

Intelligent Healthcare Communication Systems

www.zkr.com.tr



#### Pure IP

ZKR Comfort and Versatile series are pure IP systems with fully structured cabling, allowing for detailed and easy device fault monitoring with different notifications for different types of failures, such as power loss, disconnection, major malfunction, etc. The system can also update the software of all of its component units through the network automatically.

## Middleware Integration

Integration Software is the process of combining data from many different sources, typically for analysis, business intelligence, reporting, or loading into an application. Our systems take one step further and work as Middleware – as a bridge between different software.







- Patient Monitoring Integration
- HIS (Hospital Information System)
- Fire Alarm Integration
- PBX Integration
- **Building Management System**
- Infant Tracking
- Public Voice Address Integration

#### Web-Based Server Interface

We offer fully backed up server options with hot swap capabilities based on hospital demand to ensure continued service.

Our systems work from a single server with a user-friendly web-based Application and Reporting Interface allowing you to monitor what types of calls were made when and which personnel responded to them, as well as the use of the MCW One mobile application, detailing when personnel received and read messages and calls, and when they declined calls, etc.



# €iMiT



## Flexible Software -Workflows and Efficiency

Our systems are tailored to your requirements. Our flexible software allows us to accommodate user-designed workflows through intelligent call routing. Calls and alarms need only go to the relevant assigned staff, reducing general alarm fatigue and promoting a healing environment—helping you supply efficient quality patient-care and manage your most valuable resource: time.



## Fully VoIP Structure

Voice calls can be made in the Versatile Plus and Comfort systems, from room to room, nurse station to room, nurse station to nurse station, patient handset to nurse station, and from the MCW One mobile application to any of the units connected to the system.

At the institution's request all voice calls made on the system can be stored on the central ZKR application server, and listened to at any time.



#### Modern Room Control

Our Room Control Units are touchscreen, with easy to navigate menus and clear indicators regarding the connection status and active call statuses. These menus are configurable to the needs of the hospital. Highly configurable room control units allow new custom types of emergency calls, consultation calls to any hospital branch specified by you, different quantities of connected pull-cord or wall button type call points, etc.



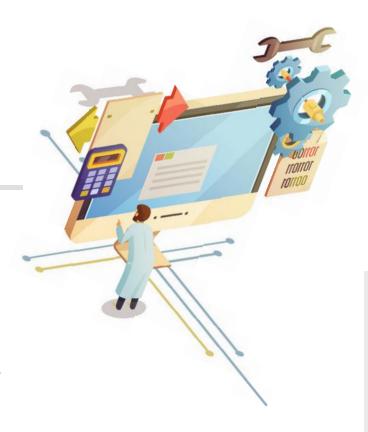
#### Scalable

The system is scalable and modular, and unlimited in scope. Our Intelligent Healthcare Communication Systems easily grow with your hospital and respond to your needs without needing to completely reinstall already installed portions of the system.

### Easy Maintenance

ZKR system comprises of easy maintenance modules. Our systems can scale from 10 beds to 10,000 beds with no problems and expand with your institution in the future.

All equipment within the system detect any failures automatically within 30 seconds and generate Failure Notifications to the assigned technical teams of the institution. In this way accurate address error information is sent to the right people quickly and reliably



## Stability and Backup

The ZKR system architecture was designed to be 99.95% operational.

Thanks to fully structured cabling, one malfunctioning unit or cable does not affect other units.

In case of a Nurse Panel malfunction, calls will automatically be forwarded to another Nurse Panel defined within the system, and the system will continue normal functionality through the other Nurse Panel uninterrupted.

All system logs are kept centrally in the local ZKR application server, and automatically backed up. These logs can be monitored through a web based interface by any authorized personnel from any computer on the network. The logs can be exported to a spreadsheet or printed.





# ZKR Product Family







#### **PATIENT DEVICES**

The patient handset allows the patient's condition to be reported quickly to the hospital staff in an emergency situation. These products vary according to the model of solution. With different handset models, patients can make internal and external phone calls, call for their needs, and control the TV and lights.

