# **Emergency / Transportation Monitor**

Comen C30 is a new generation of specialized ambulance&transport monitor. It is designed according to the requirements of the rescuing site and ambulance transport monitoring for practicability, convenience and reliability of emergency treatment, first aid and transportation. It adopts PC/ABS high-strength engineering plastics, high-reliability Linux operation system and high-brightness scratching-prevention LCD. It is equipped with a specialized first -aid monitor bag with fitting management pack and first aid device collection pack able for multi-carry. The entire machine is portable, solid, reliable, stable, waterproof, fireproof and anti-falling. It also can be displayed clearly under strong sunshine in the field and can be used under various kinds of severe environment to meet demand of medical users such as troops and hospitals etc. during emergency treatment, first aid and transportation in the field.

## **Patient Monitor**



C90 patient monitor is integrated with the world-leading life parameter monitoring technology and IT application technology to make a high-end life monitoring platform and provide a comprehensive monitoring solution.

To monitor the patient parameters comprehensively and integratively from the first-aid spot to the recovery of patient as a complete management system.

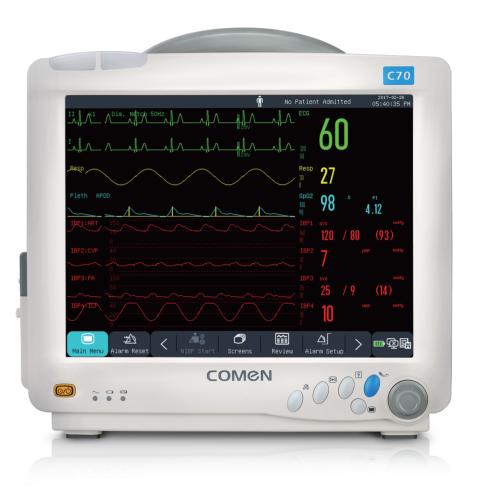




### Shenzhen Comen Medical Instruments Co., Ltd.

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### COMON



# 70 Patient Monitor

### Classic Continuation, Continuous Innovation

C70 inherits the outstanding character of our Patient Monitor C90 and adopts the highly integrated modular mechanical structure. It efficiently combines the structure, function and maintenance management.C70's single-module and muti-module can combine at will to meet the need of clinical upgrading.C70 opens a new chapter in the modular monitor field.

### External Design

Highly integrated modular mechanical structure, easy to dissemble and maintain, easy to upgrade. The flexible, Reliable, Stable C70 ensures that Doctors work with confidence.





 12.1inch LED backlit display, bright, low power consumption, efficiency; touch screen and button operation, dual protection







- Machine fanless design fundamentally prevents recontamination
- Aluminum-magnesium alloy stent design, lighter, more stable and better heat dissipation
- Large-capacity lithium battery with intelligent control chip, power control accuracy of up to 1%, ≥ 4 hours working time on a single charge, effectively extending the battery life
- Module data transfer uses infrared transmission mode for prevention of electromagnetic interference



• Handle: natural, comfortable, solid





### Hardware technology - module

3+1 functional module slot, supports plug and play, full-module random combination, automatic software identification, and interface dynamic adjustment



- Brand new mulit-parameters modular box, integrats various parameters measurement efficiently, maximum 8 connection sockets, meets different departments' demand
- Standard ECG RESP SpO<sub>2</sub> PR NIBP
- Optional
   IBP EtCO<sub>2</sub> ICG C.O. BIS AG TEMP 12-lead ECG



### • IBP (invasive blood pressure) module

Various brands of IBP accessories support. It is able to monitor more than 10 pressures such as arterial pressure, pulmonary arterial pressure, central venous pressure, intracranial pressure, left/right arterial pressure, etc.



### • EtCO<sub>2</sub> module

#### RESPIRONICS CO2

To work together with US RESPIRONICS / MASIMO we chose mainstream / side stream (miniflow) CO₂ module. As small in size, durable and light in weight, the mainstream sensor can be used to provide all intubated patients from new born child to adults for an accurate reliable CO₂ monitoring. It can be automatically corrected, an LoFlo side flow probe (without dewatering bottle) is used to monitor non-intubated patients. The flexible and compact CO₂ sensor can provide adults, child and newborn babies for a continuous and reliable CO₂ monitoring. And, the sampling rate (miniflow) is ≤50mL/min.

### MASIMO IRMA CO<sub>2</sub> (Mainstream)

Extremely compact design (25g!); Maintenance free-no calibrations needed; Intelligent disposables; Extremely easy to integrate; "Plug in and measure".

#### MASIMO ISA CO<sub>2</sub> (Sidestream)

Unique water handing-nomoline; Low sample flow-50ml/ min for all type of patients; "Instant on" - warm-up time 10/20 seconds until full spec; Extremely low power and weight; "Plug in and measure"; Maintenance free-no routine calibrations needed.



### • AG (anesthetic gases) module

To cooperate with MASIMO with advanced AG modular, it is able to monitor eight different gases (O², CO², N²O, ENF, ISO, DES, SEV, HAL). It can automatically identify what kind of anesthetic gas is in use, characterized by its short period of warmming time and long service life as well as MAC value provided (minimum alveolar concentration).

COMEN 03



### • ICG (noninvasive blood flow dynamics) module

Collaborated with Medis inpedance ECG to realize noninvasive blood flow dynamics monitoring, which is characterized by its noninvasive, continuous and high accurate and strong interface-resistant capability as well as lower cost and easy operation. The impedance variation is used to monitor parameters such as stroke volume(SV), cardiac output(CO), system vascular resistance(SVR), cardiac index(CI), myocardial contractility and fluid state(TFC), etc.



