Technical Specifications

Physical Dimensions

Monitor size:	uMEC10:315mm x 155 mm x 220mm; uMEC12:345mm x160mm x 255mm
Weight:	uMEC10:≤3.5kg; uMEC12:≤4kg Standard parameters configuration, including a lithium battery and a recorder

Display

Type:	uMEC10: 10.4" color LED, or touchscreen uMEC12: 12.1" color LED, or touchscreen
Resolution:	800 x 600 pixels
Waveforms:	uMEC10: up to 7 uMEC12: up to 11
External display:	1 display through VGA

ECG

Lead set:	3-lead: I, II, III 5-lead: I, II, III, aVR, aVL, aVF, V Automatic 3/5-lead recognition
Gain:	x0.125, x0.25, x0.5, x1, x2, x4, Auto
Sweep speed:	6.25 mm/s, 12.5 mm/s, 25 mm/s, 50 mm/s
Bandwidth:	Diagnostic Mode: 0.05-150Hz Monitor Mode: 0.5-40Hz Surgical Mode: 1-20Hz ST Mode: 0.05-40Hz
Defib.protection:	Withstand 5000V (360J)defibrillation
Recovery time:	<10 s
CMRR:	Diagnostic Mode: >90dB Monitor, Surgical, ST Mode: >105dB
ST analysis:	Range:-2.0 to 2.0 mV Accuracy: ±0.02 mV or ±10 %, whichever is greater (-0.8 to +0.8 mV) Resolution: 0.01mV
Arr analysis:	Support, multi-lead, 24 classifications, including AF
QT analysis:	Support

Heart Rate

Range:	Adu: 15 to 300 bpm Ped/Neo: 15 to 350 bpm
Resolution:	1 bpm
Accuracy:	±1 bpm or ±1%, whichever is greater
HR analysis:	Support

Respiration

Range:	Adu: 0 to 120 rpm Ped/Neo: 0 to 150 rpm
Resolution:	1 rpm
Accuracy:	7 to 150 rpm: ±2 rpm or ±2%, whichever is greater 0 to 6 rpm: Not specified
Lead:	I or II
Sweep speed:	3 mm/s, 6.25 mm/s, 12.5 mm/s, 25 mm/s or 50mm/s

SpO_2

Range:	0 to 100%
Resolution:	1%
Accuracy:	±2% (70-100%, Adu/Ped) ±3% (70-100%, Neo) Unspecified (0-69%)
Refreshing rate:	≤2 s

Pulse Rate

Range:	25 to 350 (from IBP, uMEC 12) 20 to 254 bpm (from SpO_2) 30 to 300 bpm (from NIBP)
Accuracy:	±3 bpm (from SpO_2) ±3bpm or ±3%, whichever is greater (from NIBP)
Resolution:	1 bpm
Refreshing rate:	≤2 s

NIBP

Method:	Automatic Oscillometric
Operation mode:	Manual, Auto, STAT, Sequence
Parameters:	Systolic, Diastolic, Mean
Systolic range:	Adu: 25 to 290 mmHg Ped: 25 to 240 mmHg Neo: 25 to 140 mmHg
Diastolic range:	Adu: 10 to 250 mmHg Ped: 10 to 200 mmHg Neo: 10 to 115 mmHg
Mean range:	Adu: 15 to 260 mmHg Ped: 15 to 215 mmHg Neo: 15 to 125 mmHg
Accuracy:	Max mean error:±5 mmHg
Max standard deviation:	8 mmHg
Resolution:	1 mmHg
NIBP analysis:	Support

Temperature

Channel:	1-ch (uMEC10), 2-ch (uMEC12)
Parameters:	T1, T2 and TD
Range:	0 to 50℃ (32 to 122 °F)
Resolution:	0.1℃
Accuracy:	±0.1℃ or ±0.2 °F (without probe)

IBP (for uMEC 12 only)

