EDANUSA by MDPRO

UX SERIES

UX10, UX12, & UX15 Patient Monitors

High-Resolution Gesture Touch Screen

Bi-directional Communications with Central Monitoring System

HDMI Output for Larger Screen Viewing

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Introducing The UX Series

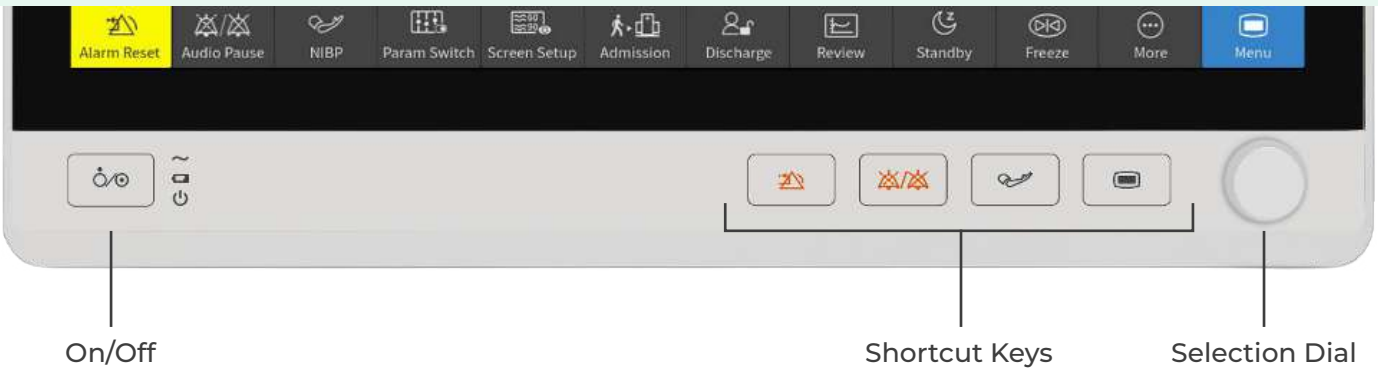
The Edan UX Series Patient Monitor is a bedside and continous monitoring solution with flexible mounting solutions for dental care, outpatient settings, and primary care facilities. This advanced patient monitor features a high resolution touchscreen, customizable shortcut keys and a sleek, ergonomic design.

Additionally, the UX Series utilizes iSEAP algorithm for ECG monitoring, which detects up to 33 types of arrhythmias. Blood pressure measurement is quick and accurate with the iFAST algorithm, and the SpO_2 iMAT algorithm offers outstanding motion resistance. With advanced monitoring capabilities, high-capacity storage, and CMS integration, the Edan UX Series is ideal for any environment.

Features:

- High resolution display & touchscreen
- No-fan design
- 3 hours of battery life (6 hours with upgraded battery)
- 5G WiFi connectivity
- USB, HDMI ports
- Multi-lead analysis
- 3-level alarms with different colors
- Detects up to 33 types of arrhythmia
- Standard 3/5-Lead
- Ample internal storage for trends and event records
- Compatible with MT-207 trolley and wall mount
- iMAT algorithm
- Specialized SEIMP algorithm
- iCUFS algorithm

Standard Parameters: 3/5-lead ECG, HR, RESP, SpO_2, NIBP, PR, 2-TEMP, IBP
Optional Features: Printer, CO_2, Cardiac Output, F300 Filac Module, Dual IBP



What's the Difference?

UX10 Patient Monitor

- ✓ WiFi
- ✗ Optional CO_2
- ✓ 10.1" Touch Screen
- ✗ Optional Dual IBP Slots
- ✓ Optional CMS Connectivity

UX12 Patient Monitor

- ✓ WiFi
- ✓ Optional CO_2
- ✓ 13.3" Touch Screen
- ✓ Optional Dual IBP Slots
- ✓ Optional CMS Connectivity

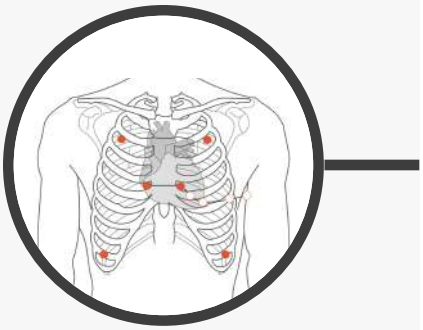
UX15 Patient Monitor

- ✓ WiFi
- ✓ Optional CO_2
- ✓ 15.6" Touch Screen
- ✓ Optional Dual IBP Slots
- ✓ Optional CMS Connectivity

