



medical **CONET**
GERMANY

CARDIO M-PRO

Digital 12-Channel ECG



Intelligent 12-channel ECG with touchscreen

CARDIO M-PRO - a 12-channel ECG with a variety of intelligent features, which will help to reduce the amount of time consuming work steps and will implement a modern workflow in every practise.

The combination of a wide 8 inch LCD touchscreen with a full alphanumeric keyboard will simplify the already functional device even more.

Plug in an external USB printer or a barcode scanner to combine the existing precise management system with the CARDIO M-PRO will reduce the working steps, too. - The CARDIO M-PRO supports all popular outputs, such as manual, automatic, rhythm, R-R, off five recording modes, Minnesota code diagnostic information as well. The powerful analysis module can report 140 kinds of diagnostic analysis and supports PDF, DICOM, FDA-XML, DAT or JPEG.

Features and Benefits

- 8-inch color widescreen touch LCD monitor, 12-channel synchronous display with the screen
- Using the computer keyboard input and full-screen touch operation design
- Using 24-bit high-precision synchronous data acquisition, with low noise, high dynamic range, wide frequency response characteristics
- The use of excellent performance of the linear phase of the all-digital filter, high-fidelity waveform output
- The use of innovative fast baseline correction algorithm, can be stable within 1-3s baseline
- ECG automatic analysis system through ECE CSE ECG database test
- The use of high-definition low-noise thermal recorder, put the stack paper automatic positioning function, without human intervention
- Built-in high-energy lithium battery, can print 500 copies of ECG data
- Hidden portable handle design, mobile, easy to carry
- Using high-precision data storage, support for internal Flash, large-capacity USB, SD card storage
- Support manual, automatic, rhythm, R-R, off five recording modes, Minnesota code diagnostic information output
- Support ECG waveform freeze and automatic playback
- Support external USB printer, bar code scanner
- Support networking, support PDF, Dicom (optional), FDA-XML (optional) format output

CARDIO M-PRO

Digital 12-Channel ECG



The keyboard of CARDIO M-PRO is designed to be user-friendly and easy to operate. According to functions, keys are divided into single function key, dual function key and combined function key. Below are examples of some important keys.



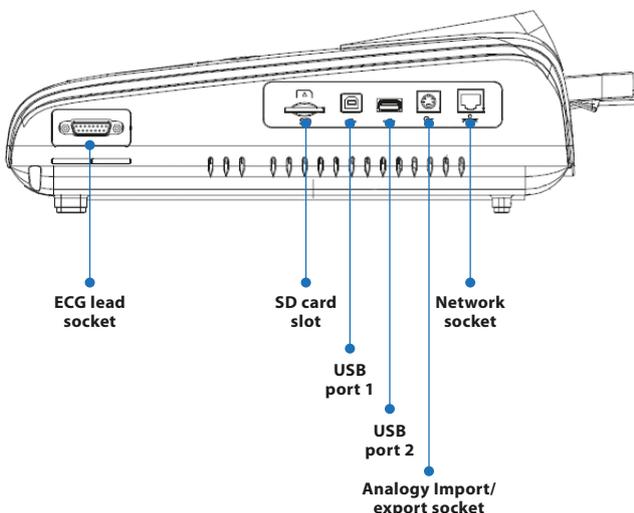
Gender switch key



Age group switch key



Method switch key



CARDIO M-PRO provides on the devices right side all important ports and sockets for an easy everyday workflow.

- ECG lead socket: Connect to patient cables to collect ECG data
- SD card slot: Can be inserted in SD memory card to store ECG data
- USB port 1: Standard USB connector. For USB stick, USB printer or barcode scanner. Can also be used to software upgrade.
- USB port 2: Standard USB connector, can be connected to PC computers.
- Analogy Import/export socket: Reserved function
- Network socket: RJ45 socket, can be connected to internet

CARDIO M-PRO

Digital 12-Channel ECG

Specifications

Size and Weight

Size: 360 x 276 x 130 mm (W H D)
Weight: 4.2 kg

Display

Type: 8", 800x480 TFT LCD touch screen

Power Supply

Input voltage: AC:100V~240V, 50/60 Hz
Input power: 100 VA
Earth leakage current: <0.3 mA
Standard: Comply with IEC 60601-1 and IEC 60601-1-2

Battery

Type: Rechargeable lithium-ion battery
Rated Voltage: 11.1V
Capability: 4400 mAH
Operating Time: Used continuously for 5 hours (print 500 shares of cardiogram)
Indication of battery capability: With

Input/Output Specification

Keyboard: USB keyboard
Standard touchscreen connector (4 lines)
Network connector: RJ-45 (one) TCP/IP; Web function
USB-Connector: 1x USB Host connects scanner & printer
1x USB Device connects PC Computer
SD-Card: SD Card (optional)

