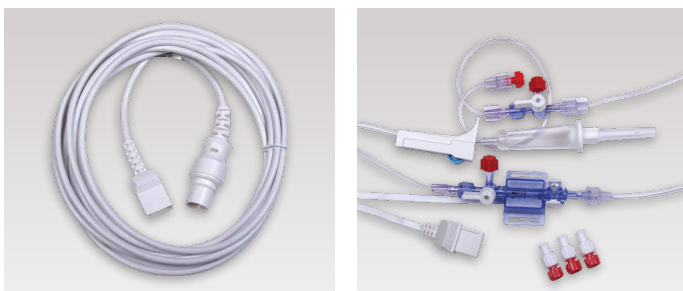
Both mainstream and sidestream modules are available for End-tidal CO2 and agent measurement.

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



Simple connection sample lines allows the **EndTide** to be one of the Industry's lowest cost per patient End-tidal CO2 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 series patient monitors**.

ECG:



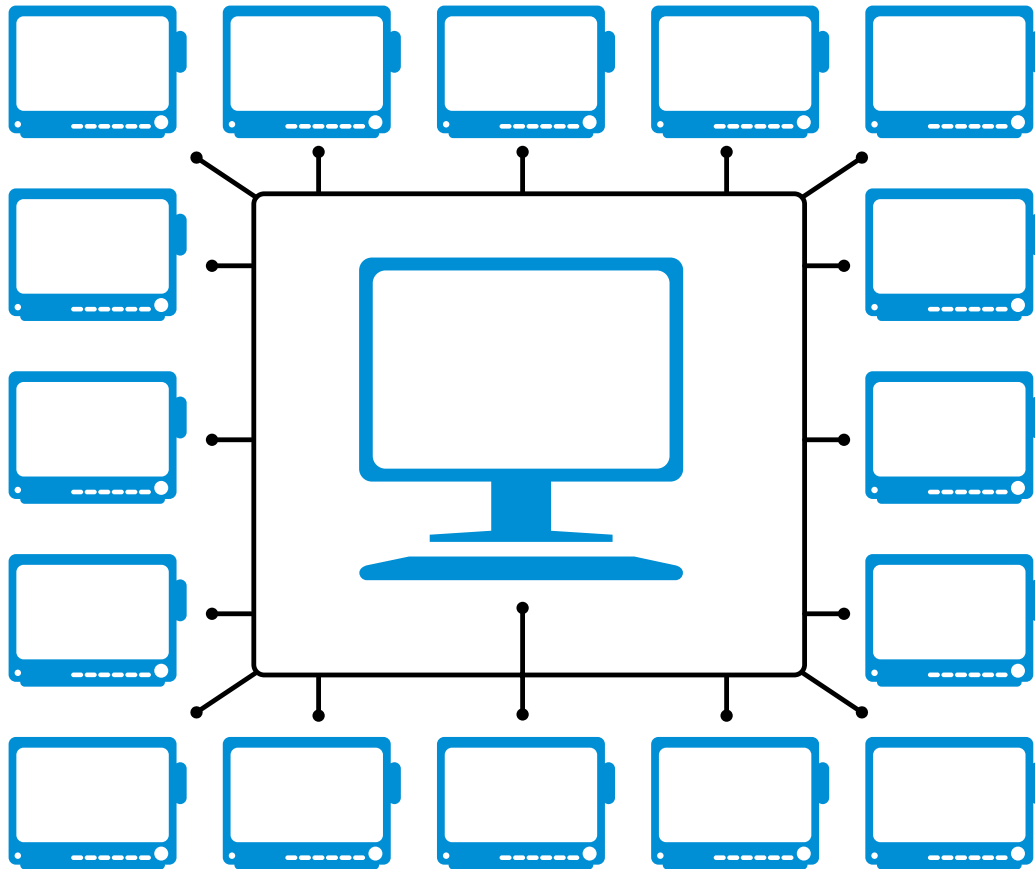
The **Omni series patient monitors** offers a 3, 5, and 12 lead ECG platform. Arrhythmia detection and ST are also standard and measurable on all lead sets.

- **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 32 **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, SpO₂, Temp, EtCO₂ 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 to 64 waveforms for up to 32 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
72 hours of 32 channels full-disclosure waveforms store and review

Connection methods

Wireless via transmitter
Hardwired via ethernet
Hardwired via RS-232

OMNI SERIES PATIENT MONITORS TECHNICAL SPECIFICATIONS:

Application

Neonatal, pediatric and adult patients

Performance Specifications

Display: 15, 12.1, 10.5, 10.1 & 7 inch color touch screen

Trace: Up to 12 waveforms

Indicator: Alarm indicator
Power indicator

Trend time: QRS beep and alarm sound

Recorder: 1 - 72 hour
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, aVL, aVF, V, V1-V6, TEST
**V1-V6 not available in Express model*

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: ± 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: ± 3 rpm

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

Sweep Speed: 12.5, 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: 2 min ~ 4 hrs

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: ± 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%, $\pm 2\%$, Adult/
Pediatric, Non-motion conditions

70% to 100%, $\pm 3\%$, Neonate, Non-motion conditions

70% to 100%, $\pm 3\%$, Adult/
Pediatric/Infant/Neonate, Motion conditions

70% to 100%, $\pm 2\%$, 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%

IBP

Measurement Range: -50 ~ 300mmHg

Channel: 2 channels

Pressure Transducer: sensitivity, 5µV/mmHg

Impedance Range: 300 ~ 3000Ω

Transducer Sites: ART, PA, CVP, RAP, LAP, ICP
mmHg/kPa selectable

Unit: 1mmHg

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

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

Alarm Range: -10 ~ 300mmHg

EtCO₂

CO₂ Measurement Range: 0 ~ 99mmHg

Accuracy: ± 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

C.O. (Cardiac Output)

Measurement Method

Measurement Range

Resolution

Accuracy

Alarm Range

Repeatability

**Not available in Express model*

Thermodilution Method

C.O. 0.1 to 20 L/min

TB 23 to 43

TI 0 to 27

C.O. 0.1 L/min

TB, TI 0.1

C.O. $\pm 5\%$ or ± 0.1 L/min, which-
ever is greater, as measured using
electronically generated flow curves.

TB, TI ± 0.1 (without sensor)

TB 23 to 43

C.O. $\pm 2\%$ or ± 0.1 L/min, which-
ever is greater, as measured using
electronically generated flow curves.

TB 23 to 43

C.O. $\pm 2\%$ or ± 0.1 L/min, which-
ever is greater, as measured using
electronically generated flow curves.

Anesthetic Agents

Method:

Gas Sorts:

Measurement Range:

Halothane, Isoflurane:

Enflurane, Sevoflurane:

Desflurane:

CO₂:

N₂O:

O₂:

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: -20 ~ 65 °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, Arrhythmia detection, ST segment



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