### • BIS (Depth of Anesthesia) module

Cooperate with CONVIDIAN company from USA for BIS technology.

The BIS module has been designed to be used in the monitoring of the level of consciousness of aperson during the application of general anaesthesia or in intensive care. This is accomplished byregistering the electroencephalographic signal (EEG) by means of surface electrodes which is thenanalyzed by a digital process. As a result of the applied calculation, an index "BIS" is obtained, which serves as guidance to theexperts who use it to determine the level of consciousness of the patient during surgery.



### • C.O. (invasive cardiac output) module

C70 is involved itself in invasive cardiac output technique, but C.O. measurement is conducted with conventional thermo dilution invasive cardiac output and other hemodynamic parameters. The monitor can measure "blood temperature", "calculating cardiac output", "calculating hemodynamics". The cardiac output is measured with floating catheter led from vein to pulmonary artery followed by injecting a certain amount at  $0^{\circ}$ C –25  $^{\circ}$ C injecta such that the blood temperature will be varied after the injecta and blood output from the heart are mixed together thereby achieving cardiac output by measuring blood temperature variation before and after infected in accordance with the principle of heat balance.



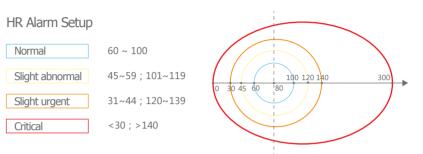
### • C70 plug-in expansion slot

10 module slots can be provided for function expansion.

### Software technology-Interface

#### Alarm System

Three level alarm system for 360 degree observation, easy to see physiological and technical alarm; Unique I-KLOK intelligent alarm technology: I-KLOK tech can identify alarm grade automatically according to physiological parameters change; in different three levels of visual & audio alarm, to help medical staff to make accurate judgment.



- Strong network function, supports wired/wireless connection; built-in WiFi module is selectable
- Prompt module identification and interface switching without flashing
- Unlimited module extension with automatic software detection and dynamic interface adjustment



### Module MAP diagram

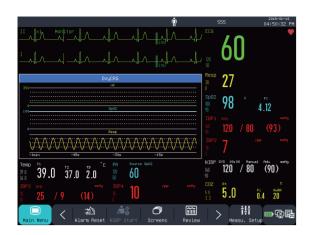
• Display operating status of module



#### Touch screen

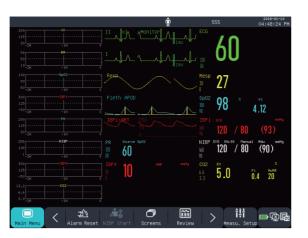
• Keyboard, handwritting input

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### Respiration Oxygenation interface

- Consist of HR trend, SpO<sub>2</sub> trend and RR trend or compressed respiration waveforms
- Different period of trend selectable



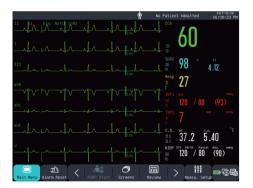
### **Trend Coexistence**

- Trend graph displays dynamic change of each parameter
- Trend view time of each parameter are freely selectable

### Big font interface

- Observed clearly from long distance, is especially suitable for ICU, CCU, OR and night care.
- Users can freely select 4 parameters to display on the screen. one waveform will be displayed for those parameters with waveforms.





### 7/12 leads display simultaneously

 Leads collecting, amplifying silultaneoulsy.
 Rhythmic leads calculation freely selection and display simultaneously



### Information integration function

- Complete medical records management
- Users can search, review, delete and transfer medical records



### Bed to bed Observation

- To display other bed information such as bed no. patients' name, alarm information and parameter setup;
- User can configure dynamic parameters and waveform



### Layout interface

- User can freely select the parameters and waveforms and locate its displayed place on the screen
- Design the interface freely as you reference



### Configuration management

• Five departments default configuration, can also be customized to meet application of different departments



### Alarms setting on one page

• All alarms are managed on the same page, more easy to set the alarms

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### Admission and discharge management function of C30

### • C30

C30 transport monitor has an independent operating system and can be used as an C70 plug-in module C30 used together with C70 can be displayed with double screens simultaneously

Patient data can be swapped between C30 and C70. C30 can help realize the data transfer and sharing between C70s.

C30 built-in 2200mAh lithium cell can support hot swap with power on thereby seamlessly transferring patient's information monitored.





3 Lifted onto stretcher

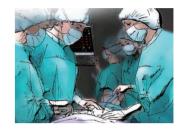


4 Sent to an emergency room

After C30 ambulace transport monitor is connected into C70 modular monitor ,the patient would be fully monitored by C70 .C70 will take over the monitoring and start working.



5 Transferred from emergency room to an operating room



6 Treated in the operating room

C70 modular monitor will carry out all-round monitoring and diagnosing of patient's condition in the operating room, thereby displaying twelve-channel ECG on the screen simultaneously. The accurate ECG measurement will help doctors to make good diagnosis thereby allowing operation carried out more smoothly. Combination of anesthesia machine, a respirator and C70 will help doctors to control operation time more accurately.



Transferred from the operating room to ICU



8 ICU ward

C70 modular monitor has taken an important position in ICU ward; as a device directly displaying the patient's condition after operation, it allows doctors to control the condition at any time in ICU, and it will give an alarm under abnormal condition to remind medical staff so that the patient's condition could be effectively controlled until the patients gradually recover.



1 Arrived at the spot



2 Put on to ambulance



9 Transferred to a general ward

The patients will be transferred to general ward after their condition improves and becomes stable; the patient's information accumulated in operating room and ICU unit will be transferred through a small host C30 to a large frame C70 modular monitor to ensure the continuity and real-time updating of patient's information.



10 Filing up the patient's records.