

Life Scope

 NIHON KOHDEN

Life Scope®

PATIENT MONITORING SYSTEMS

WORKS IN HARMONY, SO YOU CAN TOO



Imagine one continuous patient record, from admit to discharge. Available to everyone on the caregiving team, seamlessly integrating every device and decision across the spectrum of care.

Created by clinicians, for clinicians—Nihon Kohden Patient Monitoring gives you more data, more insights, and more efficiency. Combining fully optimized, adaptable monitors with an enterprise-level server and software applications customized to your needs. All in a consistent user interface that's easy to use and streamlines workflow. These advanced tools were designed to help accomplish one critical goal: to allow clinicians to spend more time with their patients and less with technology.

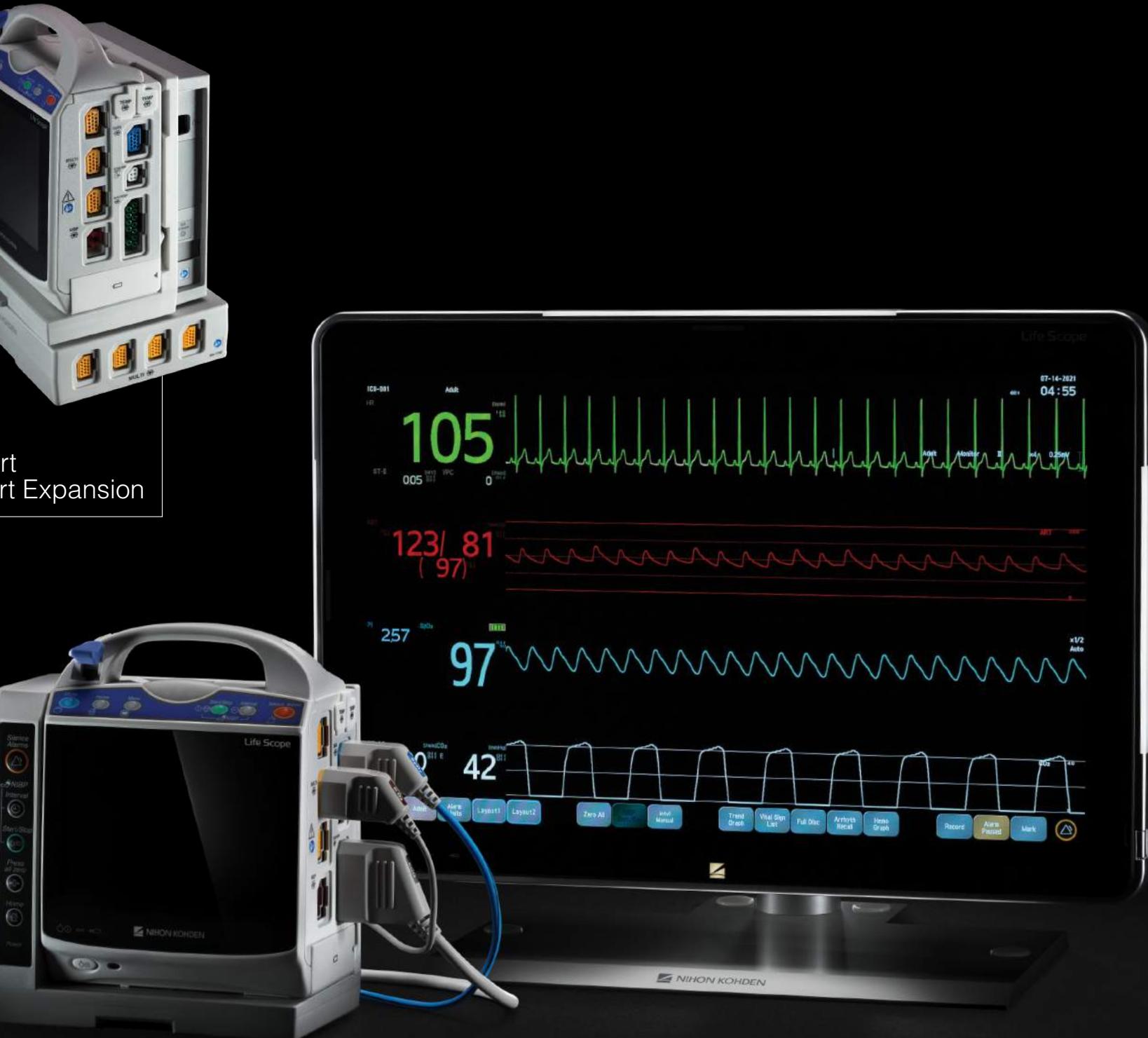
Life Scope G7

Details That Deliver

The Life Scope G7 patient monitor provides caregivers the features needed for the highest acuity settings. Balancing powerful insights and ease-of-use, the G7 processor is integrated into the display unit. It also deploys conveniently at the bedside and is easy to mount, with option to add 4 smart ports for even more capabilities. The Life Scope G7 incorporates a Data Acquisition Unit to host the BSM-1700 Transport Monitor for uninterrupted data during transport. The compact Data Acquisition Unit can be mounted close to the patient, with a connection cable that is available in various lengths up to 10 meters. The Life Scope G7 provides up to eight channels of continuous EEG monitoring to quickly identify potential neurological issues.

See The Big Picture

- **19 inch, high resolution LCD touchscreen display**
- **Excellent wide angle visibility**
- **Durable, tempered glass display for easy cleaning**
- **Add one independent interactive remote monitoring screen**
- **Detailed visuals and compact design with configurable screen layouts**
- **Alarm out and third party device interface**
- **Data acquisition unit for easier access to controls and transport monitor functions**
- **Advanced interbed function enables multi-clinician oversight**
- **Advanced features including SpO₂ histogram, HiQ-View pairing, WLAN transport and car seat challenge functions**
- **Advanced cardiology parameters such as QTc and AFib**





Life Scope G5 Max

Ingenuity For Mid/High Acuity