Channel:	up to 2 channels
Range:	-50 to 300 mmHg
Resolution:	1 mmHg
Accuracy:	±2% or ±1 mmHg, whichever is greater (without sensor)
Sensitivity:	5 μV/V/mmHg
Impedance range:	300 to 3000Ω

C.O. (for uMEC 12 only)

Method:	Thermodilution
Range:	C.O.: 0.1 to 20 L/min TB: 23 to 43℃ TI: 0 to 27℃
Accuracy:	C.O.: ±5% or ±0.1 L /min, whichever is greater TB, TI: ±0.1℃ (without sensor)
Resolution:	C.O.: 0.1 L/min TB, TI: 0.1℃

CO_2 (for uMEC 12 only)

Mode:	Sidestream
Range:	0 to 20% (0-152mmHg under standard atmospheric pressure)
Accuracy:	±0.1% (<1%) ±0.2% (1 to 4.9%) ±0.3% (5 to 6.9%) ±0.4% (7 to 11.9%) ±0.5% (12 to 12.9%) ±(0.43%+8%rel) (13 to 20%) Unspecified (over 20%)
Sample flowrate:	90, 120ml/min(sidestream)
Sample flowrate accuracy:	±15% or ±15 ml/min, whichever is greater.
Start-up time:	<90s
Response time:	When using adult water trap and 2.5 m adult sampling line <5.5 s @120 ml/min When using neonatal water trap and 2.5 m neonatal sampling line <4.5 s @ 90 ml/min
AWRR range:	0 to 150 rpm
AWRR precision:	＜60rpm: ±1 60-150 rpm: ±2
Apnea time:	10 s, 15 s, 20 s, 25 s, 30 s, 35 s, 40 s

Data Storage

Trend data:	1200hrs (interval 10min), 120 hrs (interval 1 min), 4 hrs (interval 5 sec)
Alarm events:	1800 events and associated waveforms
Arr. events:	128 Arr. events and associated waveforms
NIBP:	1600 measurements
Waveforms:	Max. 48 hrs full disclosure waveforms

Battery

Type:	1 Build-in Chargeable Lithium-Ion battery
Voltage:	11.1 VDC
Capacity:	2500 mAh (5000 mAh optional)
Run time:	4 hrs(2500 mAh), 8 hrs (5000 mAh)
Recharge time:	2500 mAh: 4 hrs maximum (power off) 5000 mAh: 8 hrs maximum (power off)

Interfacing

Connectors:	1 AC power connector 1 RJ45 network connector 2 USB 2.0 connector 1 VGA output connector 1 multifunctional output connector (output ECG, nurse call and Defib. Synch. Signals)
WiFi:	Support, 5G/2.4G dual band
Barcode scanner:	Support
Network printer:	Support

Recorder

Type:	Thermal array
Speed:	12.5mm/s, 25 mm/s, 50 mm/s
Trace:	3

Power Requirements

AC Voltage:	100 to 240 VAC, 50/60Hz
Current:	1.5 A

Environmental Requirements

Temperature:	Operating: 0 to 40℃ (32 to 104 °F) Storage: -20 to 60℃ (-4 to 140 °F)
Humidity:	Operating: 15 to 95 % (non condensing) Storage: 10 to 95 % (non condensing)
Barometric:	Operating: 427.5 to 805.5 mmHg (57.0 to 107.4 kPa) Storage: 120 to 805.5 mmHg (16.0 to 107.4 kPa)

*Not all of the functions are available in all geographies, please contact with local Mindray sales representative for more information.

