Technical Specifications

Display	12.1 inches, color LED, touch screen(optional)
Resolution (pixels)	800 x 600
Weight (kg)	<4.0kg
Battery	Standard: Chargeable Lithium-Ion, 2.5Ah Optional: Chargeable Lithium-Ion, 5Ah
Runtime	Standard：> 4 h Optional：> 8 h
Basic Parameters	ECG, SpO_2, NIBP, PR, RR, Temp
Extended Parameters	CO_2, IBP, C.O.
Recorder	Thermal dot array, number of waveform channels: maximum 3
Data Storage	Trends: 120 hours Mid-length trends: 4 hours Long-trends: 1200 hours Parameter alarms: 1800 Arrh. Events: 128 NIBP measurements: 1600 sets Full-disclosure waveforms: 48 hours at maximum.
ECG	
Lead type	3/5 lead
HR range(bpm)	15 ~350
SpO_2	
SpO_2 range(%)	0 ~ 100
PI Range (%)	0.05 ~ 20
NIBP	
Operation mode	Manual, STAT, Sequence
Range (mmHg)	Systolic:25 ~ 290 (>23kg) 25 ~ 240 (<23kg) Mean:15 ~ 260 (>23kg) 15 ~ 215 (<23kg) Diastolic:10 ~ 250 (>23kg) 10 ~ 200 (<23kg)
CO_2	**Infrared absorption**
Sample flowrate	120 ml/min, 90ml/min
Range (%)	0 ~ 20

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uMEC12 Vet
Safety & Efficiency for Veterinary Monitoring

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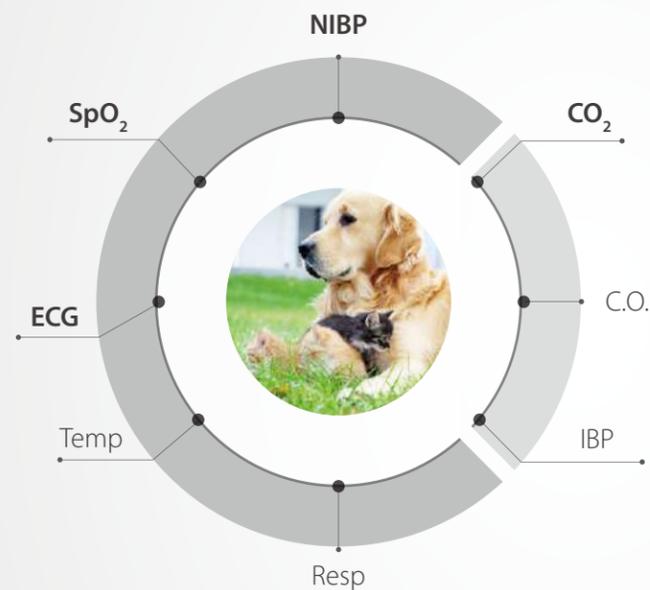
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healthcare within reach

Accurate Monitoring

With nearly 30 years of technical accumulation, uMEC Veterinary Monitor is the reliable choice for animal monitoring by providing comprehensive and accurate parameter measurements and animal-specific accessories.
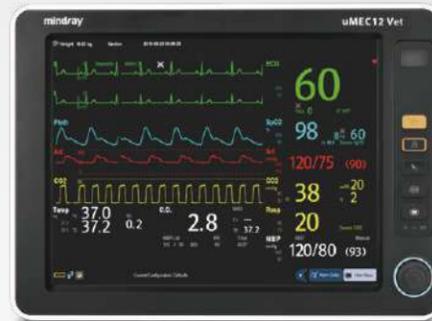
Special animal algorithm

- **NIBP** Animal specific algorithm can detect weak signal and interference for animal ensuring measurement quickly and accurately
- **SpO₂** Advanced technologies for interferences and weak perfusion
- **ECG** The unique patented ECG algorithm and ECG Smart Lead ensure stable monitoring
- **Side-stream CO₂** Gold-standard Artema technology for accurate measurements

Professional accessories

ECG:
ECG crocodile clips will prevent falling and ensure signal stability

SpO₂:
Clips for animal tongue and ear

NIBP:
Multi-size cuffs for different animals

Efficiency and Easy to Use

uMEC Veterinary monitor is designed for ease of use and will make your work easier.

- 12.1 inches high resolution LED screen with optional touch screen
- Unique accessory cabinet makes accessories management effective
- Less than 4kg weight with battery make it portable

Reliable and Durable

To be effective in different environment, uMEC has low-power design and a series of rigorous tests to ensure long time use.

