



IoT Health Solution for Elderly Care with SaaS Offering

By HKC

Cice Smart Health Care System

Mission

**Improve the quality of
life through Digital
Transformation**

Vision

**Add Life to Digital
Transformation**



Why you should subscribe SaaS?



Cost Effective

- economical solution without compromising on efficient features
- no local servers and reduced IT expenses
- reduce maintenance costs
- low set up costs
- lower costs of ownership



Security

- multiple security features to keep the patient data secure
- keep private health information and sensitive data safe



Accessibility

- easily accessible from anywhere via mobile device or any internet browser
- 7X24X365.



Scalability

- add resources to existing operations to increase their performance and meet the increasing workloads.
- modular design allows you to buy what you need today and scale up or down in the future
- easily be scaled with a simple upgrade within the subscription



Real-Time Updates

- every nursing specialist will have the latest updated information, which will help them provide better care.
- Streamline your work
- work efficiently
- save time
- maps integrated with Real-Time Data



Back-up

- continuously back up all data.
- avoid risk of losing all data in case the servers crash.

Benefits

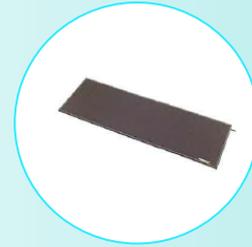
Buy or Lease Nursing Care Products as you need



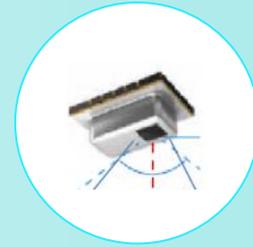
Call Unit Bedside /
Bathroom / Toilet



Bed Exit Alarm



Anti-wandering



Toilet Fall Detection



Vital Sign Monitoring



Real Time Location
Tracking



Room & Bedhead -
Display & Control



UV-C Disinfection
Machine

Bedside Call Unit (With Voice Call Version)



Functional Features:

- One large round button for nurse call with nurse symbol on both panel and call cord
- Contain build-in speaker on panel and microphone on both panel and call cord for patient and staff active communications
- Call unit will send out alert signal to the CCMS Console for real time record
- Monitoring staff's service by recording the respond time

Bedside Call Unit (Without Voice Call Version)



Functional Features:

- Large Call buttons for Bedside Call Unit and Emergency Call Cord
- Bedside call unit will send out alert signal to the CCMS Console for real time record
- Two Color Indication Lamp :
 - Orange for standby
 - Red for call alarm
- Can provide reset function
- Monitoring staff's service by recording the respond time

Bedside Call Unit

Specification for Bedside Call Unit:

- Model : NBDR - D1 / D2
- Color : White
- Size and Weight :
With voice call version : 190.8 x 86 x 15mm (W x H x D), 120g approx.
Without voice call version : 88 x 88 x 16.4mm (W x H x D), 90g approx.
- Panic button size : 25mm X 25mm
- Buttons and Connectors
- Emergency Button
- 3.5 mm jack for Call Cord Connection
- Light - 2 Colors : Orange and Red
- Power - DC 12V~ 19V (+-5%)
- Standby current : 200mA approx
- Environmental Requirement
 - Operating ambient temperature : 0 to 35C
 - Relative humidity: 5% to 93% noncondensing
- Certification : CE
- Installation: Fit for BS4662 mounting box.