Proprietary Algorithms & Technologies

G2 CO_2 (Sidestream)

- Superior water trap design for accurate monitoring
- iCARB™ algorithm with intelligent CO_2 pseudo wave identification technology
- Sampling rate as low as 50ml/min



ECG

- Automatic lead type detection
- Industry leading iSEAP™ algorithm with auto-detection of 33 types of arrhythmias
- SEMIP® algorithm with 208 ECG findings over age/gender diversities

NIBP

- Dual dust filter design means no blockage inside and provides accurate NIBP readings
- Unique cleaning mode for routine maintenance
- iCUFS™ algorithm with smart deflation technology

SpO_2

- iMAT algorithm with motion resistance and low perfusion resistance performance
- Reference reading of Perfusion Index (PI) from 0 to 10 according to perfusion changes
- Simultaneous measurements of SpO_2 and NIBP of the same limb

Configurations

UX10
Standard Configuration with Touch Screen, WiFi, 3/5-lead ECG, RESP, NIBP, Edan SpO_2, 1-TEMP, PR, HR and internal memory for previous data review.

UX10.P
Standard Configuration with Touch Screen, WiFi, 3/5-lead ECG, RESP, NIBP, Edan SpO_2, 1-TEMP, PR, HR, internal memory for previous data review & printer installed.

UX12
Standard Configuration with Touch Screen,WiFi, 3/5-lead ECG, RESP, NIBP, Edan SpO_2, 2-TEMP, PR, HR and internal memory for previous data review.

UX12.P
Standard Configuration with Touch Screen, WiFi, 3/5-lead ECG, RESP, NIBP, Edan SpO_2, 2-TEMP, PR, HR, internal memory for previous data review & printer installed.

UX12-G2
Standard Configuration with Touch Screen, WiFi, 3/5-lead ECG, RESP, NIBP, Edan SpO_2, 2-TEMP, PR, HR and internal OEM Edan Sidestream G2 CO_2 module. G2 CO_2 uses traditional water traps and any male luer lock cannula with generic connection. Internal memory for previous data review.

UX12-G2.P
Standard Configuration with Touch Screen, WiFi, 3/5-lead ECG, RESP, NIBP, Edan SpO_2, 2-TEMP, PR, HR and internal OEM Edan Sidestream G2 CO_2 module. Internal memory for previous data review and printer installed.

UX15
Standard Configuration with Touch Screen, WiFi, 3/5-lead ECG, RESP, NIBP, Edan SpO_2, 2-TEMP, PR, HR and internal memory for previous data review.

UX15.P
Standard Configuration with Touch Screen, WiFi, 3/5-lead ECG, RESP, NIBP, Edan SpO_2, 2-TEMP, PR, HR and internal memory for previous data review & printer installed.

UX15-G2
Standard Configuration with Touch Screen, WiFi, 3/5-lead ECG, RESP, NIBP, Edan SpO_2, 2-TEMP, PR, HR and internal OEM Edan Sidestream G2 CO_2 module. G2 CO_2 uses traditional water traps and any male luer lock cannula with generic connection. Internal memory for previous data review.

UX15-G2.P
Standard Configuration with Touch Screen, WiFi, 3/5-lead ECG, RESP, NIBP, Edan SpO_2, 2-TEMP, PR, HR and internal OEM Edan Sidestream G2 CO_2 module. Internal memory for previous data review and printer installed.

Included Accessories

STANDARD ACCESSORIES
- ECG cable, 3-lead, snap, AHA, 3.4m — ***01.57.471388***
- SpO_2 Finger Sensor, Adult, 2.5m, reusable - direct connect 7 pin — ***02.57.225029***
- NIBP Cuff, Adult, 27cm-35cm, reusable — ***Cuff.E9***
- NIBP Tube — ***01.59.473007***
- Adult skin temperature probe — ***01.15.040225***
- Rechargeable Lithium-Ion Battery (10.8V, 2550mAh) — ***01.21.064380***

G2 ACCESSORIES
- Water Trap — ***02.01.210520***
- Disposable CO_2 Sampling line with male luer lock — ***4410-10-25***
- Adult Nasal CO_2 sampling cannula — ***4000-7-25***

