



Support patient care with  
unique sensing technology



# Life Scope *i*

**Bedside Monitors**  
**BSM-2301K**  
**BSM-2303K**



Compact with innovative technology  
and clear 8.4 inch color TFT LCD

Fighting Disease with Electronics



## Nihon Kohden Monitoring System Network **K**

### ★ LS-NET (Life Scope Networking)

You can connect to Nihon Kohden central and bedside monitors using Ethernet and TCP/IP (LS-NET). (An optional QI-101P network card is required.)

### ★ HL7 gateway

You can connect to an HIS (Hospital Information System) and LS-NET using an HL7 gateway. (An optional QP-982PK HL7 gateway software is required.)



### ★ Wireless Networking

By attaching an optional ZS-900PK transmitter (optional holder DI-230P required) to the monitor, you can transmit waveforms and parameter data to a Nihon Kohden telemetry central monitor or multi-patient receiver.

### Major options

For full list of options and consumables, see the Technical Data separately available



**Recorder module,**  
WS-231P (3-channel)

#### SpO<sub>2</sub> probe, BluPRO®

Reusable type (washable)



[P225F] finger

#### Disposable type



[P203A] adult finger  
[P203B] child finger



[P203C] neonate instep  
[P203D] infant finger or toe

#### CO<sub>2</sub> sensor cap-ONE



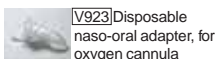
World's first mainstream CO<sub>2</sub> sensor for non-intubated patients



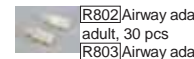
[P907] for non-intubated patients



[P905] for Quantitative method



[V923] Disposable naso-oral adapter, for oxygen cannula adjustment, 30 pcs



[R802] Airway adaptor, adult, 30 pcs  
[R803] Airway adaptor, child, 30 pcs

- Cart, KC-013P
- Hook, DZ-230P
- Battery, X062
- Interface, QI-231P
- Network card, QI-101P
- Network printer card, QI-111P
- Transmitter, ZS-900P
- HL7 gateway software, QP-982PK

This brochure may be revised or replaced by Nihon Kohden at any time without notice.



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# 7 parameters and 6 or 5 traces on an 8.4 inch TFT color LCD touch screen

## High performance in a compact body

### ★ 7 parameters with MULTI

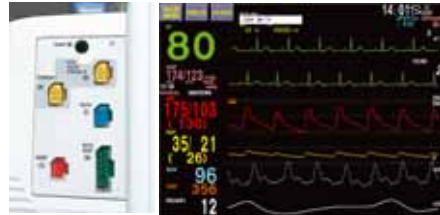
#### connector

ECG, impedance respiration, SpO<sub>2</sub>, NIBP, temperature, IBP (BSM-2303K) and MULTI connector parameters (IBP, mainstream CO<sub>2</sub>, or thermistor respiration)

When you plug the sensor cable into a MULTI connector, it automatically detects the type of parameter and starts measuring.

### ★ Crisp 5 or 6 traces display

6 (BSM-2303K) or 5 (BSM-2301K) traces on an 8.4 inch TFT LCD (800 × 600 dots). Dual-lead ECG, respiration, pulse (SpO<sub>2</sub>), IBP (BSM-2303K) and either IBP or CO<sub>2</sub> waveforms can be displayed.



## Innovative technology

### ★ PWTT triggered NIBP

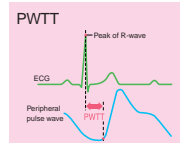
#### measurement

PWTT triggered NIBP measurement increases the chance to detect sudden change in blood pressure.



#### PWTT

Blood pressure	PWTT
UP ↗	Shorter ↔
DOWN ↘	Longer ↔



PWTT (Pulse Wave Transit Time) has a correlation to blood pressure in most cases. PWTT can be calculated from ECG and SpO<sub>2</sub> non-invasively. During periodic NIBP measurement, if PWTT exceeds a threshold it triggers NIBP measurement. The blood pressure measuring technology in Life Scope i uses Nihon Kohden's patented PWTT technology (US patent no. 5564427, other patents pending).

## User-friendly design and operation

### ★ Touch screen

A touch screen allows easy and intuitive operation. Just touch the place on the screen you want to see or change. A Home key takes you to the main menu from any screen.

You can view 30-minute short trend with real time waveform, and change the length of the short trend display with your finger.



### ★ Trend/vital signs list

Up to 24 hours of trendgraphs of all parameters, and 120 sets of vital signs list data and 120 sets of NIBP list data can be stored and reviewed.



### ★ Customized keys

You can set three function keys to call up your commonly used preset screens with one key stroke.



### ★ Enlarged numeric display

An enlarged numeric display lets you see the patient condition from a distance.



### ★ Free-writing patient name

You can directly write the patient name on screen with your finger or an optional touch pen. Any characters and figures can be displayed. (not available on the network)



### ★ 3 alarm level indicator

A wide-viewing alarm indicator at the top of the monitor can be seen clearly from a distance. It lights in red or yellow to indicate the severity of the alarm.



## Satisfies every hospital scenes

### Transport

3-hour battery operation is available. It provides continuous monitoring during transportation. The battery is automatically charged during AC operation. (Battery, X062, option)



### ICU

#### ★ Interbed

You can view information of other LifeScope series bedside monitors in an LS-NET Nihon Kohden monitor network. The interbed screen displays one waveform, numeric data and alarm of each bed.



#### ★ Multi-template arrhythmia analysis

16 arrhythmia episodes for 8 seconds can be stored using an editable multi-template arrhythmia analysis method which provides more reliable arrhythmia information.



### NICU OCRG screen

An OCRG (Oxygen Cardiorespirogram) display for NICU monitoring displays respiration wave, real-time heart rate, and SpO<sub>2</sub> trendgraph simultaneously.

Impedance lead selection helps in difficult neonatal respiration measurement.



### OR Optional multi gas unit

With optional AG-920R multi gas unit, CO<sub>2</sub>, O<sub>2</sub>, N<sub>2</sub>O, anesthetic agents (Halothane, Isoflurane, Enflurane, Sevoflurane, Desflurane) can be measured. The monitor automatically distinguishes the agent type during measurement.



multigas unit, AG-920RA/RK

#### ★ Alarm history

The alarm history is created when any alarm occurs. Up to 200 alarms can be saved and displayed on the alarm history window.

