

**iE 6**Technical Specifications

# Signal processing specification:

	Biocare CardioPro ECG analysis program for adults and
ECG interpretation	pediatrics
Acquisition mode	Simultaneous standard 12-lead acquisition
A/D conversion	24 bit
Sampling rate	8,000 sample/second/channel
Frequency response	0.05 Hz∼250 Hz
Common mode rejection ratio	>105dB
Polarization voltage	$\pm$ 550 mV
Input circuit	Floating circuit input
Input impedance	≥50MΩ
Input CIR current	≤0.1 μA
Patient leakage	<10 ··· A
current	<10 μΑ
Time constant	≥3.2 s
Noise level	$\leq$ 15 $\mu$ V <sub>p-p</sub>
Sensitivity threshold	≤20 μV <sub>p-p</sub>
Calibration voltage	1 mV±3 %
Sensitivity	(1.25, 2.5, 5, 10, 20, 40, 10/5, 20/10) mm/mV, Auto Gain
E'll an anti' an	EMG filter: 25/35/75/100/150/250Hz
Filter setting	Baseline wander filter: 0.01/0.02/0.05/0.35/0.5/0.8Hz
AC filter	50Hz, 60Hz
Heart rate range	30~300 bpm
Special acquisition	Lead-off detection, lead overflow, AC interference,
functions	baseline wander interference, EMG interference
Acquisition time	10~24 seconds

# Display and keyboard specifications:

Display type	8 inch TFT LCD with touch screen	
Display resolution	800×600	
Display data	Waveforms, heart rate, clock, record mode, filters,	
	sensitivity, paper speed, system prompt, alarming	
	messages, battery, power indicator, tone level	
Waveform display	1) Same screen display:	
mode	3*4, 3*4+1R, 6*2, 6*2+1R, 12*1	
	2) Split-screen display:	
	3*4, 3*4+1R, 6*2, 6*2+1R	
Keyboard type	Silicon full alphanumeric keyboard with shortcut	
	function keys	

# Recorder specifications:

Recorder technology	Thermal dot matrix word printing system	
Recorder resolution	8 points/mm (perpendicular)	
	40 points/mm (horizontal, 25 mm/s)	
Recorder speed	(5, 6.25, 10, 12.5, 25, 50) mm/s ±5 %	
Recording paper	112 mm×140 mm×160p	

# Standard software specifications:

Measurement and	Supports n	neasure	ment and	interpretat	tion v	with Bio	ocare
interpretation	CardioPro	ECG	analysis	program	for	adults	and

	pediatrics		
Measurement values	HR, PR interval, QRS duration, QT/QTC interval,		
	P/QRS/T axis, RV5/SV1 amplitude, RV5+SV1		
	amplitude		
Minnesota code	With newest Minnesota code		
Working mode	Automatic mode, Manual mode, Rhythm mode, Upload		
	mode, Cycle mode, Trigger mode		
DEMO mode	Normal ECG, Arrhythmia ECG		
QTC formula	Bazett, Fridercia, Framingham, Hodges		
Rhythm analysis	Single rhythm mode: 30-300 seconds		
	Three rhythms mode: 30-100 seconds		
Auto-trigger mode	Auto-trigger printing when arrhythmia is detected		
	during the examination		
Extended printing in	Supports extended arrhythmia waveform printing in		
arrhythmia	automatic mode		
Waveform frozen	Supports 300 seconds of waveform frozen		
Pacemaker detection	Weak, Normal, Enhance		
Report auto-saved	Selectable auto-saved file		
Interpretation printout	Selectable interpretation printing		
Report preview	Preview the report before printing		
Data format	ECG, DICOM, XML, JPEG, PDF		
Alarming system	Voice and visual alarming for: Lead off, No paper, Low		
	battery		
Patient information	Record No., Name, Gender, D.O.B, Height, Weight, BP,		
setting	Race, Pacemaker, Medication, Accession No.,		
	Ref-physician, Technician, Physician, Room No.,		
	User-define		
Language	Chinese, English, Spanish, Portuguese, Russian, Polish,		

	German, Czech, French, Italian, Ukrainian, Turkish	
Local memory	More than 3000 files	
capacity	Wiole than 5000 mes	

# Report specifications:

Report type	Manual report, Simple report, Detail report, MVB	
	report(Median beat report)	
Record format	3*4; 3*4+1R; 3*4+3R; 6*2, 6*2+1R	