NBDR - D1



NBDR - D2

Call Cord



Specification for Call Cord:

- Model : BD-C-D1
- Color : White
- Size and Weight : 78x42x16mm (Width x Height x Depth), 50g approx.
- Buttons and Connectors
 - One Emergency Button
 - 3.5 mm plug for connection to Bedside Call Unit
- Cord length : 2 meter approx.
- Environmental Requirement
 - Operating ambient temperature : 0 to 35C
 - Relative humidity: 5% to 93% noncondensing
- Bracket for mounting (optional)
- Indication Lamp for Call Cord (optional)
- Can add one 3.5 mm jack to connect to bed alarm monitoring devices/bed pad provided by others in parallel with the call cord. (optional)

Bathroom/Toilet Call Unit



Functional Features:

Patient pull the cord to call nurse / alert the alarm for emergency

Location information report to the central control office

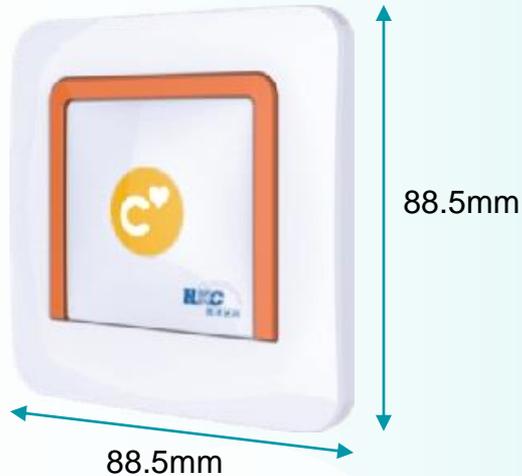
Two Color Indication Lamp :

- Orange for standby
- Red for call alarm

Water-proofed

Can provide reset function

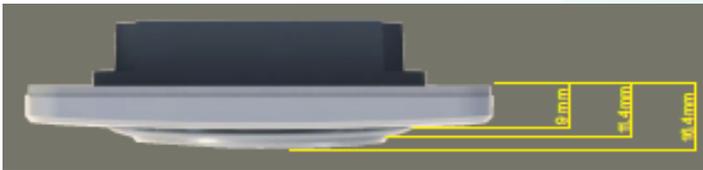
Bathroom/Toilet Call Unit



Specification :

Specification

- Model : TC-D2
- Color : White.
- Size : 88.5 x 88.5 x 16.4mm (Width x Height x Depth).
- Power: DC 12 V \pm 5%
- Working Current: <20mA
- Buttons and Connectors : Emergency Button
- Light : 2 Colors : Orange and Red
- Environmental Requirement
 - Operating ambient temperature : 0 to 50C
 - Relative humidity: 5% to 93% noncondensing
 - Water-proof IP65
- Certification : CE
- Installation: Fit for BS 4662 mounting box.



Operation Work Flow

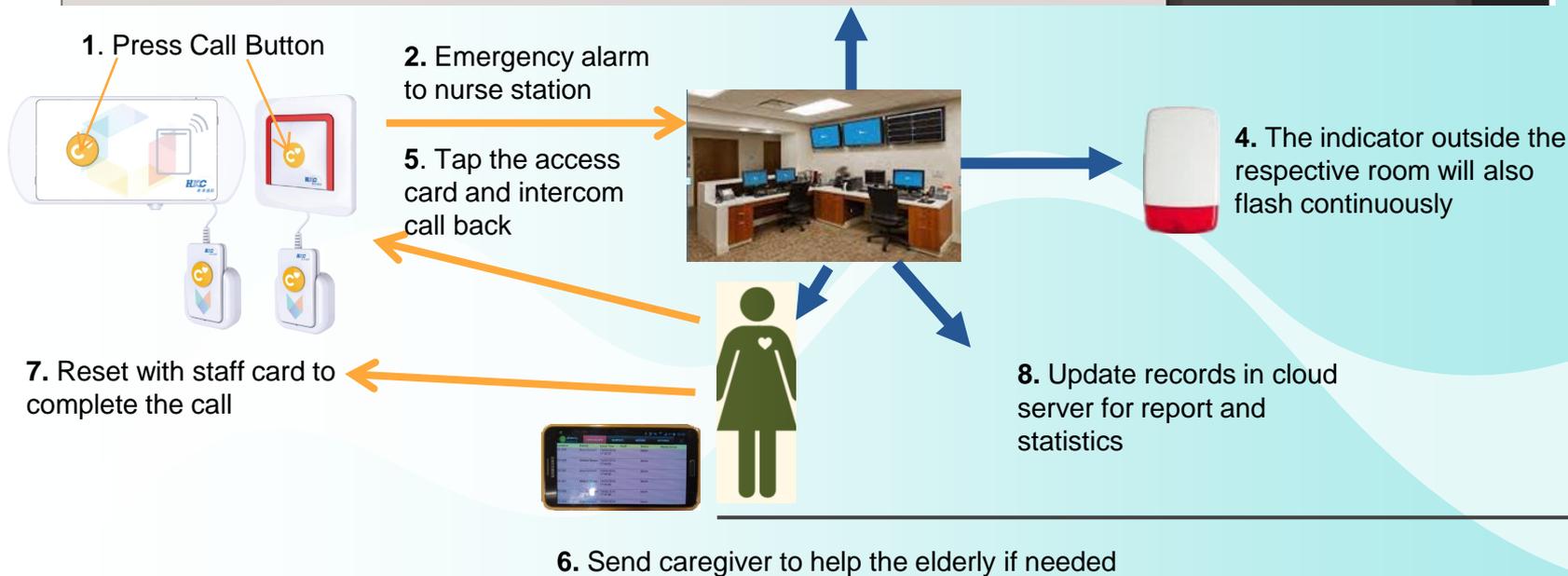
- The notification will include
 - the elapsed time,
 - client's details (name, age, gender, location),
 - and the status on screen will appear to be 'Alarm'.