Data Storage

Fixed Memory: 800 groups of ECG data
Optional Memory: Flash, SD card or U disk
Storage mode: Background storage automatically
Storage format: PDF, DAT, DICOM, FDA-XML, JPEG

Measure and Diagnosis of ECG Waveform

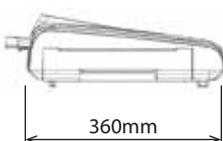
HR range: 30bpm - 300bpm
HR precision: ± 1 bpm (10s average)
Coefficient error: $\leq 5\%$, 0,333
Measure info of ECG waveform: P time limit, PR interphase, QRS time limit, QT interphase, QTC interphase, RV5swing, SV1swing, RV6swing, SV2swing, RV5-SV1swing, P axis, QRS axis, T axis
Diagnosis analyze: ≥ 140 kinds

Environmental Specifications

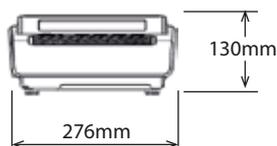
Operating
Temperature: 5°C ~ 40°C
Relative humidity: 25% ~ 95% (non condensing)
Atmospheric pressure: 700hPa ~ 1060hPa
Transportation and storage
Temperature: -20°C ~ +55°C
Relative humidity: 25% ~ 95% (non condensing)
Atmospheric pressure: 500hPa ~ 1060hPa

Dimensions

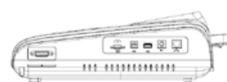
Left



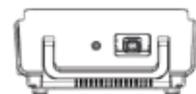
Front



Right



Back



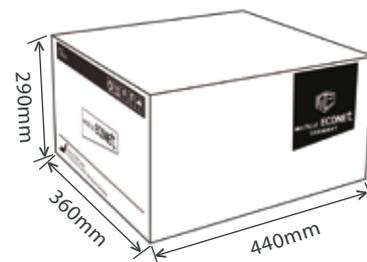
Recorder

Recording way: Thermal dot array
Horizontal resolution: 40 dots/mm
Vertical resolution: 8 dots/mm
Recording speed: 5mm/s, 6.25mm/s, 10mm/s, 12.5mm/s, 25mm/s, 50mm/s, error: $\pm 3\%$
Record width: 215mm (the effective record width of the device is 210mm)
Paper: 210mm x 140mm x 20m (Z type)
Paper type: Folded thermosensitive printing paper
Recording type: more than 10 kind of printing methods (Auto:3x4, 3x4+1R, 3x4+3R, 6x2, 6x2+1R, 12x1, 12x1_V6; Manual: 3 path, 6 path, 12 path; Rhythm: single-lead, three-lead, R-R: R-R)

Display of ECG Collection

Signal input: 12-lead, defibrillator-proof, Pacemaker, pulse rejection
Degree of protection against electric shock: 4000VV, Type CF applied part
Electrode offset potential: ± 600 mV d.c.
Response to frequency: 0.05Hz-200Hz (-3dB)
Baseline filter: On/Off
ECG filter: 25Hz, 35Hz, 45Hz, Close
Lowpass filter: 75Hz, 100Hz, 150Hz, 200Hz, Close
Frequency filter: Off/On
Gain selection: 2.5, 5, 10, 20, 40, 10/5, AGC (mm/mV)
Gain accuracy: $\leq 5\%$
Time base selection: 5 mm/s, 6.25 mm/s, 10 mm/s, 12.5 mm/s, 25 mm/s, 50mm/s
Input impedance: $\geq 50M\Omega$
Current of input loop: ≤ 15 nA
Patients leakage current: ≤ 10 μ V
CMRR: ≥ 110 dB (with AC filter open)
Time for response to wave displaying: ≤ 5 s
Time for baseline recovered after switching leads: ≤ 1 s
Defibrillator-proof: 5000V 360J
Recovering time for defibrillator-proof: ≤ 5 s
Energy reduced $\leq 10\%$
Voltage transfer ≤ 1 V
Standard complied with: IEC 60601-2-25

Packaging



Approx. 7 kg

Weiterführende Informationsmedien: *Available further product information:*



Image Broschüre CARDIO M-PRO
Image brochure CARDIO M-PRO



Komplette Zubehörliste
Complete Accessory list

Contact details:

medical ECONT GmbH
Im Erlengrund 20
46149 Oberhausen
Germany

t: +49 (0)208 / 377 890 - 0
f: +49 (0)208 / 377 890 - 55
e: info@medical-econet.com

www.medical-econet.com

facebook.com/medicaleconetgermany
twitter.com/medicaleconet
youtube.com/medicalECONETGmbH



medical **ECONET**

medical ECONET GmbH
Im Erlengrund 20 46149 Oberhausen Germany
www.medical-econet.com

Distributor