Optional Accessories

SPO2 SENSORS
- SpO_2 Finger Sensor, Adult, 2.5m, reusable — ***SH1.DB9***
- SpO_2 Wrap Sensor, Neonate, 1m, reusable — ***SH3.DB9***
- SpO_2 Silicone Soft-tip Sensor, Adult, 1m, reusable — ***SH4.DB9***
- SpO_2 Silicone Soft-tip Sensor, Pediatric, 1m, reusable — ***SH5.DB9***
- SpO_2 Ear Clip Sensor, Adult/Pediatric, 1m, reusable — ***SH6.DB9***
- SpO_2 7-pin Extension Cable, 2m — ***01.57.471068***
- SpO_2 7-pin Extension Cable, 4m — ***01.57.471789***

CUFFS
- NIBP Cuff, Infant, 10-15cm, reusable — ***Cuff.E5***
- NIBP Cuff, Small Child, 13-17cm, reusable — ***Cuff.E6***
- NIBP Cuff, Child, 16-21cm, reusable — ***Cuff.E7***
- NIBP Cuff, Small Adult, 20.5-28cm, reusable — ***Cuff.E8***
- NIBP Cuff, Adult, 27cm-35cm, reusable — ***Cuff.E9***
- NIBP Cuff, Large Adult, 34cm-43cm, reusable — ***Cuff.E10***
- NIBP Thigh Cuff, Adult, 42cm-54cm, reusable — ***Cuff.E11***

NIBP TUBING
- NIBP Tube (3m) with connector — ***01.59.473007***

Specifications

CLASSIFICATION
Anti-electroshock type
Class I equipment and internal powered equipment
Anti-electroshock degree: CF
Ingress Protection:IPX1
Working system:Continuous operation equipment
Compliant with Standards: IEC 60601-1; IEC 60601-1-2; EN 60601-1; EN 60601-1-2; IEC 80601-2-49

PHYSICAL SPECIFICATION
UX10
Dimensions
268.5mm(W)×209.7mm(H)×170.5mm(D)
Weight: 3.5 kg

UX12
Dimensions
330.1mm(W)×244.2mm(H)×176.2mm(D)
Weight: 4.0 kg

UX15
Dimensions
383.3mm(W)×268.7mm(H)×182.4 mm(D)
Weight: 5.0 kg

ENVIRONMENT SPECIFICATION
Temperature
Working: 0°C to 40°C (32°F to 104°F)
Transport and Storage: -20°C to 60°C (-4°F to 140°F)
Relative Humidity
Working: 15%RH to 95%RH (non-condensing)
Transport and Storage: 10%RH to 95%RH (non-condensing)
Barometric Pressure
Working: 57 kPa to 107.4 kPa
Transport and Storage: 16 kPa to 107.4 kPa

POWER SUPPLY
AC Voltage: 100 V to 240 V
Input Current: 0.6 A to 0.3 A
Frequency: 50 Hz/60 Hz
Over Current Fuse Protection: Support

BATTERY
Operating Time
UX10: One battery (2550 mAh) ≥ 4 h
UX12: One battery (5100 mAh) ≥ 8 h
UX15: One battery (2550 mAh) ≥ 3 h
One battery (5100 mAh) ≥ 6 h
Condition
At 25±5 °C, with new fully charged battery/batteries, 3-lead ECG cable and SpO_2 sensor connected, NIBP module set at an interval of 15 minutes, and screen brightness set to "1".
Charge Time
UX10/UX12: One battery (2550 mAh)
≤ 3.5 h (monitor is off)
One battery (5100 mAh)
≤ 6.5 h (monitor is off)
UX15: One battery (2550 mAh)
≤ 5.5 h (monitor is on or standby)
One battery (5100 mAh)
≤ 11 h (monitor is on or standby)
Condition
Environment temperature: 20°C to 30°C ≥ 90% charged
Charge/Discharge Cycle: 300 times

DISPLAY
UX10
Screen: 10.1" color TFT (optional touchscreen)
Resolution: 1024×600
Waveforms: 8
One power LED
One AC power LED
One alarm LED
One battery LED
UX12
Screen: 13.3" color TFT (optional touchscreen)
Resolution: 1920×1080
Waveforms: 10
One power LED
One AC power LED
One alarm LED
One battery LED
UX15
Screen: 15.6" color TFT (optional touchscreen)
Resolution: 1920×1080
Waveforms: 12
One power LED
One AC power LED
One alarm LED
One battery LED

RECORDER
Record Width: 48 mm
Record Paper Width: 50 mm
Paper Speed: 12.5 mm/s, 25 mm/s, 50 mm/s
Number of waveform channels:A maximum of 3

