digital
Diagnostic Center

GDT

mobile

WiFi

ECG

12-Channel

Vector

HRV

USB

stress test

CARDIAX® PC-ECG



Modern microelectronics combined with cardiologically validated Software the CARDIAX® PC-ECG is the ideal device to generate a high quality 12 channel ECG. CARDIAX® is consistently adjusted to the requirements of modern PC technology.

The integrated USB connection for data communication and current supply or the Wireless connection by the WiFi version enables a mobile use by notebook or tablet, too.

CARDIAX® Software Features

- Simple, user friendly software with multiple functions
- 12-Cannel, Frank, Nehb
- ECG Monitoring
- Interval / continuous ECG storage
- ECG documentation / ECG comparison
- Measurement / Interpretation
- Heart Rate Variability (HRV)
- Arrhythmia detection
- 2D/3D ECG-Vector
- Emergency ECG function
- ECG Report transfer via Internet
- GDT / HL7 / DICOM - Interface





CARDIAX® USB version

- USB communication with PC
- Power supply via USB port
- Small, lightweight and robust housing



CARDIAX® WiFi version

- *In wireless mode:*
  - Wireless communication with PC
  - Power supply via built-in Li-Poly battery
- *In USB mode:*
  - USB communication with PC
  - Power supply via the USB port
  - Built-in Li-Poly battery is charging
- Small, lightweight and robust housing



CARDIAX Software Options

- Network

  Use of Cardiax Software in the Network. View and editing of stored ECG reports on all workstations.

- Stress test

  Activation of the Cardiax-Software for stress test. Software for management of ERGOLINE, ERGOSANA, ERGOFIT, ELMED, SECA and other ergometers including continuous documentation.

- Online-ECG

  Activation of the Cardiax-Software for the online function to show the ECG, blood pressure, workloud and time during stress test in the network.

- SpO_2 pulse oximetry

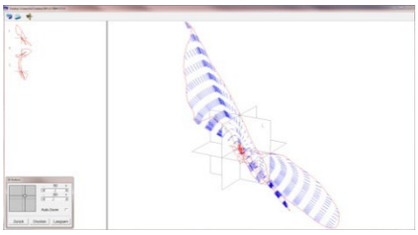
  CARDIAX-Software optional available for SpO2 measurement. During resting ECG and stress test the pulsewave and the SpO2 values are viewed.

For measurement of the oxygen saturation (SpO2) CARDIAX® is optionally available with pulse oximetry module.

Patient data base and Software interfaces e.g. EXCEL, GDT- , HL-7 and DICOM for adaption to the Hospital EDP are available as integration into existing network environments, too.
CARDIAX is FDA approved.

ECG Monitoring
Up to 12 free selectable leads can be documented on the monitor at the same time. By pressing a button a complete resting ECG can be stored. Amplitude and speed of the ECG are adjustable.

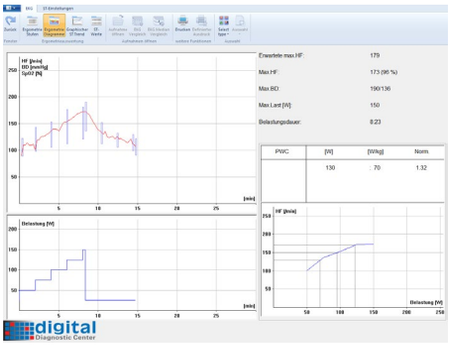




2D/3D ECG vector
For special cardiological questions the ECG can be documented as 2D or 3D vector by using the FRANK leads. Perspective and mode of enlargement can be selected variable.

ECG documentation / ECG comparison
The stored ECG can be called from the data base together with the analysed QRS complexes in any time. The comparison of up to 6 ECGs of one patient permits an efficient therapy control directly at the screen.





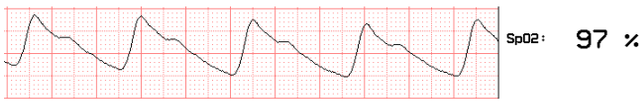
Stress test
The complete stress test with heart frequency, blood pressure values and complete 12 channel ST measurement can be called tabular and graphically. The integrated 3D ECG documentation additionally indicates the variations within each ECG lead.

Heart rate variability (HRV)
The heart rate variability is calculated at the resting ECG up from a continuous ECG storage of 2 minutes and at a stress test after 2 minutes of recording time. The HRV values and graphics can be displayed during the examination and evaluation. The screen view can be changed between time and frequency documentation.



Measurement / Interpretation
All relevant results of the automatic ECG measurement are documented in a clearly arranged form. Additionally, an electronic ECG ruler for manual ECG measurement is available. The interpretation program is providing diagnostic recommendations for children and adults.

SpO_2 pulse oximetry
During resting ECG and stress test the pulse curve and the SpO2 values are Online viewed and stored.



Technical Specifications:

	CARDIAX USB version	CARDIAX WiFi version
▪ **Sampling rate**	2000 Hz	2000 kHz
▪ **Input impedance**	> 10 MOhm	> 10 MOhm
▪ **Accuracy**	0,05 µV/bit	0,05 µV/bit
▪ **A/D Converter**	24 Bit	24 Bit
▪ **Common mode rejection**	> 120 dB	> 120 dB
▪ **Polarization voltage**	400 mV	400 mV
▪ **Time constant**	Standard 3,2 sec. / 1,6 sec. adjustable	Standard 3,2 sec. / 1,6 sec. adjustable
▪ **Linearity error**	< 0.5 %, < 1/2 LSB	< 0.5 %, < 1/2 LSB
▪ **Filter**	524 Hz Low-pass (hardware) 50, 100, 200 Hz (adjustable) 60, 120 Hz (adjustable) 35 Hz Tremor filter (adjustable)	524 Hz Low-pass (hardware) 50, 100, 200 Hz (adjustable) 60, 120 Hz (adjustable) 35 Hz Tremor filter (adjustable)
▪ **Leads**	12 Standard Frank Nehb	12 Standard Frank Nehb
▪ **Connection to PC**	USB	Wireless USB
▪ **Power supply**	+5 V (100 mA) via USB	+3,7 V LiPoly Accu (2000 mAh) +5 V (100 mA) via USB
▪ **ECG connection**	15 pin Standard	15 pin Standard
▪ **LED**	Yellow LED flashing: USB connection Yellow LED lit: ECG monitoring	Yellow LED flashing: USB connection Yellow LED lit: ECG monitoring Blue LED: WiFi connection Green LED: Battery status
▪ **Switch**	----	Power button (touch button) (Auto power off after 15 minutes of inactivity)
▪ **Safety**	IEC 601, BF-Type Safety Class II USB galvanically isolated	IEC 601, BF-Type Safety Class II USB galvanically isolated
▪ **Defibrillation protection**	Defibrillation protected 5 kV (max.1 kV/µsec)	Defibrillation protected 5 kV (max.1 kV/µsec)
▪ **Dimensions**	131 x 73 x 25 mm	131 x 73 x 25 mm
▪ **Weight**	140 g	160 g

PC requirements:

Operating system	WINDOWS ™ 11		
CPU	Intel Core i / Ultra		
RAM	4 GB, recommended 8 GB RAM	HDD	min. 500 GB
		Interfaces	USB-Port

Our products are up from development to manufacturing subject to a certified Quality Management System in accordance to the EN ISO 13485:2016 directives. All products are CE marked.

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