## **Comfort VoIP Handset**





#### **Pro Handset** ZKRUNCIPHS10200



#### **Basic Handset** ZKRUNCIPHS10100 ZKRUNCWRHS10100





## **Room Control Units**

#### Comfort **Room Control Unit 10"** ZKRUNCIPCNFRMC002



## Versatile Plus **Room Control Unit 5**"





## Versatile Room Control Unit 4.3"



#### Air Plus **Room Control Unit** ZKRUNCWRRMCN100



#### **Call Unit Devices**

**ROOM DEVICES** 

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#### **Bedside Call Unit** ZKRUNCIPWL10100 ZKRUNCWRWL10100











#### VoIP Pull-cord Call Unit







## **Custodial Cell Call Unit**











#### GROWING DEMANDS OF MODERN HOSPITALS

The ZKR product family includes a wide range of products that have easy integration with each other. Inter-compatible products enable us to offer more flexible solutions to meet our customers' requirements.

#### STAFF DEVICES

Staff devices are used to receive all call types. All logs can be reported on staff devices in detail.

## **CORRIDOR DEVICES**

Corridor devices are used to help the operation of other devices, and they are easy to use.

#### **CONTROL DEVICES**

Control devices control the operation of all systems and provides logs to hospital.

#### **VoIP Nurse Control Panel 10"**







## Senset 3 Input Module ZKRUNCIPIZLMODI



## VoIP Nurse Control Panel 7"







## Function Control Module ZKRUNCIPRMLK100



## Central Monitoring Software ZKRUNCIPCNTMNTI8



#### Text Panel



Pager ZKRUNCIPPOSPG10

#### **ZKR** Application Servers









Application Server M30 ZKRUNCIPSR10300



Air Application Server





## MCW One

ZKRUNMCWTER1100









# Logs and Reporting

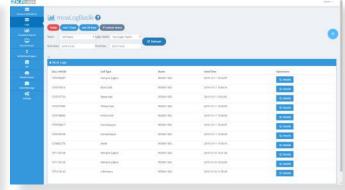
Our web-based server interface allows your hospital to access the server settings and event logs from anywhere on the hospital network. Simply open a web-browser on any computer on the same network as the server, and type in the server's IP address. After logging in, technical personnel can define rooms and teams on the server without interrupting the functionality of the nurse call system.

Here hospital administrators can also view filterable call logs, with all relevant data, including call type, timestamps, and elapsed time for both nurse response and nurse presence. Thanks to our RFID card-based system, administrators can see which nurses respond to the most calls, and how they are spending their time. All of this data can be viewed as easy-to-read graphical reports, so that the hospital can use real data to decide how better to manage their resources.



If the system ever needs an update in software, or a change in configuration with help from headquarters, we can connect to a hospital technician through the internet and access the server directly to provide the hospital with support. There is no travel time or travel expenses, we are by your side, wherever you need us.

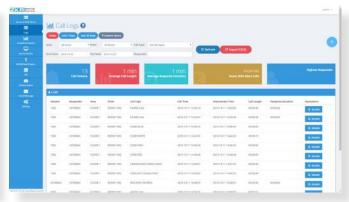




Number of Calls per Call Type

| Management | Man

MCW Usage Logs



Statistics of Answered Calls

Call Event Logs



# Integration Software

We are very flexible with software integration with different systems used throughout the hospital. The following are some examples of integrations we support, but anything is possible—we work together with you to find the best solutions to improve the quality of service and save time and future costs for the hospital.

## **Middleware Functionality**

The ZKR system can function as middleware for multiple different systems and allow all integrated systems to intercommunicate to achieve their full potential in functionality. All integrated systems can be monitored from a single operation center screen.

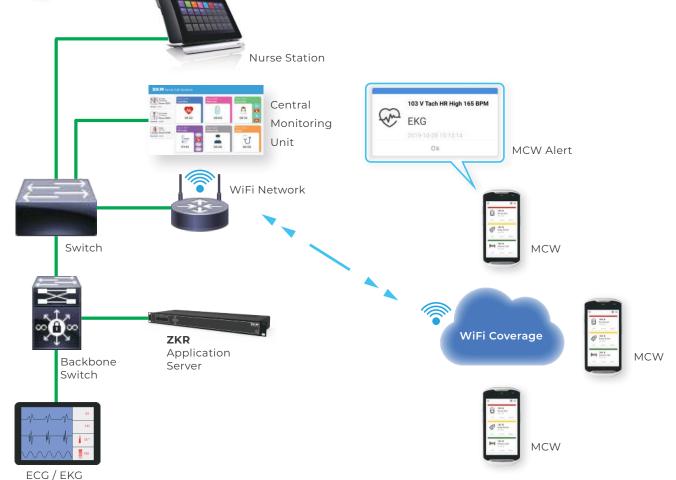


## Patient Monitoring Integration



Integration with patient Monitoring Devices such as Saline Solution Controller, allowing nurses to be automatically notified when the saline solution is running low or Pressure Pads which allow configurable automatic alarms to be sent to nurses when a patient leaves his bed, or when he has fallen out of bed. It can also trigger automatic emergency calls when medical devices such as ECG/EKG monitors give alarm.