DATA STORAGE
Trend Data
48 hours @ 1 s
240 hours @ 1 min
NIBP Measurement: At least 1600 sets
Alarm Events: Up to 1800 sets
Full Disclosure Waveform: 48 hours @ 1 s

WIFI
IEEE: 802.11a/b/g/n
Bandwidth: 20 M/40 M
Frequency Band: 2.4 G/5 G
Modulation Mode
802.11a/g/n: OFDM
802.11b: CCK and DSSS
Antenna
Single antenna, 2.4 GHz gain ≤ 3.0
5 GHz gain ≤ 3.5
Power voltage: 3.3 V
Bluetooth: Dual mode BLE4.0+EDR/BR
Connector: SDIO2.0 for Wi-Fi, UART for BT

ECG
Lead Mode
3 Electrodes: I, II, III
5 Electrodes: I, II, III, aVR, aVL, aVF, V
6 Electrodes: I, II, III, aVR, aVL, aVF, and leads corresponding to Va Vb.
10 Electrodes: I, II, III, aVR, aVL, aVF, V1, V2, V3, V4, V5, V6
Electrode Standard:AHA, IEC
Display Sensitivity (Gain Selection)
1.25 mm/mV (×0.125), 2.5 mm/mV (×0.25), 5 mm/mV (×0.5), 10 mm/mV (×1), 20 mm/mV (×2), , 40 mm/mV (×4), AUTO gain
Sweep: 6.25 mm/s, 12.5 mm/s, 25 mm/s, 50 mm/s
Bandwidth (-3dB) (Output amplitude relative to that for a 5 Hz sinusoidal input signal)
Diagnosis: 0.05 Hz to 150 Hz
ST: 0.05 Hz to 40 Hz
Monitor and Monitor (Hi-Fi): 0.5 Hz to 40 Hz
Enhanced: 2 Hz ~18 Hz
Customized: High-pass Filter and Low-pass Filter
CMRR (Common Mode Rejection Ratio)
Diagnosis: > 95 dB
ST: > 105 dB
Monitor and Monitor (Hi-Fi): > 105 dB
Surgery: > 105 dB
Enhanced: > 105 dB
Customized: > 105 dB (Low-pass Filter < 40 Hz) > 95 dB (Low-pass Filter > 40 Hz)
Hum Filter
In diagnosis, ST, monitor, surgery, enhanced and customized modes: 50 Hz/60 Hz (Hum Filter can be turned on or off manually)
Differential Input Impedance: > 5 MΩ
Input Signal Range: ±10 mV PP
Accuracy of Signal Reproduction
An error of ≤ ±20 % of the nominal value of the output or ±100 μV, whichever is greater.
The total error and frequency response comply with IEC 60601-2-27: 2011, Sect. 201.12.1.101.1.
Electrode Offset Potential Tolerance: ±800 mV
Auxiliary Current (Leads off detection)
Active electrode: < 100 nA
Reference electrode: < 900 nA
Recovery Time After Defibrillation
< 5 s (measured without electrodes as IEC60601-2-27:2011, Sect. 201.8.5.5.1 requires.)
Leakage Current of Patient: < 10 μA
Scale Signal: 1 mV PP, accuracy is ±5%
System Noise: < 30 μVPP
Multichannel Crosstalk
≤ 5% of the input signal
Complied with IEC 60601-2-27: 2011, Sect. 201.12.1.101.5.
Frequency and Impulse Response
Frequency response: Input a 5 Hz, 1 mV sine wave signal, and the output signal amplitude remains within the range of 71 % to 110 % at 0.67 Hz and 40 Hz. Input a 1 Hz, 1.5 mV 200 ms triangular wave input signal, and the output shall be within 11.25 mm~15 mm.
Impulse response:
Displacement value: ≤ 0.1 mV
Slope: ≤ 0.3 mV/s following the end of the pulse.
Complied with IEC 60601-2-27: 2011, Sect. 201.12.1.101.8.
ESU Protection
Cut mode: 300 W
Coagulation mode: 100 W
Restore time: ≤ 10 s
Electrosurgical Interference Suppression
Test according to ANSI/AAMI EC13:2002, Sect. 5.2.9.14. Complied with ANSI/AAMI EC13:2002, Sect. 4.2.9.14.
Sampling Frequency: 1000 Hz
Sampling Channel Switch Time: < 80 μS
A/D Precision: 24 Bits (Minimum resolution: 0.077uV/LSB)
Baseline Reset Time: <3 s
Pace Pulse without overshoot
Pulse Indicator
Pulse is marked if the requirements of IEC 60601-2-27: 2011, Sect. 201.12.1.101.12 are met:
Amplitude: ±2 mV to ±700 mV
Width: 0.1 ms to 2.0 ms
Ascending time: 10 μs to 100 μs
Pulse Rejection
Pulse is rejected if the requirements of IEC 60601-2-27: 2011, Sect. 201.12.1.101.13 are met:
Amplitude: ±2 mV to ±700 mV
Width: 0.1 ms to 2.0 ms
Ascending time: 10 μs to 100 μs
Pace Pulse Detecting Lead: one among I, II, III, aVR, aVL, aVF, V1, V2, V3,V4, V5, V6
Heart Rate
HR Calculation
Range
ADU: 15 bpm to 300 bpm
PED/NEO: 15 bpm to 350 bpm
Accuracy: ±1% or 1 bpm, whichever is greater
Resolutio: 1 bpm (For display and alarm limit)
Sensitivity: ≥ 300 μVPP
QRS Detection Range
The detection range has exceeded the require ment described in the standard:
Width: 70 ms~120 ms for adult, 40 ms~120 ms for Pediatric/neonate.
Amplitude: 0.5 mv~5 mv
In adult mode, these two signals are not responded: 1. when QRS amplitude of 0.15 mV or less is applied; 2. when QRS duration of 10 ms and QRS amplitude of 1 mV or less is applied.
Complied with IEC 60601-2-27: 2011, Sect. 201.12.1.101.15.
PVCs
Range
ADU: (0 to 300) PVCs/ min
PED/NEO: (0 to 350) PVCs/ min
Resolution: 1 PVCs/min (For display and alarm limit)
Pause/min
Range: ADU/PED/NEO: (0 to 30) pauses/min
Resolution: 1 pause/min (For display and alarm limit)
ST value
Range: -2.0 mV to +2.0 mV
Accuracy: -0.8 mV to +0.8 mV: ±0.02 mV or 10%, whichever is greater. Beyond this range: not specified.
Resolution: 0.01 mV (For display and alarm limit)