The Life Scope G5 Max is the all-in-one solution ideal for mid to high acuity settings. Designed to help caregivers focus on patients instead of managing equipment, the G5 Max offers a perfect balance of advanced features and user-friendly operation. Its sleek chassis with an easy-to-clean design, alarm management, and customizable screen layouts enable optimal workflow in a variety of healthcare environments.

Intelligent and Intuitive

- 15.6 inch high-resolution LCD touchscreen display
- Excellent wide-angle visibility with durable, tempered glass
- Up to two remote independent displays for flexible monitoring
- Comprehensive parameter monitoring with data storage
- Multi-waveform/multi-parameter full disclosure
- Advanced arrhythmia and ST segment analysis
- Drug, hemodynamic, and pulmonary calculations
- 12-lead ECG capability
- Smart Cable™ connectivity for seamless device integration
- Screen builder for customized layouts
- Seamless data flow to CNS-6801 Central Nursing Station
- Compatible with BSM-1700 Transport Monitor for uninterrupted data during patient transport
- Works with or without a Central Nursing Station (CNS)





Life Scope G5

Agility Amplifies Abilities

Different areas throughout the hospital have different requirements for patient care. The Life Scope G5 can easily be programmed to different care settings using stored configurations and provides auto screen configuration. Clinicians can customize the monitor for each patient's needs, reduce false alarms, seamlessly transport, monitor trends and configure standard displays for fast, informed patient management. This is smart technology for high quality patient-centered care.

Change is Good

- **12.1 inch touchscreen display**
- **Multiple quick-access configurations with trend analysis**
- **All-in-one system with removable transport monitor**
- **Budget-friendly, compact design**
- **Wall or battery operation**
- **Advanced cardiology parameters such as QTc and AFib**
- **Graphical features such as ST diagram, histogram and quick access trend cabinets**





BSM-1700

Transport Monitor

Every Step Of The Way

The BSM-1700 lightweight transport monitor has a high resolution touchscreen display and comprehensive data storage that includes up to 24 hours of full disclosure waveforms, tabular and graphical trends. The BSM-1700 can function as a compact standalone monitor, a transport monitor or an Input Unit for a Life Scope G5, G5 Max or G7 series bedside monitor.

