

**BeneVision™**  
See more With ease

**Central Monitoring System**  
Visible anywhere  
Flexible system  
Easier to use



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**BeneVision™**  
**Central Monitoring System**  
A better vision of care





# BeneVision™ Central Monitoring System

A versatile partner that really enhances your clinical work

The everyday routines of modern hospitals call for ever higher efficiency and place more demanding requirements on clinical diagnosis. BeneVision Central Monitoring System (CMS) is the ideal tool to meet these requirements and redefine versatile clinical surveillance.

## Make your team more efficient.

BeneVision Central Monitoring System evolves from a centralised monitoring station to a distributed and patient-oriented system. It provides several correlative system components - CentralStation, WorkStation, ViewStation, CMS Viewer, Mobile Viewer, AlarmGUARD and web client. You can combine these components in a flexible way to build various monitoring systems that satisfy different departments' needs and the whole hospital's monitoring requirements.

## Make your workflows smoother.

BeneVision Central Monitoring System not only allows you to oversee patient monitor but also infusion pump, ventilator, and devices connected via the BeneLink. With diverse system component options, you can get comprehensive patient information at a nurse station, corridors, offices and so on. In addition, based on the capacitive touch screen, the intuitive and friendly user interface of the Central Monitoring enable you to operate the system quickly and reduce your training costs.

## Make your clinical decisions easier.

BeneVision Central Monitoring System provides various review applications to fast-track patient conditions, and contrast windows enabling you to simultaneously view patient data in different ways. In addition, sophisticated analysis tools help you make clinical decisions faster and easier.



Nurse:

*"It is more intuitive and help me to save more time for my patients."*



Doctor:

*"I can access my patient's data immediately no matter where I am. With clinical assistant applications, I can make a quick and accurate diagnosis."*



IT technicians:

*"The BeneVision CMS fits seamlessly with our existing IT infrastructure, satisfies all of our safety and security strategies, and is easy to maintain."*



Supervisor:

*"It offers a better solution to improve our care quality within a reasonable investment."*

# BeneVision™ Central Monitoring System: Patient control at any point of care



## Observe patients in different departments

The WorkStation (WS) can be connected to CentralStations from different departments simultaneously, enabling clinical supervisors to conveniently observe and review multiple patients at one glance.



**Analyse patient conditions in the office**  
The CMS Viewer allows access to patient monitoring information and bedside peripheral devices on the PC in your office. Comprehensive review and clinical assistive applications make diagnosis more convenient.



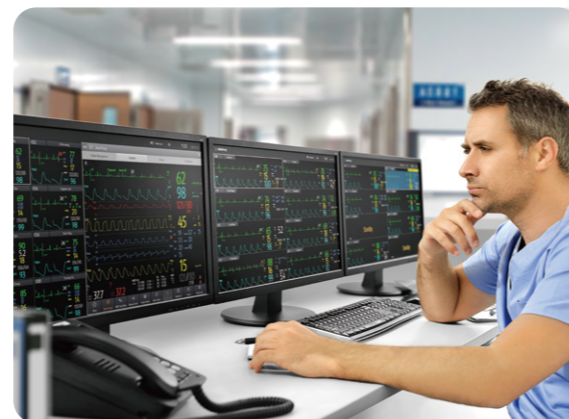
## Get patient detailed information anywhere

The ViewStation (VS) can be located anywhere it is needed, such as the lounge or corridor. Unlike the usual CentralStation mirroring solution, the ViewStation can display patient information from one or multiple CentralStations. In addition, it allows you to view detailed information from any single patient and supports touch screen operation.



## Monitor patients in a care group

The WorkStation Lite can be installed on the same host with the information system, which helps you concentrate more on your work and patients care. As well as real-time monitoring information, you can also adjust settings and admit patients. All patient data will be synchronized with that in the bedside monitor and in the CentralStation.



## Access all bedside device data at the nurse station

The CentralStation (CS) not only displays information from patient monitors but also from infusion pumps, ventilators and 3rd party devices via the BeneLink module. All data is patient-centered and well-organized for easy browsing and review. These data is also transferred to other BeneVision CMS components such as WS and VS.



## View patients by smart phone/pad

For even greater flexibility, the Mobile Viewer is a CentralStation in your pocket. You can get patient data for clinical decision making no matter where you are. Alarm distribution management through AlarmGUARD to ensure patient safety.