Specifications

QT measurement
- Range: 200 ms ~ 800 ms
- Resolution: 4 ms (For display)
- Accuracy: ± 30 ms

QTc measurement
- Range: 200ms ~ 800 ms
- Resolution: 1 ms (For display and alarm limit)

QTc measurement
- Range: 200ms ~ 800 ms
- Resolution: 1 ms (For display and alarm limit)

ΔQTc measurement
- Range: -600 ms ~ 600 ms
- Resolution: 1 ms (For display and alarm limit)

HR Averaging Method
- Method 1: Heart rate is computed by excluding the minimum and maximum values from the 12 most recent RR intervals and averaging the residual 10 RR intervals.
- Method 2: If each of three consecutive RR intervals is greater than 1200 ms, then the four most recent RR intervals are averaged to compute the HR.

Range of Sinus and SV Rhythm

Tachy
- Adult: RR interval for 5 consecutive QRS complex ≤ 0.5 s.
- Pediatric/neonatal: RR interval for 5 consecutive QRS complex ≤ 0.375 s.

Normal
- Adult: 0.5 s<RR interval for 5 consecutive QRS complex<1.5 s.
- Pediatric/neonatal: 0.375 s < RR interval for 5 consecutive QRS complex < 1 s.

Brady
- Adult: RR interval for 5 consecutive QRS complex ≥ 1.5 s.
- Pediatric/neonatal: RR interval for 5 consecutive QRS complex ≥ 1 s.

Range of Ventricular Rhythm

V-Tach
- 5 consecutive ventricular beats and ventricular HR ≥ 100 bpm.

Vent Rhythm
- 5 consecutive ventricular beats, and 20 bpm ≤ ventricular HR < 40 bpm.

Vent Brady
- 5 consecutive ventricular beats, and ventricular HR < 20 bpm.

Acc. Vent Rhythm
- 5 consecutive ventricular beats, and 40 bpm ≤ ventricular HR < 100 bpm.