Patient Insights To Go

- **5.7 inch touchscreen display**
- **Compatible with G-series Nihon Kohden bedside monitors**
- **Ensures seamless transport with continuity of patient data**
- **Lightweight workhorse for rugged, simplified workflow**
- **Up to 5 hours of battery operation**
- **Optional wireless connectivity for WLAN transport capability**
- **Premium as standard, includes 3 Smart ports for a variety of parameters**
- **Available with either Nihon Kohden SpO₂, Nellcor® SpO₂ or Masimo® SpO₂ technology**
- **Includes advanced ECG analysis and advanced arrhythmia monitoring such as atrial fibrillation (AFib) algorithm**



Life Scope® G5 Bedside Monitor

CSM-1501 SPECIFICATIONS

DISPLAY

Display Size/Type	12.1" color TFT LCD
Resolution	1280 x 800
Characteristics	Acrylic hard film with resistive touchscreen with up to 15 function soft keys and 3 quick recall screen configurations
Number of Traces	Up to 15 traces (30 traces on two displays) moving or fixed method
Waveforms	Up to 15 traces (30 traces on two displays) moving or fixed method ECG (up to 12), respiration, IBP (up to 8), SpO ₂ , pulse wave, CO ₂ , BIS-EEG, EEG (up to 2 traces), vent PAW, vent Flow, and CO ₂ Thermodilution curve. When gas is monitored: O ₂ concentration curve, CO ₂ concentration curve, anesthetic agent concentration (Halothane, Isoflurane, Enflurane, Sevoflurane, Desflurane) Analog input.
Sweep Speed	Normal sweep speed: 25 mm/s, 50 mm/s Slow sweep speed (respiration): 1.56 mm/s, 6.25 mm/s, 12.5 mm/s, 25 mm/s

ALARMS

Alarm Items	Vital sign, arrhythmia, technical, operational, interbed
Alarm Levels	Crisis: red blinking; Warning: yellow blinking; Advisory: yellow or blue light
Alarm Indication	Alarm indicator (360° visibility) highlighted message, alarm sound
Alarm Suspend	1, 2, or 3 min
Alarm Master	Adult and Pediatric up to 4, Neonatal up to 6

STORED PATIENT DATA

Trendgraph	Trend parameters: up to 9 for each trend graph (up to three); Trend display time: Up to 72 hours (short trend for the last 30 minutes on main screen)
Full Disclosure	Storage time: up to 72 hours; Number of waveforms stored: 5 (max)
ST Recall	Number of files: 4,320 files (1 per minute for 72 hours) for all monitoring leads
History	16,384 files (Alarm & Arrhythmia recall)
12-Lead Interpretive Recall	Number of files: 18 files
Storage Capacity	72 hours (OCRG/Hemodynamics/Trend/aEEG)

RECORDER (OPTIONAL)

Recording Method	Thermal array recording
Number of Channels	3 traces (max)

* With optional modules.

PARAMETERS

Leads	3,6 or 10-lead ECG cable for I, II, III, aVR, aVL, aVF, V1 to V6
ECG	Number of ECG waveforms channels: up to 12; Frequency response: diagnosis mode - 0.05 to 150 Hz, ST mode -0.05 to 18 Hz, monitor mode -0.3 to 40 Hz, maximum filter mode -1 to 18 Hz; Heart Rate Counting range: 0, 15 to 300 beats/min; Arrhythmia analysis method: multi-template software algorithm; VPC counting rate: 0 to 99 VPCs/min; Arrhythmia alarms: ASYSTOLE, VF, VT, V RHYTHM, V BRADY, EXT TACHY, EXT BRADY, A-Fib, End A-Fib, VPC RUN, COUPLETT, EARLY VPC, BIGEMINY, TRIGEMINY, FREQ VPC, PROLONGED RR, SV TACHY, TACHYCARDIA, BRADYCARDIA, VPC, MULTIFORM, IRREGULAR RR, NO PACER PULSE, PACER NON-CAPTURE, PAUSE
ST Level Measurement	Number of measurement channels: Up to 12; Measuring range: ± 2.5 mV
Respiration	Measuring range: 0 to 150 breaths/min (Impedance)
SpO ₂	Measuring technology: Nihon Kohden, Masimo or Nellcor; Measuring display range: 0 to 100% (70 to 100% at specified accuracy); Pulse rate from SpO₂ range: 0, 30 to 300 > 20 to 300, (varies by SpO ₂ technology)
Non-invasive Blood Pressure, iNIBP	Measuring method: Oscillometric Cuff; Pressure display range: 0 to 300 mmHg
Invasive Blood Pressure, IBP	Measuring range: -50 to 300 mmHg; Pulse rate display range from IBP range: 0, 30 to 300 beats/min
Temperature	Measuring range: 0 to 45°C; Number of channels: 4 (max)
Cardiac Output	Measuring method: Thermodilution method; Measuring range: Injectate temperature (Ti): 0°C to 27°C; Blood temperature (Tb): 15°C to 45°C; Thermodilution curve (delta Tb): 0°C to 2.5°C; Cardiac output (CO): 0.5 to 20 L/min
CO ₂	CO₂ measuring range: 0 to 150 mmHg; Respiration rate counting range: 3 to 150 breaths/min
BIS*	Input channels: 2; Measuring parameters: Bispectral Index (BIS), 95% Spectral Edge Frequency (SEF90, SEF95), Suppression Ratio (SR), EMG, Signal Quality Index (SQI)

