

ComboLab IT

Merging Hemodynamics and Electrophysiology in one powerful Recording System

By combining the CardioLab® IT Electrophysiology System with the Mac-Lab® IT Hemodynamic System, GE provides a cost-effective solution that allows dual use of your cardiac cath lab.

ComboLab® IT, powered by Centricity® Carddas Xi², is designed to acquire, store and manage clinical data, delivering efficiency in clinical workflow and reporting. In hemodynamics, our real-time data acquisition TRAM® module adds maximum system reliability. In electrophysiology, our CLab II Plus Amplifier brings high-quality signals for exceptional intracardiac recordings. Whether a simple or complex EP case, ComboLab IT's advanced clinical tools help physicians expedite diagnosis. GE's X-ray Innova family now comes with the easy-to-use intuitive Central Touch Screen, which provides unprecedented remote control of the basic functions of ComboLab IT at the bedside.



System Features and Options

- Unique CARTO XP 3D Mapping System Interface
- GE X-ray Innova table-side touch screen interface
- GE X-ray Bi-directional Interface
- Cardiologic Fluoroscopy Image Management System
- ImageCapture
- 32/64/96/128 channel CLab II Plus Amplifier
- Enhanced mapping tools (includes pace mapping, activation and interval alignment)
- Advanced features (includes Plot and Holter capabilities)
- Connectivity to RF Ablation generator(s)
- Real-time Waveform Scrolling
- Networking solutions, such as remote waveform review and Nurses' Workstation, for simultaneous data entry with waveform archive
- Configurable sampling rates: 1K, 2K, & 4K
- Easy access to raw waveform data (data extraction), binary & ASCII formats
- Isochronal and Isopotential Maps
- Integrated Vitals with Audible Indicators
- End-Tidal CO₂
- Connectivity to holding area bedside monitors: GE Dash 3000/4000 and GE Solar 8000M monitors
- Coronary diagramming module
- Continuous ST Segment analysis window
- Pediatric functionality with Interface to PedCath
- ADT, Orders, Billing, Results Interface(s)
- Full-disclosure data saving to the network or DVD disc media



Technical Specifications	
Processor/Data Storage	
	Intel 2.33 GHz Dual-core or greater processor
	2 GB of RAM
	2 x 80 GB hard drives
	9.4 GB DVD-RAM/CD-RW drive
	Optional 2.6 GB Magnetic Optical Drive
	Optical Scroll Mouse
	OS: Windows XP Professional
	Microsoft Office 2007 Professional
Networking	
	100/1000 Base-T Ethernet, TCP/IP
Monitors	
	20" flat panel ultra high-resolution color
	1600 x 1200 resolution
Printer Options	
	Black & White Ricoh SP 4100N
	Ricoh AFICIO CL3500N Color LaserJet
Compliance with Standards	
	UL 2601-1, IEC 60601-1-2
	European Union Medical Device Directive (CE Marked)
Environmental/Electrical	
Specifications	
Operating Temperature:	+10°C to +30°C
Storage Temperature:	-10°C to +45°C
Humidity:	30-75% (storage: 10-95%, non-condensing)
Maximum Current Draw:	15A/115V, 7A/230V
Chassis Leakage Current:	<100µA
CLab II Plus Amplifier Technical Specifications	
ECG Input	
High Pass Filter:	0.05 Hz, 0.5 Hz, 5.0 Hz
Low Pass Filter:	100 Hz
Gain:	50 - 10,000 in 8 settings
Catheter/Intracardiac	
High Pass Filter:	DC, 0.05Hz, 0.5 Hz, 5.0 Hz, 30 Hz and 100 Hz
Low Pass Filter:	150 Hz, 500 Hz, 1000 Hz
Gain:	50 - 10,000 in 8 settings
Pressure (4 Inputs)	
Inputs:	Compatible with all standard external pressure transducers. 5µV/V/mmHg
Input Impedance:	>1 billion Ohms
Up to:	4 pressure channels
Range:	-100 mmHg to +400 mmHg
Design	
Sampling Rate:	1K, 2K, 4K
CMRR:	100dB min
Input Impedance:	>1 billion Ohms
Leakage Current:	Patient Source: <10µA Patient Sink: <10µA Patient Sink measured at patient leads under single fault condition: <50µA Chassis Leak: <100µA

Operating Temperature:	0°C to +30°C non-condensing
Storage Temperature:	-10°C to +45°C non-condensing
Humidity:	<95% relative at 35° non-condensing
CardioImage™ Fluoroscopy Image Management System	
	View real-time images from X-ray, IVUS, echo, or any standard video source on a dedicated 1600 x 1200 monitor
	Acquire up to 1280 x 1024 images at 72 Hz sampling from up to four separate inputs with a maximum input frequency of 135 MHz
TRAM Module Physiologic Recordings	
Amplifiers:	Modular transport design
ECG:	12-lead with ST segment analysis
Respiration:	Impedance method (1 - 200 breaths per minute range)
Cardiac Output:	Thermodilution, calculated and estimated Fick
Invasive Pressure:	4 channels with means (-98 to 350 mm/Hg range)
Non-invasive Pressure:	Automatic and manual modes (oscillometric)
Pulse Oximetry:	Saturation range 0 - 100 % (accuracy 90 - 100 %, 1.5 %)

Physical Specifications				
	Width (in/cm)	Depth (in/cm)	Height (in/cm)	Weight (lbs/kg)
Controller	8/21	21/52	18/45	45/20
Workstation – 65"	65/165	30/76	30/75	172/77
Workstation – 47"	47/114	30/76	30/75	145/65
Workstation - Box	24/61	28/71	30/75	89/40
Amplifier (32/64 Channels)	14/36	14/36	10/24	22/10
Amplifier (96/128 Channels)	14/36	14/36	14/36	25/11
Flat Panel Monitor (20")	18/44	8/20	15/37	23/10
CRT Monitor (19")	18/45	19/47	18/45	41/19
Ricoh SP 4100N	15/39	18/45	14/35	34/15.5
Ricoh AFICIO CL3500N Color	17/42	21/54	16/40	68/31
Integr. Electronics Box (IEB)	11/28	21/53	25/64	75/34
UPS	6/13	15/39	8/20	30/14

Physiologic Specifications				
	CLab II Plus 128	CLab II Plus 96	CLab II Plus 64	CLab II Plus 32
Total Recording Channels	128	96	64	32
Intracardiac Channels	108	76	44	12
Stim	4	4	4	4
Catheter Inputs	224	160	96	32
ECG	12-Lead	12-Lead	12-Lead	12-Lead
Pressure	4	4	4	4
Catheter Input Modules	7	5	3	1

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GE imagination at work

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