# External peripheral use:

Patient cable socket	Connect to the patient cable	
SD card port	8 GB SD card for data transfer	
Two USB ports	Support USB flash disk and barcode scanner	
LAN port	Communication with ECG-1000 workstation software	
	on PC	

### **Power supply**

Power supply	AC / DC
AC power supply	100 V~240 V, 50 Hz/60 Hz, 80 VA
Battery power supply	Rechargeable lithium battery, 14.8 V, 2200mAh
Battery capacity	Supports about 3 hours for continuous operation
Battery charge time	Approximately 4 hours for total charge

# Dimensions and weight

Length × width × height	257 mm× 291 mm×106 mm
Weight:	About 2.5 kg

#### Standard accessories

ECG data acquisition box with lead wire	10 lead wires, TPU,Φ4mm banana plug, defi, IEC, no LOGO			
Chest Electrode	Adult chest electrode, Φ4mm, 6pcs/set			
Limb Electrode	Adult limb electrode, Φ4mm, 4pcs/set, no LOGO, light blue color			
Thermal Recording Paper	Z-fold, 112mm*140mm*160p, no LOGO			
Power adapter	AC Input:100-240 DC OutPut:19V 3.43A 65W			
Power Cord	L=1500mm, 3-pin, European standard,			
Grounding Cable	L=4m			
Battery	HYLB-722 2200mAh/14.8V, 73x70x20mm			

# Dimensions and weight

Length × width × height	257 mm×291 mm×106 mm
Net Weight:	About 2.5 kg

# **Environment requirements**

1	Transportation		
	Environment temperature	-20°C~+55 °C	
	Relative humidity	≤95% (No condensation)	
	Air pressure	70 kPa~106 kPa	
	In accordance with the requirements stipulated in the contract order, the		
	transport process to prevent rain and sun.		
2	Storage		

	Environment temperature	-20°C~+55°C	
	Relative humidity:	≤95%(No condensation)	
	Air pressure	70 kPa~106 kPa	
	The packaging of ECG stored in the non-corrosive gases and		
	well-ventilated room.		
3	Using		
	Environment temperature	+5°C~+40 °C	
	Relative humidity:	≤95%(No condensation)	
	Air pressure	86 kPa~106 kPa	

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- Based on the need of product technical improvement or the file updates, we reserve the right to modify the contents contained in this manual; if the change does not involve safety issues, the contents are subject to amend without notification.



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Company: Shenzhen Biocare Bio-Medical Equipment Co., Ltd.

File Name: Declaration of Conformity Document No.: BJ-ECG-14-08 Version: 1.4

# **DECLARATION OF CONFORMITY** TO COUNCIL DIRECTIVE 93/42/EEC **CONCERNING MEDICAL DEVICES**

SHENZHEN BIOCARE BIO-MEDICAL EQUIPMENT CO., LTD.

#16-1, Jinhui Road, Jinsha Community, Kengzi Sub-District, Pingshan New District, 518122 SHENZHEN, PEOPLE'S REPUBLIC OF CHINA

MEDICAL DEVICE: DIGITAL ELECTROCARDIOGRAPH

> *TYPE: iE 3, iE 6* GMDN CODE: 16231

CLASSIFICATION - ANNEX IX: CLASS IIA, RULE 10

CONFORMITY ASSESSMENT ROUTE: ANNEX II EXCLUDING(4)

WE, THE MANUFACTURER, HEREWITH DECLARE THAT THE STATED MEDICAL DEVICES MEET THE TRANSPOSITION INTO NATIONAL LAW, THE PROVISIONS OF COUNCIL DIRECTIVE 93/42/EEC CONCERNING MEDICAL DEVICES:

INCLUDING, AT 21 MARCH 2010, THE AMENDMENTS BY COUNCIL DIRECTIVE 2007/47/EEC. ALL SUPPORTING DOCUMENTATION IS RETAINED AT THE PREMISES OF THE MANUFACTURER. THE MANUFACTURER IS EXCLUSIVELY RESPONSIBLE FOR THE DOC.