Live Call(2)	Alert(8)	History	Statistics	Report	Settings
Name	Location	Device	Elapsed Time	Staff	Status
Wong Qing	Rm 701-1	Bedside Call	00:00:12		Alarm
Yeung Fong Jeung	T3_13E Unsafe	Portable Device	00:29:11		Alarm_Remind

Emergency

Bedside Call / Rm 701-1
03/10/2015 14:13:21

 Wong Qing, Female, 57 years old
Address: Rm 701-1
Contact Name: Li Mei
Contact Phone: 32121111
Remark:



UWB PRECISE POSITIONING

Locate patient and device with accuracy of centimeter level



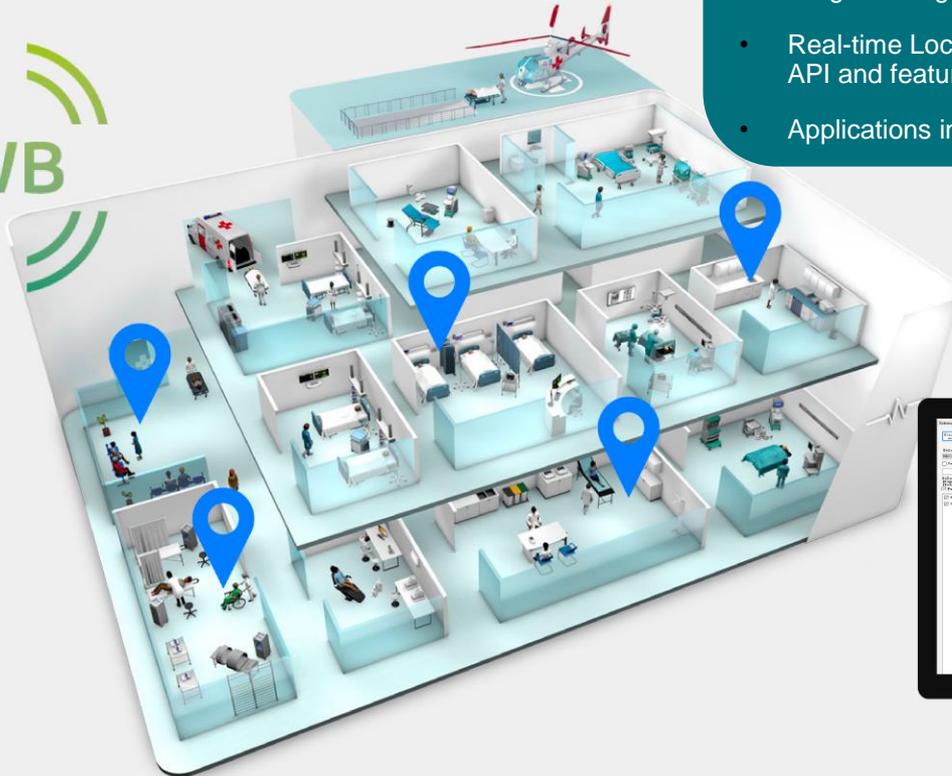
- Armband, lanyard, wristband
- Long battery life
- Li-ion battery
- Programmable buttons