CONNECTIVITY

Standard: Ethernet (LS-Net), USB, third party interface (2), HDMI remote video out, recorder and RS-232 Serial out. Optional third party interface (4), Nurse call, independent interactive remote display port, DVI independent remote video out, Ethernet (HIS), ground terminal and AC power.

DIMENSIONS & WEIGHT

Dimensions	Core unit, CSM-1501: 13.4" W x 11.6" H x 8" D (341 W x 294 H x 204 D mm) WS-151P recorder unit: (built in option) AA-174P multi amp unit: 6.1" x 2.4" x 7.5" (156 W x 63 H x 190 D mm) (option, excluding cable)
Weight	Core unit, CSM-1501: 13.2 lbs (6 kg) WS-151P recorder unit: 0.77 lbs (0.35 Kg) (option) AA-174P multi amp unit: 1.8 lbs (0.82 kg) (option)

Life Scope® G5 Max Bedside Monitor

CSM-1502 SPECIFICATIONS

DISPLAY

Display Size/Type	15.6" color direct bond TFT LCD
Resolution	1366 x 768
Characteristics	True flat, tempered glass medical certified, capacitive touch screen with up to 15 function soft keys and 3 quick recall screen configurations
Number of Traces	Up to 15 traces (30 traces on two displays) moving or fixed method
Waveforms	Up to 15 traces (30 traces on two displays) moving or fixed method ECG (up to 12), respiration, IBP (up to 8), SpO ₂ , pulse wave, CO ₂ , BIS-EEG, EEG (up to 2 traces), vent PAW, vent Flow, and CO ₂ Thermodilution curve. When gas is monitored: O ₂ concentration curve, CO ₂ concentration curve, anesthetic agent concentration (Halothane, Isoflurane, Enflurane, Sevoflurane, Desflurane) Analog input.
Sweep Speed	Normal sweep speed: 25 mm/s, 50 mm/s Slow sweep speed (respiration): 1.56 mm/s, 6.25 mm/s, 12.5 mm/s, 25 mm/s

ALARMS

Alarm Items	Vital sign, arrhythmia, technical, operational, interbed
Alarm Levels	Crisis: red blinking; Warning: yellow blinking; Advisory: yellow or blue light
Alarm Indication	Alarm indicator (360° visibility) highlighted message, alarm sound
Alarm Suspend	1, 2, or 3 min
Alarm Master	Adult and Pediatric up to 4, Neonatal up to 6

STORED PATIENT DATA

Trendgraph	Trend parameters: up to 9 for each trend graph (up to three); Trend display time: Up to 72 hours (short trend for the last 30 minutes on main screen)
Full Disclosure	Storage time: up to 72 hours; Number of waveforms stored: 5 (max)
ST Recall	Number of files: 4,320 files (1 per minute for 72 hours) for all monitoring leads
History	16,384 files (Alarm & Arrhythmia recall)
12-Lead Interpretive Recall	Number of files: 18 files
Storage Capacity	72 hours (OCRG/Hemodynamics/Trend/aEEG)

RECORDER (OPTIONAL)

Recording Method	Thermal array recording
Number of Channels	3 traces (max)