NOTIFIED BODY: TÜV SÜD PRODUCT SERVICE GMBH

Ridlerstraße 65 · 80339 Munich · Germany

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(EC) CERTIFICATE(S): G1 065758 0004 Rev.01

IDENTIFICATION NUMBER

EUROPEAN REPRESENTATIVE: SHANGHAI INTERNATIONAL HOLDING CORP. GMBH

(EUROPE)

Eiffestraße 80, 20537 Hamburg, GERMANY

START OF CE-MARKING: 2017-05-20

SHENZHEN P.R.C., 2019-09-19 PLACE, DATE OF DECLARATION:

SIGNATURE:

POSITION: GENERAL MANAGER

Ref: EN ISO/IEC 17050-1 revision date: June 2009





Product Service

# Certificate

No. Q5 065758 0005 Rev. 01

**Holder of Certificate: Shenzhen Biocare Bio-Medical** 

**Equipment Co.. Ltd.** 

#16-1 Jinhui Road, Jinsha Community, Kengzi Sub-District

Pingshan New District 518122 Shenzhen

PEOPLE'S REPUBLIC OF CHINA

Shenzhen Biocare Bio-Medical Equipment Co., Ltd. Facility(ies):

#16-1 Jinhui Road, Jinsha Community, Kengzi Sub-District,

Pingshan New District, 518122 Shenzhen, PEOPLE'S REPUBLIC

OF CHINA

**Certification Mark:** 



Design and Development, Production and Distribution **Scope of Certificate:** 

of Digital Electrocardiograph, B-Ultrasonic Diagnostic **Equipment, Patient Monitor, Fetal Monitor, Doppler Fetal** Heart Rate Detector, Infusion Pump, Syringe Pump, Fingertip Pulse Oximeter, Handheld Pulse Oximeter, Ambulatory electrocardiographs, Ambulatory blood

pressure recorder and associated software, Fetal/Maternal Monitor, Color Doppler Ultrasound

System, Central Monitoring System.

EN ISO 13485:2016 Applied Standard(s):

Medical devices - Quality management systems -

Requirements for regulatory purposes

(ISO 13485:2016) **DIN EN ISO 13485:2016** 

The Certification Body of TÜV SÜD Product Service GmbH certifies that the company mentioned above has established and is maintaining a quality management system, which meets the requirements of the listed standard(s). See also notes overleaf.

Report No.:

BJ20089601

Valid from:

2020-04-01

Valid until:

2023-03-31

Date.

2020-03-17

**Christoph Dicks** 

Head of Certification/Notified Body

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# **EC Certificate**

Full Quality Assurance System Directive 93/42/EEC on Medical Devices (MDD), Annex II excluding (4) (Devices in Class IIa, IIb or III)

No. G1 065758 0004 Rev. 01

Manufacturer:

Shenzhen Biocare Bio-Medical

Equipment Co., Ltd.

#16-1 Jinhui Road, Jinsha Community, Kengzi Sub-District

Pingshan New District 518122 Shenzhen

PEOPLE'S REPUBLIC OF CHINA

Facility(ies):

Shenzhen Biocare Bio-Medical Equipment Co., Ltd. #16-1 Jinhui Road, Jinsha Community, Kengzi Sub-District,

Pingshan New District, 518122 Shenzhen, PEOPLE'S REPUBLIC

OF CHINA

Product Category(ies): Digital Electrocardiograph, Patient Monitor,

**B-Ultrasonic Diagnostic Equipment,** 

Doppler Fetal Heart Rate Detector, Infusion

Pump, Syringe Pump, Fingertip Pulse Oximeter, Handheld Pulse Oximeter,

Fetal/Maternal Monitor, Fetal Monitor, Color

Doppler Ultrasound System, Central

Monitoring System, Ambulatory

Electrocardiographs, Ambulatory blood pressure recorders, and associated

software.

The Certification Body of TÜV SÜD Product Service GmbH declares that the aforementioned manufacturer has implemented a quality assurance system for design, manufacture and final inspection of the respective devices / device categories in accordance with MDD Annex II. This quality assurance system conforms to the requirements of this Directive and is subject to periodical surveillance. For marketing of class III devices an additional Annex II (4) certificate is mandatory. See also notes overleaf.

Report No.:

BJ1989607

Valid from:

2019-09-11

Valid until:

2024-05-26

Date,

2019-09-11

Stefan Preiß

1. Punil

Head of Certification/Notified Body

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TÜV SÜD Product Service GmbH is Notified Body with identification no. 0123

TÜV SÜD Product Service GmbH · Certification Body · Ridlerstraße 65 · 80339 Munich · Germany