Low Power Design

No-fan Design   Low Power Consumption   Durable components

Multi-scenario Tests

Resistance 0.75m fall   Durable and robust casing

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uMEC12 Vet

Veterinary monitor

Physical Specifications

Weight	≤4kg, Standard parameters configuration, including a lithium batter
Size	345mm x160mm x 255mm
Display screen	12.1" color LED, or touchscreen
Resolution	800 x 600 pixels
Waveforms	up to 11

ECG

Lead set	3-lead: I, II, III
	5-lead: I, II, III, aVR, aVL, aVF, V
Sweep speed	6.25 mm/s, 12.5 mm/s, 25 mm/s, 50 mm/s
Gain	x 0.125, x 0.25, x 0.5, x 1, x 2, x 4, auto
Bandwidth	Diagnostic mode: 0.05 to 150 Hz
	Monitor mode: 0.5 to 40 Hz
	Surgical mode: 1 to 20 Hz
	ST mode: 0.05 to 40 Hz
CMRR	Diagnostic: > 90 dB
	Monitor, Surgical, ST mode: > 105 dB
Defib. protection	Withstand 5000V (360J) defibrillation
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	Yes, multi-lead, 24 classifications, including AF
QT analysis	Yes

Heart Rate

HR range	15 to 350 bpm
HR accuracy	± 1 bpm or ± 1%, whichever is greater.
HR resolution	1 bpm

Respiration

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

SpO$_2$

Range	0 to 100 %
Resolution	1%
Accuracy	± 3 % (70 to 100%)
Refreshing rate	≤2s

PR

PR range	20 to 254 bpm (SpO$_2$)
	25 to 350 bpm (IBP)
	30 to 300 bpm (NIBP)
PR accuracy	± 3 bpm (SpO$_2$)
	±1 bpm or ±1 %, whichever is greater (IBP)
	± 3 bpm or ±3 %, whichever is greater (NIBP)
Refreshing rate	≤2s

Temperature

Channels	2-ch
range	0 to 50 °C (32 to 122 °F)
Accuracy	± 0.1 °C or ± 0.2 °F (without probe)
Resolution	0.1 °C

NIBP

Technique	Oscillometry
Operation mode	Manual, Auto, STAT, Sequence
Parameters	Systolic, Diastolic, Mean
Systolic range	>50lb or 23kg: 25 to 290 mmHg
	21lb~50lb or 10kg~23kg: 25 to 240 mmHg
	<21lb or <10kg: 25 to 240 mmHg
Diastolic range	>50lb or 23kg: 10 to 250 mmHg
	21lb~50lb or 10kg~23kg: 10 to 200 mmHg
	<21lb or <10kg: 10 to 200 mmHg
Mean range	>50lb or 23kg: 15 to 260 mmHg
	21lb~50lb or 10kg~23kg: 15 to 215 mmHg
	<21lb or <10kg: 15 to 125 mmHg
Accuracy	Max mean error: ± 5 mmHg
Max standard deviation 8 mmHg	
NIBP resolution	1 mmHg
Assisting Venous Puncture	Yes

IBP

Channel	up to 2 channels
Impedance range	300 to 3000 Ω
Range	-50 to 300 mmHg
Accuracy	±1 mmHg or ±2 %, whichever is greater
IBP resolution	1 mmHg

C.O.

Technique	Thermodilution
C.O. range	0.1 to 20 L/min
C.O. accuracy	±0.1 L/min or ±5%, whichever is greater
C.O. resolution	0.1 L/min
TB range	23 to 43 °C (73.4 to 109.4 °F)
TI range	0 to 27 °C (32 to 80.6 °F)
TB, TI accuracy	± 0.1 °C (without sensor)
TB, TI resolution	0.1 °C

CO$_2$

Method	Sidestream
Sweep speed	3 mm/s, 6.25 mm/s, 12.5 mm/s, 25 mm/s, 50 mm/s
CO$_2$ range	0 to 20%
CO$_2$ accuracy	$\pm$0.1% (<1%)
	$\pm$0.2% (1 to 4.9%)
	$\pm$0.3% (5 to 6.9%)
	$\pm$0.4% (7 to 11.9%)
	$\pm$0.5% (12 to 12.9%)
	$\pm$(0.43%+8%rel) (13 to 20%)
	Unspecified (over 20%)
Sample flowrate	90, 120 ml/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

Trends data	1200hrs (interval 10min), 120 hrs (interval 1 min), 4 hrs (interval 5 sec)
Events	1800 events and associated waveforms
NIBP	1600 sets
Full disclosure	48 hours at maximum

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	Yes, 5G/2.4G dual band
Barcode Scanner	Support
Network printer	Support

Battery

Type	1 Build-in chargeable Lithium-ion battery
Voltage	10.95VDC
Capacity	2500 mAh (5000 mAh optional)
Run time	4 hrs(2500 mAh), 8 hrs (5000 mAh)
Recharge time	2500 mAh: 4 hrsmaximum (power off)
	5000 mAh: 8 hrsmaximum (power off)

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 °C (32 to 104 °F)
	Storage: -20 to 60 °C (-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)

Some of functions marked with an asterisk may not be available. Please contact your local Mindray sales representative for the most current information.