Maximum Start-up Alarm Time for Tachycardia

V-Tach (Ventricular Tachycardia) 1 mV 206 bpm
- Gain 0.5: 10 s
- Gain 1.0: 10 s
- Gain 2.0: 10 s

V-Tach (Ventricular Tachycardia) 2 mV 195 bpm
- Gain 0.5: 10 s
- Gain 1.0: 10 s
- Gain 2.0: 10 s

Response Time of Heart Rate Meter to Change in HR
- HR range: 80 bpm to 120 bpm
- Range : Within 11 s
- HR range: 80 bpm to 40 bpm
- Range : Within 11 s

Tall T-wave Rejection
- Complied with IEC 60601-2-27: 2011, Sect. 201.12.1.101.17 minimum recommended 1.2 mV T-Wave amplitude

Accuracy of Heart Rate Meter and Response to Irregular Rhythm
- Complied with IEC 60601-2-27: 2011, Sect. 201.7.9.2.9.101 b) 4), the HR value after 20 seconds of stabilization is displayed as follows:
- Ventricular bigeminy: 80 bpm±1 bpm
- Slow alternating ventricular bigeminy: 60 bpm±1 bpm
- Rapid alternating ventricular bigeminy: 120 bpm±1 bpm
- Bidirectional systoles: 91 bpm±1 bpm

Time to Alarm for Heart Rate alarm conditions
- Asystole alarm: ≤ 10 s
- HR low alarm: ≤ 10 s
- HR high alarm: ≤ 10 s

Arrhythmia analysis
- Asystole V-Fib/V-Tach Couplet
- Vent Rhythm PVC Bigeminy PVC Trigeminy
- Tachy R on T PVC
- Irr Rhythm Brady Missed Beat
- Pacer not Pacing Vent Brady Pacer not Capture
- VEB Run PVCs Acc. Vent Rhythm
- IPVC Non-Sustain VT Multiform PVCs
- Pause/min High Pause Afib
- PAC Bigeminy PVCs High Low Voltage(Limb)
- ExtremeBrady PAC Trigeminy Wide QRS Tachy
- Sustain VT ExtremeTachy V-Tach

RESP

Method: Impedance between RA-LL, RA-LA

Measurement lead
- Options are lead I and II.
- The default is lead II.

Calculation Type: Manual, Automatic

Baseline Impedance Range
- 200 Ω to 2500 Ω (with ECG cables of 1 KΩ resistance)

Measuring Sensitivity
- Within the baseline impedance range: 0.3 Ω

Waveform Bandwidth: 0.2 Hz to 3.3 Hz (-3 dB)

Respiration Excitation Waveform
- Sinusoid, 45.6 kHz (±10%), < 350 μA

Gain Selection: ×0.25, ×0.5, ×1, ×2, ×3, ×4, ×5

Sweep: 6.25 mm/s, 12.5 mm/s, 25 mm/s, 50 mm/s

No Breath Detected AlarmTime Setup
- 10 s, 15 s, 20 s, 25 s, 30 s, 35 s, 40 s; default value is 20 s.

Measuring Range: 0 rpm ~ 200 rpm

Resolution: 1 rpm (For display and alarm limit)

Accuracy
- ±1 rpm (0 rpm~120 rpm)
- ±2 rpm (121 rpm~200 rpm)

Update time: 1s

NIBP

Technique: Oscillometry

Mode: Manual, Auto, Continuous, Sequence

Measuring Interval in AUTO Mode (unit: minute)
- 1/ 2/ 2.5/ 3/ 4/ 5/ 10/ 15/ 30/ 60/ 90/ 120/ 180/ 240/ 360/ 480 and User Define

Continuous: 5 min, interval is 5 s

Measuring Parameter: SYS, DIA, MAP, PR

Pressure Unit: kPa, mmHg, cmH2O

Measuring Range

Adult Mode
- SYS: 25 mmHg to 290 mmHg
- DIA: 10 mmHg to 250 mmHg
- MAP: 15 mmHg to 260 mmHg

Pediatric Mode
- SYS: 25 mmHg to 240 mmHg
- DIA: 10 mmHg to 200 mmHg
- MAP: 15 mmHg to 215 mmHg

Neonatal Mode
- SYS: 25 mmHg to 140 mmHg
- DIA: 10 mmHg to 115 mmHg
- MAP: 15 mmHg to 125 mmHg

Alarm Type: SYS, DIA, MAP

Cuff Pressure Measuring Range
- 0 mmHg to 300 mmHg

Pressure Resolution
- 1 mmHg (For display and alarm limit)