# For nurses: Improve care with your own simplified workflows

## Panoramic patient monitoring

Up to 64 beds can be connected to BeneVision CentralStation simultaneously. All the measurements from the patient monitors, infusion pumps, ventilators and ultrasound, plus integrated data collected from peripheral devices are displayed on multiple, full HD wide screens.

## Prompt alarm

No matter where you are, BeneVision Central Monitoring System can inform you of patient's conditions according to the flexibly deployed WorkStation and ViewStation. The AlarmGUARD dedicated alarm distribution system can help you keep abreast the patient's risk at all times.

## Intelligent workflows

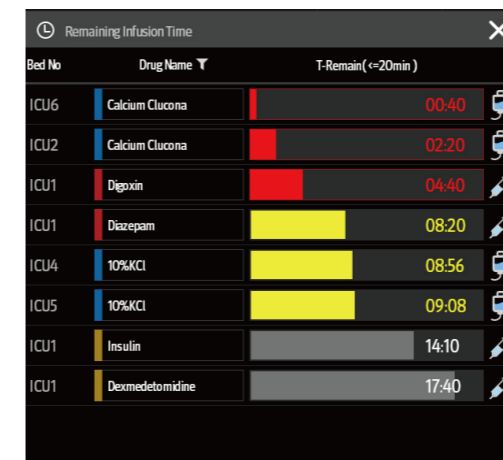
Your workflow becomes simpler and more dynamic with BeneVision Central Monitoring System. After establishing connection with your ADT system, BeneVision CentralStation/WorkStation can automatically admit patient synchronously with the information system without any operation. During patient transfer, patient data is automatically transferred and merged. Electronic reports are regularly sent to EMR. The Care Group function can help the nurse focus on patients whom she is caring for, thus simplifying workflows and reducing information overload.

## Intuitive user interface

The BeneVision Central Monitoring System with capacitive touch screens makes operations more intuitive and adopts the same interface design style of the latest BeneVision N series patient monitors, ventilators and infusion pumps helping to reduce your learning time.

## Patient centered multi equipment Central Monitoring System

The BeneVision Central Monitoring System integrates all bedside device information such as patient monitors, infusion pumps, ventilators, ultrasound and video, patient status information is readily available, which can better meet the needs of titration therapy.



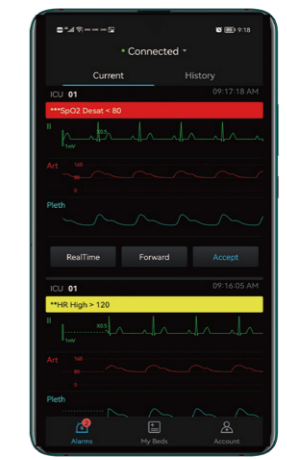
### Medication Management

Overview of all infusion pumps with remaining infusion time summary, gives clear visibility to the caregiver, facilitation timely actions.



### Alarm Statistics

Count the alarm load and response, analyse the alarm types that can be reduced and improve the alarm fatigue through closed-loop management.



### Alarm Distribution

AlarmGUARD supports customization to receive important alarms and view real-time and historical data. If there is no timely response, it will automatically notify the superior to ensure patient safety.



## Intelligent clinical assistive applications

The BeneVision Central Station supports complete clinical functions and tools which include BoA, Hemosight, SepsisSight, GCS, EWS, PACE View, 12 lead ECG reanalysis and comparison to assist clinicians understand the situation of responsible patients, intervene or modify the treatment plan in advance.



**Continuous EWS scoring**  
Remote centralized EWS management, continuous attention to patient status.



**12 lead ECG reanalysis and report comparison**  
Analysis of patient's typical waveform and disease evolution.

## For clinicians: Confidence with comprehensive information at any time

### Merged multi-device evaluation

#### Ultrasound-Vital Signs evaluation

- Vital signs and waveforms are simultaneously transmitted to ultrasound and displayed on the same screen to assist ultrasound diagnosis
- The Central Monitoring System supports the storage and review of ultrasound images, videos and reports. Ultrasound examination and vital sign can be reviewed at the same timeline, which is convenient to trace the patient's condition and confirm the treatment effect.