Dimensions	Core unit, CSM-1502: 15.9" W x 11.9" H x 8" D (403 W x 302 H x 204 D mm) WS-151P recorder unit: (built in option) AA-174P multi amp unit: 6.1" x 2.4" x 7.5" (156 W x 63 H x 190 D mm) (option, excluding cable)
Weight	Core unit, CSM-1502: 15.4 lbs (7 kg) WS-151P recorder unit: 0.77 lbs (0.35 Kg) (option) AA-174P multi amp unit: 1.8 lbs (0.82 kg) (option)

Life Scope® G7 Bedside Monitor

CSM-1702 SPECIFICATIONS

DISPLAY

Display Size/Type	19" color direct bond TFT LCD
Resolution	1680 x 1050
Characteristics	True flat, tempered glass medical certified, capacitive touch screen with up to 20 function soft keys and 3 quick recall screen configurations
Number of Traces	Up to 17 traces (up to 49 on three displays) moving or fixed method
Waveforms	ECG (up to 12), respiration, IBP (up to 8), SpO ₂ , pulse wave, CO ₂ , BIS-EEG, EEG (up to 2 traces), vent PAW, vent Flow, and CO ₂ thermodilution curve. When gas is monitored: O ₂ concentration curve, CO ₂ concentration curve, anesthetic agent concentration (Halothane, Isoflurane, Enflurane, Sevoflurane, Desflurane) Analog input.
Sweep Speed	Normal sweep speed: 25 mm/s, 50 mm/s Slow sweep speed (respiration): 1.56 mm/s, 6.25 mm/s, 12.5 mm/s, 25 mm/s

ALARMS

Alarm Items	Vital sign, arrhythmia, technical, operational, interbed
Alarm Levels	Crisis: red blinking; Warning: yellow blinking; Advisory: yellow or blue light
Alarm Indication	Alarm indicator (360° visibility) highlighted message, alarm sound
Alarm Suspend	1, 2, or 3 min
Alarm Master	Adult and Pediatric up to 4, Neonatal up to 6

STORED PATIENT DATA

Trendgraph	Trend parameters: up to 9 for each trend graph (up to three); Trend display time: Up to 72 hours (short trend for the last 30 minutes on main screen)
Full Disclosure	Storage time: up to 72 hours; Number of waveforms stored: 5 (max)
ST Recall	Number of files: 4,320 files (1 per minute for 72 hours) for all monitoring leads
History	16,384 files (Alarm & Arrhythmia recall)
12-Lead Interpretive Recall	Number of files: 18 files
Storage Capacity	72 hours (OCRG/Hemodynamics/Trend/aEEG)

RECORDER (OPTIONAL)

Recording Method	Thermal array recording
Number of Channels	3 traces (max)

* With optional modules.

PARAMETERS

Leads	3,6 or 10-lead ECG cable for I, II, III, aVR, aVL, aVF, V1 to V6
ECG	Number of ECG waveforms channels: up to 12; Frequency response: diagnosis mode - 0.05 to 150 Hz, ST mode - 0.05 to 18 Hz, monitor mode - 0.3 to 40 Hz, maximum filter mode - 1 to 18 Hz; Heart Rate Counting range: 0, 15 to 300 beats/min; Arrhythmia analysis method: multi-template software algorithm; VPC counting rate: 0 to 99 VPCs/min; Arrhythmia alarms: ASYSTOLE, VF, VT, V RHYTHM, V BRADY, EXT TACHY, EXT BRADY, AFib, End A-Fib, VPC RUN, COUPLE, EARLY VPC, BIGEMINY, TRIGEMINY, FREQ VPC, PROLONGED RR, SV TACHY, TACHYCARDIA, BRADYCARDIA, VPC, MULTIFORM, IRREGULAR RR, NO PACER PULSE, PACER NON-CAPTURE, PAUSE
ST Level Measurement	Number of measurement channels: Up to 12; Measuring range: ±2.5 mV
Respiration	Measuring range: 0 to 150 breaths/min (Impedance)
SpO ₂	Measuring Technology: Nihon Kohden, Masimo or Nellcor; Measuring Display Range: 0 to 100% (70 to 100% at specified accuracy); Pulse rate from SpO₂ Range: 20 to 300 beats/min (varies by SpO ₂ technology)
Non-invasive Blood Pressure, iNIBP	Measuring method: Oscillometric Cuff; Pressure display range: 0 to 300 mmHg
Invasive Blood Pressure, IBP	Measuring range: -50 to 300 mmHg; Pulse rate display range from IBP range: 0, 30 to 300 beats/min
Temperature	Measuring range: 0 to 45°C; Number of channels: 4 (max)
Cardiac Output	Measuring method: Thermodilution method; Measuring range: Injectate temperature (Ti): 0°C to 27°C; Blood temperature (Tb): 15°C to 45°C; Thermodilution curve (delta Tb): 0°C to 2.5°C; Cardiac output (CO): 0.5 to 20 L/min
CO ₂	CO₂ measuring range: 0 to 150 mmHg; Respiration rate counting range: 3 to 150 breaths/min
BIS*	Input channels: 2; Measuring parameters: Bispectral Index (BIS), 95% Spectral Edge Frequency (SEF90, SEF95), Suppression Ratio (SR), EMG, Signal Quality Index (SQI)