Maximum Mean Error: ±5 mmHg

Maximum Standard Deviation: 8 mmHg

Maximum Measuring Period

Adult/Pediatric: 120 s

Neonate: 90 s

Typical Measuring Period

iCUFS measurement
- 20 s to 35 s (depend on HR/motion disturbance) (measured with E9 cuff, default inflation value, PR is set as 80 bpmand systolic pressure within 100~120mmHg)

iFAST measurement
- 15 s (depend on SYS, arm circumference and HR/motion disturbance)(measured with E8 cuff, PR is set as 80 bpm and systolic pressure within 100~120 mmHg)

Dual Independent Channel Overpressure Protection

Adult: (297±3) mmHg

Pediatric: (245±3) mmHg

Neonatal: (147±3) mmHg

Pre-inflation Pressure

Adult: 80/100/120/140/150/160/180/200/220/240 mmHg

Pediatric: 80/100/120/140/150/160/180/200 mmHg

Neonatal: 60/70/80/100/120 mmHg

Venipuncture pressure

Adult Default: 80 mmHg

Options
- 20 mmHg, 30 mmHg, 40 mmHg, 50 mmHg, 60 mmHg, 70 mmHg, 80 mmHg, 90 mmHg, 100 mmHg, 110mmHg, 120 mmHg

Pediatric Default: 60 mmHg

Options
- 20 mmHg, 30 mmHg, 40 mmHg, 50 mmHg, 60 mmHg, 70 mmHg, 80 mmHg

Neonatal Default: 40 mmHg

Options: 20 mmHg, 30 mmHg, 40 mmHg, 50 mmHg

SPO2

Measuring Range: 0% to 100%

Resolution: 1% (For display and alarm limit)

Data Update Period: 1 s

Accuracy

Adult /Pediatric
- ±2% (70% to 100% SpO_2)
- Undefined (0% to 69% SpO_2)

Neonate
- ±3% (70% to 100% SpO_2)
- Undefined (0% to 69% SpO_2)

Sensor

Red Light: (660±3) nm

Infrared Light (905±10) nm

Emitted Light Energy: <15 mW

PI

Measuring Range
- 0.05% to 20%, invalid PI value is -?-, measurement error is not defined.

Resolution
- 0.01% (0.05%-9.99%)
- 0.1% (10.0%-20.0%)

PR

Parameter

PR (SpO_2)
- Measuring range: 20 bpm to 300 bpm
- Accuracy: ±2 bpm
- Resolution: 1 bpm (For display and alarm limit)

PR (NIBP)
- Measuring range: 40 bpm to 240 bpm
- Accuracy: ±3 bpm or 3.5%, whichever is greater
- Resoluation: 1 bpm (For display)

PR (IBP)
- Measuring range: 20 bpm to 300 bpm
- Accuracy: ±2 bpm or ±2%, whichever is greater (30 bpm to 300 bpm);
- Undefined (20 bpm to 29 bpm)
- Resolution: 1 bpm (For display and alarm limit)

TEMP

Technique: Thermal resistance

Position: Skin, cavity

Measure Parameter
- T1, T2, TD (the absolute value of T2 minus T1)

Channel: 2

Sensor Type: YSI-10K and YSI-2.252K

Unit: °C,°F

Measuring Range: 0 °C to 50 °C(32 °F to 122 °F)

Resolution (For display and alarm limit): 0.1 °C (0.1 °F)

Accuracy[1]
- (1) Sensor accuracy: 25 °C~45 °C: ±0.1;
- Others: ±0.2 °C
- (2) Without sensor accuracy: ±0.1 °C

Refresh Time: Every 1 s to 2 s

Temperature Calibration: At an interval of 5 to 10 minutes

Measuring Mode: Direct Mode

Transient Response Time: ≤ 30 s

IBP

Technique: Direct invasive measurement

Channe: 2 channels

IBP Measure
- Measuring Range: (-50 to +360) mmHg
- Resolution (For display and alarm limit): 1 mmHg (For display and alarm limit)
- Accuracy (not including sensor): ±2% or ±1 mmHg, whichever is greater

Specifications

PPV
Measuring Range:0%~50%
Pressure Unit: kPa, mmHg, cmH_2O
Pressure sensor
Sensitivity: 5 μV/V/mmHg
Impedance Range: 300 Ω to 3000 Ω
Filter: DC~ 12.5 Hz; DC~ 40 Hz
Zero Range: ±200 mmHg
Pressure Calibration Range
- IBP (excluding ICP): 80 mmHg to 300 mmHg
- ICP: 80 mmHg to 300 mmHg