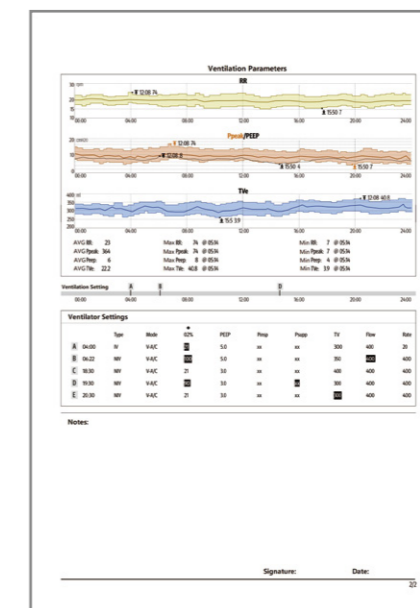
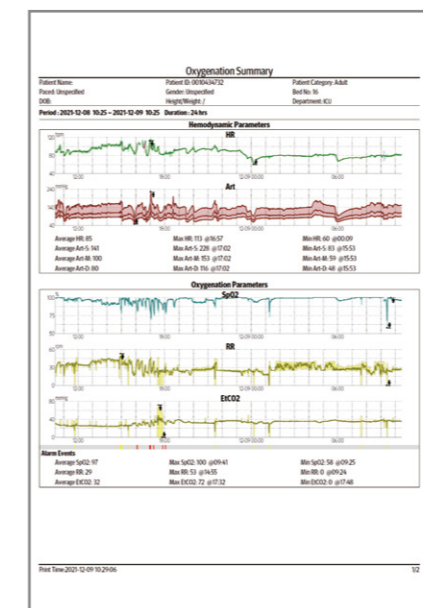
#### Spontaneous breath test

- The ventilator Weaning Tool can start the spontaneous breathing experiment (SBT), and evaluate the patient's status in combination with  $\text{EtCO}_2$ ,  $\text{SpO}_2$ , PR and other parameters, and prompt the weaning after the successful completion of SBT
- Automatically withdraw from SBT in abnormal situations to ensure patient safety and reduce the burden of medical care

