

QRS-12

DIGITAL TOUCH SCREEN 12-LEAD
ELECTROCARDIOGRAPH



QRS-12

Intuitive

Designed for a fast paced work environment, the Infinium **QRS-12** ECG System offers an extremely simple and adaptable touch-screen user interface. Patient information along with vital sign settings can be quickly modified to meet the needs of a patient's changing condition. The **QRS-12** offers a high resolution 9 inch touch screen and alphanumeric keypad to optimize the speed of patient care. The user can therefore make quick and convenient analysis while having multiple print and data transfer options.

Interpretive

Unlike most ECG systems, the **QRS-12** offers interpretation software as a standard feature. The **QRS-12** provides built-in EKG references databases.

Connective

The **QRS-12** offers several connective solutions to network and manage patient data on an electronic medical records platform or a HL7 information system. The **QRS-12** ECG system offers Ethernet and RS232 connections with an open source communication protocol. Infinium offers 2 levels of networking and connectivity. The **QRS-12** is HL7 and DICOM compliant. The HL7 network protocol will allow for all patient information and vital sign trends to be transferred and stored on a hospital information system. For non-HL7 medical facilities, there is the Infinium ECG manager software which allows the transfer of all stored ECG files and patient data to a remote PC. The patient files can be very simply saved, stored, printed and transferred.



Designed For A Fast Paced Work Environment

EXTREMELY SIMPLE & ADAPTABLE TOUCH-SCREEN USER INTERFACE.

Infinium **QRS-12** 12 Interpretive 12 Lead EKG:

- **Smart and portable design**
- **9-inch high resolution TFT touch screen with adjustable angle, easy to view**
- **Waterproof and full alphanumeric keyboard with shortcut keys.**
- **Broad frequency response 0.05-250Hz for weaker signal recognition and capture, more suitable for pediatrics**
- **Specific age and gender differential validity in CardioPro analysis program maximizes the accuracy of the ECG interpretation**
- **Unique ECG acquisition module with 3 independent keys streamlines the whole workflow**
- **ECG electrode placement diagram for lead connection guide and alarm**
- **Up to 300 seconds frozen waveforms reviewable and recordable**
- **Up to 300 seconds R-R analysis in 1 or 3 rhythms for easier in arrhythmia locating**
- **Cabrera mode available**
- **Support various file formats: XML, DICOM, JPG and PDF**
- **Local storage for up to 1500 files**
- **3 ways file storage: local memory, SD card, USB flash disk**
- **ECG management software by LAN or WIFI (optional)**



QRS-12 ACCESSORIES

Accessories Include:

12 Lead Cable, Chest Electrodes, Limb Electrodes, Paper roll, Lithium Battery, Dust Cover.

Optional Accessories:

ECG manager Software, Mobile Cart, Carry Bag, External Printer, Bar Code Scanner/Magnetic Card Reader

QRS-12 TECHNICAL SPECIFICATIONS:

SIGNAL PROCESSING SPECIFICATION:

ECG interpretation	Biocare CardioPro ECG analysis program for adults and pediatrics
Acquisition mode	Simultaneous standard 12-lead in pre-acquisition or post-acquisition
A/D conversion	24 bit
Sampling rate	8,000 samples/second/channel
Frequency response	0.05 Hz~250 Hz
Common mode rejection ratio	>105dB
Polarization Voltage	±550mV
Input circuit	Floating circuit input
Input impedance	≥50 MΩ
Input CIR current	≤0.1 μA
Patient leakage current	<10 μA
Time constant	≥3.2 s
Noise level	<15 μVp-p
Sensitivity threshold	≤20 μVp-p
Calibration voltage	1 mV±5 %
Sensitivity	Eight levels as (1.25, 2.5, 5, 10, 20, 10/5, 20/10) mm/mV, Auto Gain
Filter Setting	EMG filter: 25/35/75/100/150/250Hz 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 functions	Lead-off detection, lead overflow, AC interference, baseline wander interference, EMG interference
Acquisition time	10~24 seconds

DISPLAY AND KEYBOARD SPECIFICATIONS:

Display type	8.9 inch TFT LCD with touch screen
Display resolution	1280×768
Display data	Waveforms, heart rate, lead connection, clock, record mode, filters, sensitivity, paper speed, patient ID,name, gender, age, system prompt, alarming messages, battery, power indicator, SD card label
Waveform display mode	1) Same screen display: 3*4, 3*4+1R, 6*2, 6*2+1R, 12*1 2) Split-screen display: 3*4, 6*2
Keyboard type	Waterproof material, integrated full alphanumeric keyboard with quick-access 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	Z- fold paper: 210 mm×150 mm×140 p

STANDARD SOFTWARE SPECIFICATIONS:

Measurement and interpretation	Supports measurement and interpretation with CardioPro ECG analysis program for adults and pediatrics
Measurement values	HR, PR interval, QRS duration, QT/QTc interval, P/QRS/T axis, RV5/SV1 voltage, RV5+SV1 voltage
Minnesota code	With newest Minnesota code
Working mode	Automatic mode, Manual mode, Rhythm mode, Trigger mode, Economic mode, Cycle mode, Upload mode
DEMO mode	Normal ECG, Arrhythmia ECG
QTC formula	Bazett, Fridericia, Framingham, Hodges
Rhythm analysis	Single rhythm mode: 30-300 seconds Three rhythms mode: 30-100 seconds for each lead
Auto-trigger mode	Auto-trigger printing when arrhythmia is detected during the examination
Extended printing in arrhythmia	Supports extended arrhythmia waveform printing in 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	JPEG, XML, DICOM, PDF, ECG
Alarming system	Voice and visual alarming for: Lead off, No paper, Low battery
Patient information setting	Record No., Name, Gender, D.O.B, Height, Weight, BP, Race, Pacemaker, Medication, Accession No., Ref-physician, Technician, Physician, Room No., User-define
Language	Chinese, English, Russian, Spanish, French, Italian, Polish, Czech, German, Portuguese, Ukrainian, Turkish
Local memory capacity	More than 3000 files

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, 6*2+3R; 12*1, 12*1+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
VGA port	Connect to external monitor

POWER SUPPLY

Power supply	AC/DC
AC/DC power supply	100 V~240 V, 50 Hz /60 Hz, 110 VA
Battery power supply	Rechargeable lithium battery, 14.8 V 4400 mAh
Battery capacity	Support more than 3.0 hours for continuous operation
Battery charge time	Approximately 4 hours for total charge

STANDARD ACCESSORIES

ECG data acquisition box with lead wire	ECG data acquisition box with lead wire for 12-CH ECG, ø±4mm banana plug, defi, IEC
Chest Electrode	Adult chest electrode, ø4mm,6pcs/set
Limb Electrode	Adult limb electrode, ø4mm, 4pcs/set, no LOGO, light blue color
Power adapter	65 W 19V/3.43A
Power cord	L=1500mm, 3PIN, European standard
Grounding Cable	L=4m UL1015 14AWG
Battery	HYLB-1596,14.8V,4400mAh
Thermal Recording Paper	Z-fold,210mm*150mm*140p, no LOGO
SD card	8GB

DIMENSIONS AND WEIGHT

Length × width × height	345 mm×260 mm×128.5mm
Net Weight	About 3.4 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