Volume Displacement: 7.4 x 104 mm3/100mmHg

CO
Technique: Thermodilution Technique
Measure Parameters: C.O., TB, TI
Measuring Range
C.O.: 0.1 L/min to 20 L/min
TB: 23 °C to 43 °C (73.4 °F to 109.4 °F)
TI: -1 °C to 27 °C (30.2 °F to 80.6 °F)
Resolution (For display and alarm limit)
C.O.:0.1 L/min
TB, TI: +0.1 °C (+0.1 °F)
Accuracy
C.O.: ±5% or ±0.2 L/min
TB: ±0.1 °C (±0.18 °F) (not including sensor)
TI: ±0.1 °C (±0.18 °F) (not including sensor)

CO2
Intended Patient: Adult, pediatric, neonatal
Measure Parameters> $etCO_2$, $FiCO_2$, AwRR
Unit: mmHg, %, kPa
Measuring Range
- $etCO_2$: 0 mmHg to 152 mmHg
- $FiCO_2$: 0 mmHg to 50 mmHg
- AwRR: 0 rpm to 150 rpm

Resolution (For display andalarm limit)
- $etCO_2$: 1 mmHg (For display and alarm limit)
- $FiCO_2$: 1 mmHg (For display and alarm limit)
- AwRR 1 rpm (For display and alarm limit)

Accuracy
$etCO_2$
- Measurement conditions: Ambient temperature: (25 ± 3) °C
- Barometric pressure: (760 ± 10)mmHg
- Balance gas: N_2
- Sample gas flowrate: 100 ml/min
- I/E ratio: 1:2
- AwRR ≤ 80 rpm
- 0 mmHg to 40 mmHg
  - ± 2 mmHg
- 41 mmHg to 70 mmHg
  - ± 5% of reading
- 71 mmHg to 100 mmHg
  - ± 8% of reading
- 101 mmHg to 150 mmHg
  - ± 10% of reading

AwRR: ±1 rpm
Drift of Measure Accuracy
- Meets the requirements of the measure accuracy

Sample Gas Flowrate
- 50 ml/min, 70 ml/min or 100 ml/min (optional), accuracy: ±15 ml/min

Warm-up Time
- Display reading within 20 s; reach to the designed accuracy within 2 minutes.

Rise Time
- < 400 ms (with 2 m gas sampling tube, sample gas flowrate: 100 ml/min)
- < 500 ms (with 2 m gas sampling tube, sample gas flowrate: 70 ml/min)
- < 1000 ms (with 2 m gas sampling tube, sample gas flowrate: 50 ml/min)

Response Time
- < 4 s (with 2 m gas sampling tube, sample gas flowrate: 100 ml/min & 70 ml/min)
- < 5.5 s (with 2 m gas sampling tube, sample gas flowrate: 50 ml/min)

Work Mode: Standby (default), measure
O_2 Compensation
- Range: 0% to 100%
- Resolution: 1%
- Default: 16%

N_2O Compensation
- Range: 0% to 100%
- Resolution: 1%
- Default: 0%

AG Compensation
- Range: 0% to 20%
- Resolution: 0.1%
- Default: 0%

Humidity Compensation Method
- ATPD (default), BTPS

Barometric Pressure Compensation
- Automatic (The change of barometric pressure will not add additional errors to the measurement values.)

Zero Calibration: Support
Calibration
- Support (It is recommend to be operated by trained personal.)

Alarm: $etCO_2$, FiCO2, AwRR
No BreathDetected AlarmDelay
- 10 s, 15 s, 20 s, 25 s, 30 s, 35 s, 40 s; default value is 20 s.

Data Sample Rate: 100 Hz
$etCO_2$ Change[1]
With 2 m gas sampling tube,sample gas flowrate: 100 ml/min)
- AwRR ≤ 80 rpm, meet the accuracy mentioned above;
- AwRR >80 rpm, $etCO_2$ descends 8%;
- AwRR >120 rpm, $etCO_2$ descends 10%

With 2 m gas sampling tube, sample gas flowrate: 70 ml/min)
- AwRR ≤ 60 rpm, meet the accuracy mentioned above;
- AwRR >60 rpm, $etCO_2$ descends 8%;
- AwRR >90 rpm, $etCO_2$ descends 10%;
- AwRR >120 rpm, $etCO_2$ descends 15%;

With 2 m gas sampling tube, sample gas flowrate: 50 ml/min)
- AwRR ≤ 20 rpm, meet the accuracy mentioned above;
- AwRR > 20 rpm, etCO2 descends 8%;
- AwRR > 40 rpm, not applicable;