

# C58 Specialized Cardiovascular Monitor

In CCU, a C100A and a C58 can form a telemetry monitor. A patient in bed or in motion can enjoy Comen's 24/7 monitoring service.



# COMEN ECG&SpO<sub>2</sub> Technology

## ECG: standard 3-lead, optional 5/12-lead

Auto-identification of 3/5/12-lead, analysis of 13 types of arrhythmia, synchronous ST segment analysis of 3/7/12-lead ECG. Advanced integrated analogue front-end (AFE) processing chip (ASIC chip) is specially designed for ECG signal collection. It integrates with traditional AFE circuits that process ECG signals. And these AFE circuits are general circuits for monitoring and diagnosis. The chip has built-in 24-bit A/D converter module with up to 0.3uV high resolution. It can collect the original ECG signals without any distortion.

# SpO2: standard COMEN, optional Masimo/Nellcor

COMEN SpO<sub>2</sub> calculates the related coefficients of red and infrared light to Judge and increase the average adaptive length. It has high accuracy and high identification rate, it can suppress interference and noise under the motion mode and low perfusion mode to gain the actual SpO<sub>2</sub>. It works very well during motion and under low perfusion.

# **COMEN Telemetry Monitoring System**

The world's first to use WIFI technology

The world's first to realize 12-lead ECG monitoring

The world's first to support real-time monitoring of up to 128 beds







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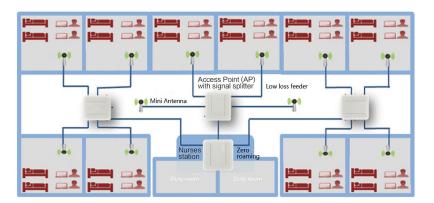
# WiFi

WIFI is currently the world's best wireless networking technology because of its high bandwidth, point-to-multipoint connection, large data volume, strong RF signals (DSSS technology) and high safely. This system has powerful functions, various control modes and good scalability.



# The traditional

Traditional radio frequency (RF) uses point-to-point connection (FSK technology). It can only achieve some simple control. This system has weak functions, no Internet Protocol, single control mode, slow data rate and bad scalability.





## Access Point (AP) with signal splitter

Customized AP; 300MB/s, twice as fast as peer competitors'; built-in splitter to evenly distribute signal to each antenna. You won't see power dividers one connecting another on the walls and tangled wires any more.



#### Low loss feeder

Very low loss RF cable, rooms 15 meters away from AP can still receive strong signals; soft materials enable normal operation under 180° bending.



#### Mini Antenna

It might be the world's smallest antenna for WLAN, thin as a coin and half the size of a business card. You won't even notice it in the room.

# Advantages of WIFI Technology in COMEN Telemetry Monitoring System

## Strong signals

You can receive full signal everywhere in and around the ward. Mini antenna is installed in the ward, which well arranges and improves WiFI network. Adding antennas can extend the area of telemetry monitoring.

#### High bandwidth

The world's first telemetry monitoring system to support real-time monitoring of up to 128 beds and 12-lead ECG monitoring.

#### 1 12-lead ECG monitoring

Traditional telemetry monitoring uses RF. It has narrow bandwidth and cannot support 12-lead ECG monitoring. Comen uses WIFI technology and its high bandwidth to easily make 12-lead ECG monitoring and synchronous ST segment analysis of 12-lead ECG possible, which is helpful to analyze the type of arrhythmia and its location.

### 2 Up to 128 beds

Telemetry system on the market currently can only monitor 16 beds at the most. Comen uses WIFI technology to easily enable telemetry monitoring of 128 beds. To departments with many patients and heavy workload, WIFI technology is way better than the traditional RF telemetry.

## Interference is too low to imagine

The latest radio resource management (RRM) technology can collect real-time signal strength in the ward so as to choose the best transmit power for each antenna and enable power auto-adjustment. Guaranteeing each ward receiving strong signals, RRM can effectively use the walls to weaken signals for maximum anti-interference from signals in next rooms.

Under the same environment, well-arranged AP makes a huge difference in anti-interference improvement.

#### Zero roaming

Wireless signals are from the same base station to effectively avoid roaming resulting from multiple APs. No matter where the patient is, the signal is never interrupted.

#### Hybrid networking

After the wireless network is well set up, central station can not only become a telemetry monitoring system by connecting with C100A, but also turn into various types of central monitoring systems by connecting with multi-parameter monitor or fetal monitor. This can avoid repeated construction and waste of medical resources.