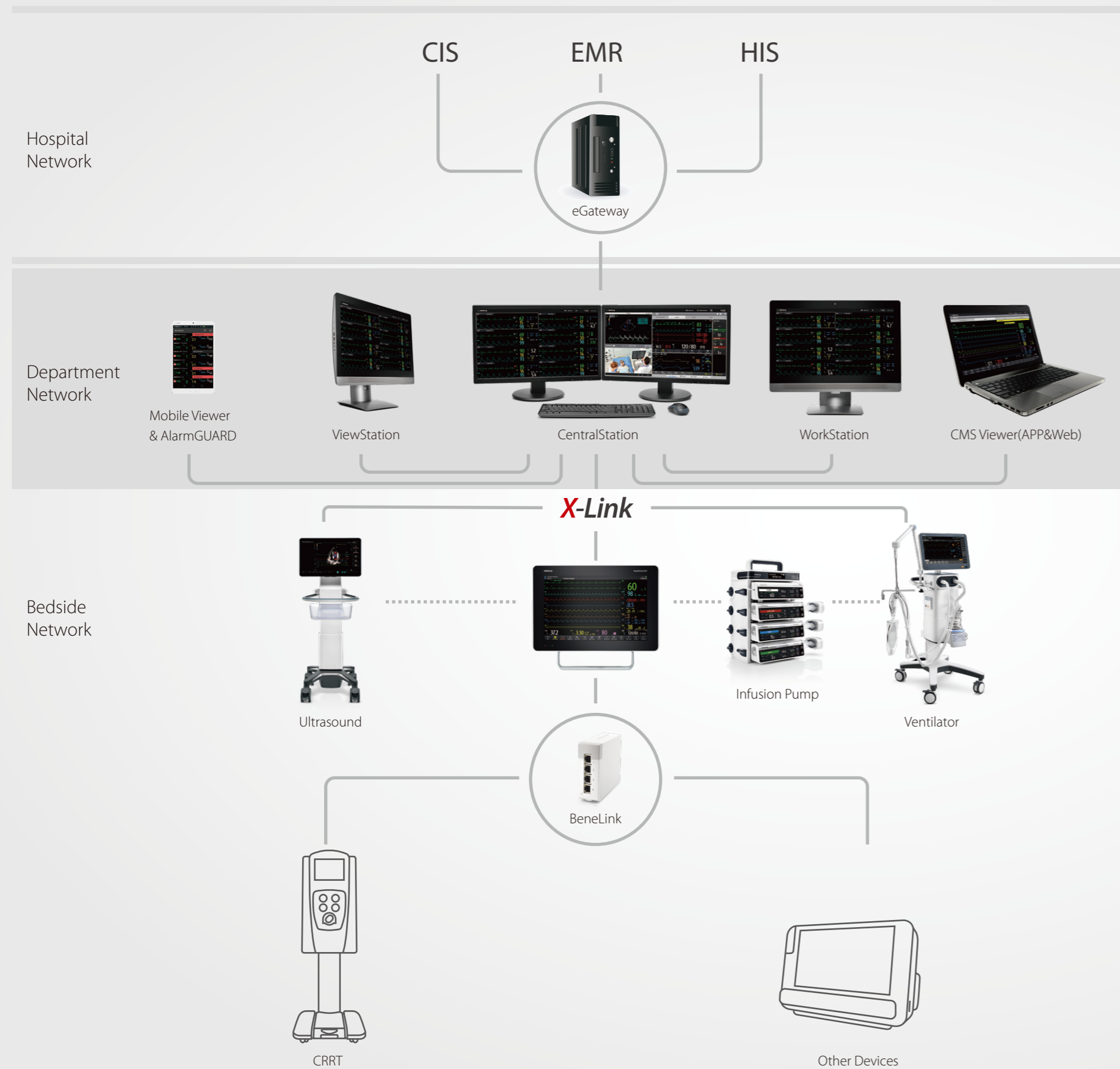


The BeneVision Central Monitoring System intelligently counts patients' physiological parameters and abnormal changes, outputs various patient status summary reports, helps clinical medical personnel quickly obtain patient status, improves diagnosis and treatment efficiency.

- Comparison and review of long-term trends to understand the evolution of the disease.
- Graphical indication of clinical thinking, intuitively summarizing patient status.
- Supports vital signs, 24h ECG, ventricular arrhythmia, atrial fibrillation, oxygenation and HRV summary.



**Oxygenation Summary**  
Combine the patient's hemodynamics, oxygenation status, ventilation parameters and ventilator ventilation settings to quickly grasp the patient's oxygenation.



For IT technicians: Access to hospital networks with enhanced solutions following your IT strategy

### Adaptable infrastructure

BeneVision Central Monitoring System supports large network deployment up to 1200 beds for mixed wired, wireless and WMTS telemetry connections. The underlying infrastructure of BeneVision Central Monitoring System is full 3-layer compatible, supports both unicast and multicast communication and so fits perfectly into your existing network without any extra investment. The IHE HL7 protocol output through eGateway makes it very easy to connect BeneVision Central Monitoring System with other hospital systems such as EMR and CIS.

### Reliable safety & security design

Data safety and security is a big concern for IT technicians. So, BeneVision Central Monitoring System supports SSL communication encryption, LDAP authorization and incorporates McAfee white list to block external intrusion. The system adopts RAID1 technology for error and disaster tolerance, QoS support to ensure real-time data transfer quality when the network is congested and overall backfilling strategy to guarantee no loss of patient data.

### Easy to maintain

BeneVision Central Monitoring System can be fully virtualised on your own server hardware via a VMware environment, which is easier for IT clustering maintenance and cost control. In addition, BeneVision Central Monitoring System integrates powerful maintenance function which can centrally acquire maintenance information, logs of networked patient monitoring devices, and centralized configure and upgrade firmware of these devices. With authorization, Mindray can offer remote services, which makes maintenance easier and more efficient.

For supervisors: Upgradeable monitoring solution with cost-effective investment

### Protected investment

BeneVision Central Monitoring System supports the whole family of Mindray patient monitoring products, protecting your investment. In addition, it is fully compatible with your existing hospital network, avoiding extra network construction costs. Through the eGateway that supports the IHE HL7 protocol, the BeneVision Central Monitoring System can easily connect to your existing hospital information system. The intuitive user interface is consistent with the latest BeneVision N series patient monitors, helping to reduce learning time and training costs.

### Enhanced monitoring solution

A wide variety of BeneVision Central Monitoring System options delivers extremely flexible monitoring solutions to meet the various requirements of different departments or even the whole hospital, enhancing your working efficiency. In addition, the BeneVision Central Monitoring System not only displays information from patient monitors but also from peripheral devices such as ventilators connected to patient monitors via the BeneLink module, improving patient safety. And alarm statistics tool can help to find out meaningless alarms, assist to change alarm setting and reduce alarm fatigue.

