![GE HealthCare logo]

Portrait VSM

Vital signs monitor

Care with confidence

The next evolution of the DINAMAP vital signs legacy, the Portrait™ VSM monitor offers fast, accurate clinical measurements and seamless EMR connectivity that enables nurses to focus on taking care of their patients while easily documenting the patient information.

Features

- Configurable monitor that can be used for spot-checking or continuous monitoring, providing you the flexibility of two devices in one

- Designed for adult, pediatric and neonatal use

- Noninvasive blood pressure measurement uses GE HealthCare's exceptional DINAMAP™ technology

- Includes the same algorithms for NIBP and SpO2 as other higher acuity GE HealthCare monitors, helping ensure measurement consistency across all care areas

- Up to seven different EWS protocol profiles supported. (NEWS2+MEWS + 5 customized EWS=7 protocols)

- Three choices for pulse oximetry include TruSignal™; Nellcor™ OxiMax™ or Masimo SET®, displayed also as a waveform

- Three options for temperature include Exergen® TemporalScanner™, HeTaiDa Non-Contact Infrared Body Thermometer and Welch Allyn® SureTemp®

- Connectivity to any HIS system through the HL7® interface engine, or direct to certain IHE-compliant systems

- Connectivity to Cerner™ Millenium™ EMR via CareAware™ VitalsLink™ with help of an iBus™ protocol

- Communicates through your enterprise wireless or wired network, with low bandwidth usage

- Typical battery life of up to 5.5 hours before requiring recharge. If the battery is discharged, patient data is not lost

- Ability to use a barcode scanner during the positive patient identification process and to identify the caregiver

- Round Advisor™ to help you prioritize patients for efficient rounding.

- Respiration rate timer to help with accurate measurement

- Thirty manual observation fields options to streamline integration into the patient record.

- The monitor can store up to 10,000 snapshot entries

- Designed for easy serviceability with simple field replacement kits

- Ability to copy the configuration of a monitor to other Portrait VSM monitors via USB connection

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Technical specifications

Display

Size	10.1 in (diagonal)
Resolution	1280x800 (WXGA)
Controls	Capacitive touch screen

System

Operation system	Linux
Cooling system	Natural convection, no fan inside for cooling

Printer

Printer type	Thermal dot array
Horizontal resolutions	24 dots/mm (600 dpi)
Vertical resolution	8 dots/mm (200 dpi)
Paper type	Thermal printer paper, roll, 50 mm wide

Network and data security

Wi-Fi certificate	CE, FCC
Wi-Fi Authentication	Support WPA-Personal; WPA2Personal; WPA-Enterprise; WPA2Enterprise
Wi-Fi Data Encryption	Support WPA/WPA2 with TKIP and AES CCMP
LAN / WLAN Connection	Supports IEEE 802.1X port-based Network Access Control (NAC)
USB file exchange	All USB functions are password protected
	Encrypted export of user settings, and service logs
Filesystem	Encrypted
NTP service	Secured NTP with Network Time Security (NTS)
Wi-Fi Security	FIPS 140-2 Inside

Temperature options

Exergen TemporalScanner temporal artery thermometer, Welch Allyn SureTemp thermometer or HeTaiDa Non-Contact Infrared Body Thermometer

SpO2 options

Available either with GE TruSignal, Masimo SET or Nellcor OxiMax oximetry technologies

Barcode reader

Support for optional medical grade barcode reader via USB

Performance specifications

Alarms

Alarms are provided for all physiological parameters except temperature. The monitor does not alarm in a spot check operating mode.

In the monitoring mode, there are three alarm priorities: high, medium and low and notifications for technical notes.

TruSignal SpO2 specifications

Measurement range	0 to 100%
Measurement accuracy	Without motion-adult/pediatric Finger sensor: 70 to 100% ±2%
	Without motion-neonate: 70 to 100% ±3%
	With motion-adult/pediatric/neonate: 70 to 100% ±3%
	Low perfusion-adult/pediatric: 70 to 100% ±3% (<70% unspecified)
PI (Perfusion Index)	0 to 32

Masimo SET® specifications

Measurement range	0 to 100% Without motion-
Measurement accuracy	adult/pediatric: 70 to 100% ±2%
	Without motion-neonate: 70 to 100% ±3%
	With motion-adult/pediatric/neonate: 70 to 100% ±3%
	Low perfusion: 70 to 100% ±2% (<70% unspecified)
PI (Perfusion Index)	Yes
APOD (Adaptive Probe Off Detection)	Yes

Nellcor™ OxiMax™ specifications

Measurement range	0 to 100%
Measurement accuracy	Adult: 70 to 100% ±2%
	Neonate: 70 to 100% ±3%
	Low perfusion: 70 to 100% ±2% <70% unspecified

NIBP specifications

Measurement technique	Oscillometric with step deflation
Measurement Modes	Single, Automatic (with customseries cycle time), and Continuous X5min
Automatic Cycle Times	Custom, 1, 2, 3, 4, 5, 10, 15, 20, 30 min, 1 h, 1.5 h, and 2 h

NIBP measurement ranges

Systolic	Adult/Pediatric: 30 to 290 mmHg
	Neonate: 30 to 140 mmHg
MAP	Adult/Pediatric: 20 to 260 mmHg
	Neonate: 20 to 125 mmHg
Diastolic	Adult/Pediatric: 10 to 220 mmHg
	Neonate: 10 to 110 mmHg

Clinical Accuracy

Mean Difference	±5 mmHg
Standard Deviation	≤ 8 mmHg
Reporting Standard	ANSI/AAMI ISO81060-2 and IEC 80601-2-30

Safety features

Default initial inflation pressure	Adult/Pediatric: 135 ±15 mmHg
	Neonate: 100 ±15 mmHg
Maximum determination time	Adult/Pediatric: 2 min
	Neonate: 85 s
Over pressure monitor	Adult/Pediatric cuff pressure exceeds 300 mmHg (±6 mmHg);
	Neonatal cuff pressure exceeds 150 mmHg (±3 mmHg).