www.mindray.com

P/N:ENG-uMEC(full origin)-210285X4P-20210315

mindray

healthcare within reach

mindray

uMEC

Patient Monitor

Lots to care, less to spend

Excellent Performance

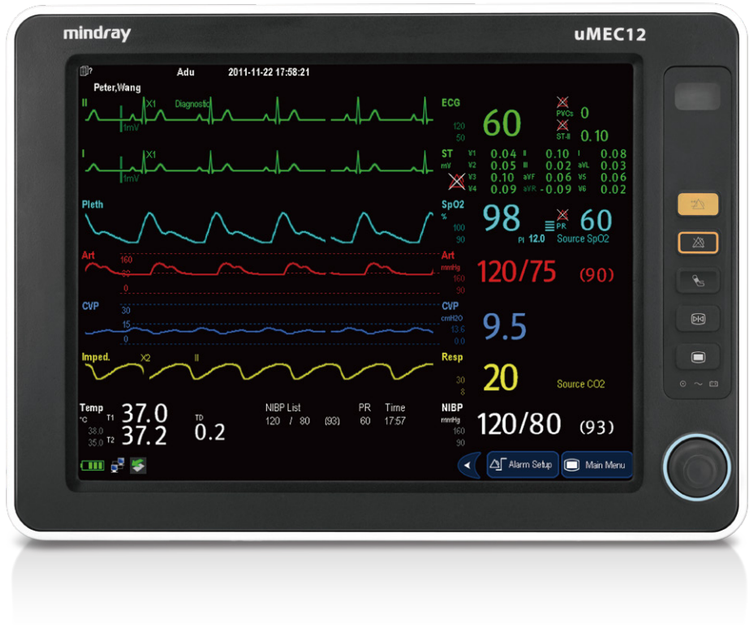
With Mindray's 25-year experience in patient monitoring, uMEC series patient monitors cater to clinical needs by offering precise and stable measurement of essential parameters. When monitoring is reliable, you can naturally be more confident with your clinical decisions.

- Mindray's patented Multi-lead ECG Algorithm
- NIBP quick-measurement technique
- Anti-interference SpO_2 algorithm
- Large capacity for data storage
- External USB storage devices supported
- 8-hour continuous runtime with one Lithium-ion battery

Reliability

To be effective in different environment, uMEC has passed strict electrical safety tests and reliability tests. It is extremely durable and has a long life span.

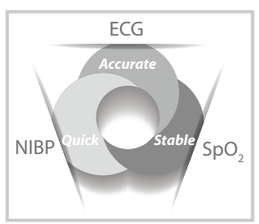
- Working temperature is 0~40°C, unaffected by extremes
- 0.75 m drop-protection and IPX1 water resistance
- Strong plastic housing resists aging and yellowing, with high corrosion resistance
- Low power consumption and fanless design
- Mindray accessories with quality material and production technique



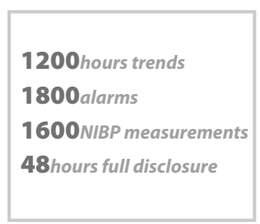
Ease of Use

As an user-friendly patient monitor, uMEC helps to simplify workflow and improve efficiency. The monitor provides very intuitive user interface to help faster and easier applications even for new users. Caregivers need less time for training, and get more time for patient care.

- 10.4 inch/12.1 inch high resolution LED screen with optional touch screen
- Supports various monitoring screen layouts, including large font, full/half screen 7-lead monitoring, view other bed, etc.
- Default settings satisfy general clinical requirements
- Statistics for heart rate changes and ambulatory blood pressure monitoring
- Less than 3.5kg weight with battery
- Unique accessory cabinet

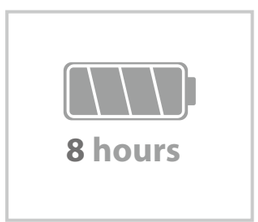


Essentially advanced measurements



Huge data capacity

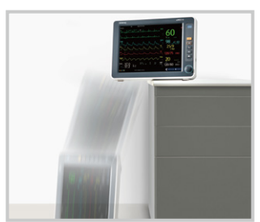
HR/BP analysis



Long battery working time

User-friendly interface

Unique accessory cabinet



Drop protection

Compatible with multiple cleaning agents