CONNECTIVITY

Standard: Ethernet (LS-Net), USB, third party interface (6), HDMI remote video out, recorder and RS-232 Serial out. Optional third party interface (4), Nurse call, independent interactive remote display port, DVI independent remote video out, Ethernet (HIS), ground terminal, DAU port, and AC power

DIMENSIONS & WEIGHT

Dimensions	Core unit, CSM-1702: 18.7" W x 12.8" H x 4.5" D (475 W x 326 H x 115 D mm) JA-170P: 7.1" W x 7.1" H x 5.3" D (182 W x 182 H x 136 D mm), (excl. cable) WS-171P recorder unit: 3.9" x 3.2" x 5.6" (99 W x 82 H x 142 D mm), (option) AA-174P multi amp unit: 6.1" x 2.4" x 7.5" (156 W x 63 H x 190 D mm), (option, excluding cable)
Weight	Core unit, CSM-1702: 18.3 lbs (8.3 kg) JA-170P: 2.4 lbs (1.1kg), (excluding cable) WS-171P recorder unit: 1.4 lbs (0.62 kg) (option); AA-174P multi amp unit: 1.8 lbs (0.82 kg) (option)

BSM-1700 Transport Monitor

BSM-1700 SPECIFICATIONS

DISPLAY

Display Size/Type	5.7" color TFT type LCD
Resolution	640 x 480

CHARACTERISTICS

Number of Traces	Up to 9 traces
Waveforms	ECG (up to 12), respiration, IBP (up to 3 traces), SpO ₂ pulse wave, CO ₂ , CO thermodilution Curve, BIS
Sweep Speed	Normal sweep speed: 25 mm/s, 50 mm/s Slow sweep speed (respiration): 1.56 mm/s, 6.25 mm/s, 12.5 mm/s, 25 mm/s
Alarm Items	Vital sign, arrhythmia, technical, operational, interbed

ALARMS

Alarm Levels	Crisis: red blinking; Warning: yellow blinking; Advisory: yellow or blue light
Alarm Indication	Alarm indicator (360° visibility) highlighted message, alarm sound
Alarm Suspend	1, 2, or 3 min
Alarm Master	Adult and Pediatric up to 4, Neonatal up to 6
Storage Capacity	72 hours (OCRG/Hemodynamics/Trend/aEEG)

STORED PATIENT DATA

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Storage Capacity	72 hours (OCRG/Hemodynamics/Trend/aEEG)

RECORDER (OPTIONAL)

Recording Method	Thermal array recording
Number of Channels	3 traces (max)

* With optional modules.

CHARACTERISTICS

Number of Traces	Up to 9 traces
Waveforms	ECG (up to 12), respiration, IBP (up to 3 traces), SpO ₂ pulse wave, CO ₂ , CO thermodilution Curve, BIS
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History	16,384 files (Alarm & Arrhythmia recall)
12-Lead Interpretive Recall	Number of files: 18 files
Storage Capacity	72 hours (OCRG/Hemodynamics/Trend/aEEG)

CONNECTIVITY

Standard: Ethernet (LS-Net), ground terminal and AC power (with SC107R). Optional wireless communication.

DIMENSIONS & WEIGHT



Different Thinking for Better Healthcare

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Important Safety Information:

Caution: Federal (United States) law restricts this device to sale by or on the order of a physician. See Instructions for Use for full prescribing information, including indications, contraindications, warnings, precautions, and adverse events.

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