Pulse rate specifications

Measurement range	30 to 250 bpm (From GE TruSignal SpO2)
	25 to 240 bpm (From Masimo SpO2)
	20 to 250 bpm (From Nellcor SpO2) 30 bpm to 250 bpm (From NIBP)
Measurement accuracy	±2 bpm (Without motion from GE TruSignal SpO2)
	±3 bpm (With motion from GE TruSignal SpO2)
	±3 bpm (Without motion from Masimo SpO2)
	±5 bpm (With motion from Masimo SpO2)
	±3 bpm (From Nellcor SpO2) ±5% or ±5 bpm , whichever is greater (From NIBP)

Welch Allyn® SureTemp®

Measurement range	26.7 °C to 43.3 °C (80 °F to 110 °F)
Measurement accuracy	±0.1 °C (±0.2 °F) (Monitor mode)
Display resolution	0.1 °C or 0.1 °F

Exergen® TemporalScanner™

Measurement range	16.0 °C to 43.0 °C (61 °F to 110 °F)
Measurement accuracy	±0.1 °C (±0.2 °F)
Display resolution	0.1 °C or 0.1 °F

HeTaiDa Non-Contact Infrared body Thermometer

Measurement range	34.0 °C - 43.0 °C/ 93.2 °F -109.4 °F
Measurement accuracy	34.0 °C - 34.9 °C: ±0.3 °C/ 93.2 °F -94.8 °F: ±0.5 °F
	35.0 °C - 42.0 °C: ±0.2 °C/ 95.0 °F -107.6 °F: ±0.4 °F
	42.1 °C - 43.0 °C: ±0.3 °C/ 107.8 °F -109.4 °F: ±0.5 °F
Display resolution	0.1 °C or 0.1 °F

Respiration rate

Use a numeric keyboard to manually enter RR value in the parameter windows. To improve the accuracy of estimated RR value, the device also provides a timer next to the numeric keyboard.

Manual observations

Portrait VSM allows users to enter physiological observations of a patient manually for clinical evaluation and record. The observations can be saved for reviewing, printing, or sending to EMR.

Patient history data

Up to 10,000 groups of patient history record

Barcode Reader

Models supported	
	CR1500 (CODE) / 1470G2D-5USB-MS
	Voyager Extreme Performance (XP) 1470g
	(Honeywell)
Codes supported	QR code and barcode

Early Warning Score

EWS systems supported:

Any typical EWS scoring systems supported such as MEWS and NEWS2. Customizable configuration with integrated configuration tool.

Up to seven different EWS protocol profiles supported on the same patient monitor. (NEWS2+MEWS + 5 customized EWS=7 protocols)

Facility can define their EWS protocol to include:

- Measured parameters (NIBP, SpO2, Temp or Pulse Rate)
- Manually entered observations (numerical or selection list)
- Subscore scales 0-2, 0-3 or 0-4 are supported
- Total up to 15 parameters

EWS user interface

Total EWS score is on the main screen with color coding. Clinical response and individual parameter scores with colors are on a dedicated window.

EWS value and the used scoring system name is able to be sent to the EMR.

Power specifications

AC input	100 to 240V ±10%, 50/60 Hz
Power consumption	Monitor ≤150 VA
Protection	Class I
Battery	Lithium Ion
Charging time	< 4 h to 90% capacity
Run time	> 5.5 hrs under usage scenario of NIBP determinations every
	10 minutes, SpO2 sensor, temperature sensor and barcode scanner connected, display brightness set to factory default, WLAN on

Physical specifications

Dimensions (H x W x D)	275 x 265 x 175 mm (without Welch Allyn temperature option)
Weight	≤ 3.8 kg (8.4 lb) (without Welch Allyn temperature option)
Ingress protection	IP22

Environmental specifications

Operating conditions

Temperature	
	5 to 40 °C (41 to 104 °F) without temperature sensors
	10 to 40 °C (50 to 104 °F) with Welch Allyn temperature sensor
	16 to 40 °C (61 to 104 °F) with Exergen temperature sensor
	15 to 40 °C (59 to 104 °F) with HeTaiDa temperature sensor
Relative humidity	15 to 90% non-condensing (Host)
Atmospheric pressure	700 to 1060 hPa (525 to 795 mmHg)

Storage and transport conditions

Temperature	-20 to 60 °C (-4 to 140 °F) (Host)
Relative humidity	10 to 90% non-condensing (Host)
Atmospheric pressure	700 to 1060 hPa (525 to 795 mmHg)