

# epoc Blood Analysis System Product Specifications

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Make patient-side testing the  
nexus of care hospital-wide.

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### System Description

Patient-side blood gas analyzer

### System Menu

pH	Na <sup>+</sup>	Hct	BUN
pCO <sub>2</sub>	K <sup>+</sup>	Glu	Urea
pO <sub>2</sub>	Ca <sup>++</sup>	Lac	
TCO <sub>2</sub>	Cl <sup>-</sup>	Crea	

### Measured Parameters

Parameter	Unit of Measure	Measurement Range
pH	pH units	6.5–8.0
pCO <sub>2</sub>	mmHg kPa	5–250 0.7–33.3
pO <sub>2</sub>	mmHg kPa	5–750 0.7–100
TCO <sub>2</sub>	mmol/L mEq/L	5–50 5–50
Na <sup>+</sup>	mmol/L mEq/L	85–180
K <sup>+</sup>	mmol/L mEq/L	1.5–12.0
Ca <sup>++</sup>	mmol/L mg/dL mEq/L	0.25–4.00 1.0–16.0 0.5–8.0
Cl <sup>-</sup>	mmol/L mEq/L	65–140
Hct	% PCV L/L	10–75 0.10–0.75

### Measured Parameters continued

Parameter	Unit of Measure	Measurement Range
Glu	mmol/L mg/dL g/L	1.1–38.5 20–700 0.20–7.00
Lac	mmol/L mg/dL g/L	0.30–20.00 2.7–180.2 0.03–1.80
Crea	mg/dL μmol/L	0.30–15.00 27–1326
BUN	mg/dL	3–120
Urea	mmol/L mg/dL g/L	1.1–42.8 7–257 0.07–2.57

*Institutions should establish and set their own normal range values.*

### Calculated Parameters

Parameter	Unit of Measure	Measurement Range
cHgb	g/dL mmol/L g/L	3.3–25 2.0–15.5 33–250
cHCO <sub>3</sub> <sup>-</sup>	mmol/L mEq/L	1–85
cTCO <sub>2</sub>	mmol/L mEq/L	5–50
BE(ecf)	mmol/L mEq/L	-30–+30
BE(b)	mmol/L mEq/L	-30–+30

### Calculated Parameters continued

Parameter	Unit of Measure	Measurement Range
cSO <sub>2</sub>	%	0–100
GFRmdr*†	mL/min/ 1.73m <sup>2</sup>	2–60 or >60
GFRmdr-a*†	mL/min/ 1.73m <sup>2</sup>	2–60 or >60
GFRckd <sup>‡</sup>	mL/min/ 1.73m <sup>2</sup>	1–225
GFRckd-a <sup>‡</sup>	mL/min/ 1.73m <sup>2</sup>	1–225
GFRswz <sup>§</sup>	mL/min/ 1.73m <sup>2</sup>	1–275
AGap	mmol/L mEq/L	-14–+95
AGapK	mmol/L mEq/L	-10–+99
BUN/Crea	mg/mg	0.2–400.0
Urea/Crea	mmol/ mmol mg/mg	0.8–1615.4 0.4–856.8
A	mmHg kPa	5–800 0.67–106.64
A-a	mmHg kPa	1–800 0.13–106.64
a/A	% fraction	0–100 0–1

# epoc® Blood Analysis System Product Specifications (continued)

## Sample Types

Whole blood: arterial, venous, capillary

## Sample Size

At least 92 µL

## Time to Result

Less than 1 minute

## Calibration

Automatically performed prior to every test

## Quality Control

Eurotrol GAS-ISE Metabolites (with BUN)  
Eurotrol Calibration Verification Fluids (with BUN)  
Eurotrol Hct Control  
Eurotrol Hematocrit Verification Fluid

## Integrated Bar-code Scanner

For Patient ID, Operator ID, and ampuled QC;  
1D and 2D bar-code symbologies

## External Interfaces

HL7

## Power Requirements

100–240 VAC; 50–60 Hz

## Operation on Battery

At least 50 test cards

## Safety

IEC 61010-1, IEC 61010-2-81,  
IEC 61010-2-101

## EMC

IEC 61326-1, IEC 61326-2-6

## Data Security

Patient Data encryption  
Encrypted end-to-end data transmission  
No hard-coded password  
No user access to operating system

## Hardware

Operating System	Android 9.0
Processor	MT6762 8*Cortex-4*A53 2.0GHz/4*A53 1.5GHz
Memory	2 GB RAM; 16 GB ROM

## BLUETOOTH

BT4.2(BLE HS compliant) BT Smart Ready

## BLUETOOTH Security

128-bit encryption with PIN authentication

## WIFI

MediaTek 6631 chipset  
802.11 a/b/g/n/ac/r  
2.4GHz +5GHz\*\*

## WIFI Security

WEP, WPA/WPA2 Personal (Pre-Shared Key)  
EAP (802.1x): TLS, TTLS (MS-CHAP), TTLS (MS-CHAP v2), TTLS (CHAP),  
TTLS-MD5, TTLS-PAP, PEAP-TLS, PEAP (MS-CHAP v2), LEAP,  
FAST WAPI PSK, WAPI Certificate

## Data Capacity

Patient Test	499
QA Tests	2000
Operators	4000

## Test Card

Storage	15–30°C
Shelf Life	Up to 5 months
Size	3.39 in (L) × 2.13 in (W) × 0.06 in (H) 86 mm (L) × 54 mm (W) × 1.4 mm (H)

## System Dimensions

	Host	Reader
Height (nominal)	160 mm [6.30 in]	215 mm [8.46 in]
Width (nominal)	78 mm [3.07 in]	85 mm [3.35 in]
Thickness (nominal)	16 mm [0.63 in] (22 mm [0.87 in] at scanner)	50 mm [2 in]
Weight (nominal)	250 g [8.82 oz] (with battery)	<500g [<1.1 lb]
Display	5.0" diagonal, HD 1280 × 720 pixels, touchscreen	—

## Environmental Requirements

Operating Temperature	-20° C to 55° C [-4° F to 130° F] (Host)	15°C–30°C (Reader and Test Card)
Humidity	Up to 85% relative humidity, non-condensing	
Barometric Pressure	400–825 mmHg (53.33–110 kPa)	

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Product availability may vary from country to country and is subject to varying regulatory requirements. Please contact your local representative for availability.

\*Values >60 will be reported as  
>60 mL/min/1.73 m<sup>2</sup>  
†IDMS-traceable MDRD type  
‡CKD-EPI equation  
§Bedside Schwartz equation  
\*\*5GHz Wi-Fi Channel might not  
be available in some countries

## Siemens Healthineers Headquarters

Siemens Healthcare GmbH  
Henkestr. 127  
91052 Erlangen, Germany  
Phone: +49 9131 84-0  
siemens-healthineers.com

## Legal Manufacturer

Epocal, Inc.  
2060 Walkey Road  
Ottawa, ON K1G 3P5  
Canada

## for the Product

epoc Blood Analysis System

## Distributed by

Siemens Healthcare Diagnostics Inc.  
Point of Care Diagnostics  
2 Edgewater Drive  
Norwood, MA 02062-4637  
USA  
Phone: +1 781-269-3000