Supported protocols: TCP/IP (Server, Client), IP HL7, Rest Web Services





## Hospital Information System

Integration with the Hospital Information System allows the demographic data, lab results, and EMG unit alarms relevant to call initiating patients to be displayed on the Room Control Unit screens, Nurse Control Panels, or even MCW One enabled smartphones.



This integration also allows nurses to view information such as allergy notes about the patient simply by pressing his bed icon on the Room Control Unit. Interactive hospital meal menus from HIS can be placed in the Room Control Units allowing the patient or their attendant/companion to easily order meals for the patient directly from the Room Control Unit touchscreen. Supported protocols: IP HL7, Rest Web Services

Nurse Station Central Monitoring Unit ľ Switch WiFi Network MCW HIS Client Application Backbone Server Switch HIS Server Switch

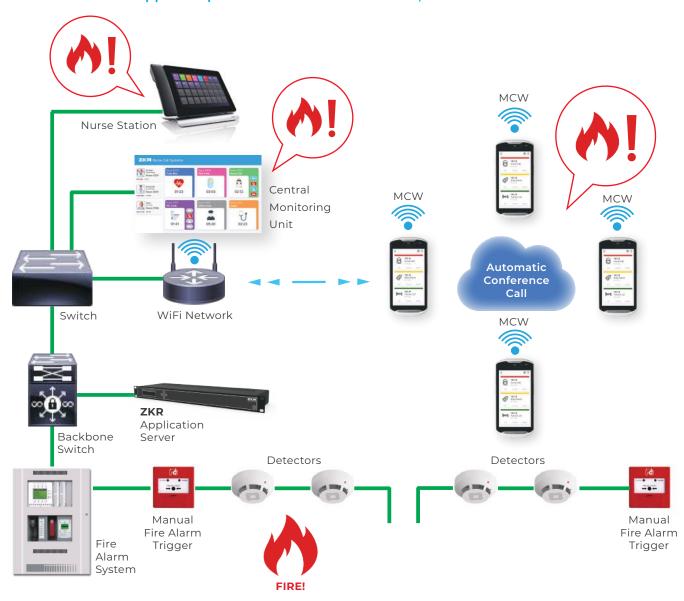


## Fire Alarm Integration



Integration with Fire Detection Systems allows the system to show the origin of the alarms on the nurse control panels of relevant zones and send this information to the communication devices (MCW One enabled smart phones, pagers, DECT phones, and WiFi phones) of the personnel that need to know. The system can also automatically trigger conference calls for Fire Safety teams on MCW One allowing clear communication for faster safer response plans.

Supported protocols: Rest Web Services, Modbus IP



### **PBX** Integration



Integration with the hospital telephone switchboard to allow for Internal and External calls from patient handsets with automatic billing, and initiation of various custom emergency codes from any telephone in the hospital (eg. 2222 for code pink: child abduction, etc.)

Supported protocols: SIP, Analog FXS



## Building Management System Integration

Integration with Building Management Systems such as lighting automation allow the Intelligent Healthcare Communication System to automatically turn on the lights of corridors where a nurse call is triggered, helping nurses reach where they are needed.



When combined with HIS (Hospital Information System) integration, we can automatically cut power to empty rooms in the hospital and turn on the power to these rooms when a patient is booked to them in the HIS, saving power and money for the hospital.

Supported protocols: Rest Web Services, Modbus IP



## Infant Tracking Integration

Integration with Infant Tracking Systems allow an alarm to be sent to relevant nurse control panels and communication devices of relevant personnel when a baby is taken out of "safe zones". This can be combined with Access Control System integration if available to lock down specified areas of the hospital automatically when the infant alarm is triggered.





### Public Voice Address System Integration

Integration with general and emergency voice alarm systems allows you to make SIP-based announcements to selected zones through VoIP-enabled Nurse Control Panels. With this integration the hospital doesn't need separate expensive microphones for these announcements, because they can be made through the built-in handset of the Nurse Control Panel.



Supported protocols: SIP



Over 750 systems installed worldwide.

Over 38 million patient served.



Bilkent Integrated Health Campus 3660 Bed Capacity Partnership with Siemens - Fully Integrated System



Adana Integrated Health Campus 1550 Bed Capacity



Eskişehir Integrated Health Campus 1080 Bed Capacity

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