UWB Tag



- UWB Anchors
- Line of sight triangulation
- 3 or more required per space

UWB Anchor



- High precision to centimeter level Ultra Wideband (UWB)
- 3 Anchors for accurate triangulation of position
- Long battery life. Adjustable update frequency
- Panic button built into the tag
- Programming input buttons for advance application
- Real-time Location System (RTLS) Server with powerful API and features
- Applications include contact tracing, alarm location



Real time location system

BLUETOOTH BEACON PRECISE POSITIONING



Wristband BLE Tag



BLE Gateway

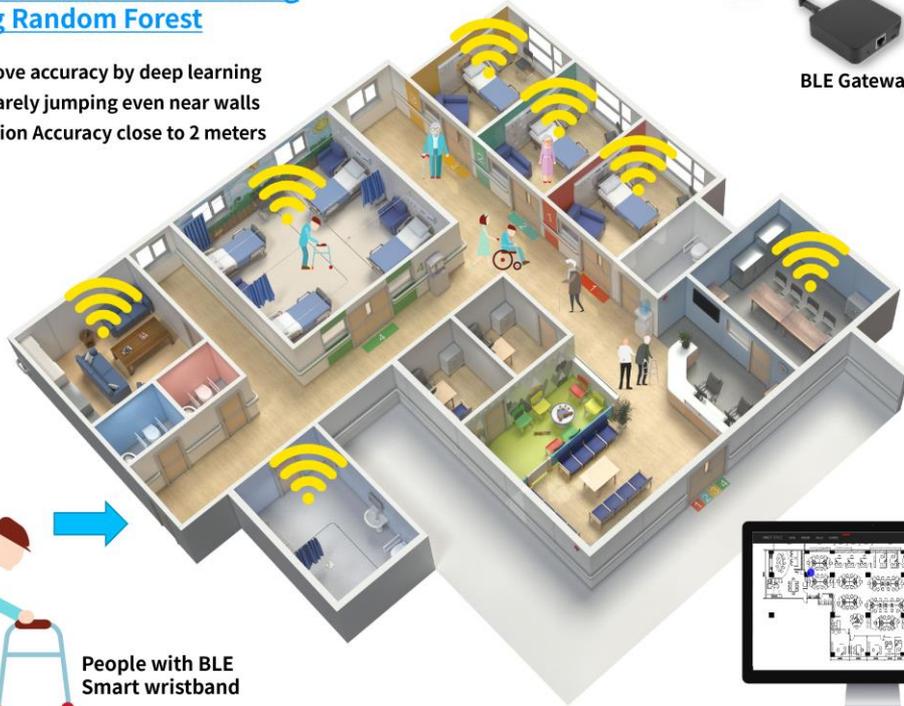
AI assisted Machine Learning using Random Forest

- * Improve accuracy by deep learning
- * It is rarely jumping even near walls
- * Location Accuracy close to 2 meters

1



People with BLE Smart wristband



- Zone-based Indoor positioning
- Very long battery life. Low battery indicator
- Electronic key for smart locks
- Waterproof, high quality silicone

2



BLE Gateway

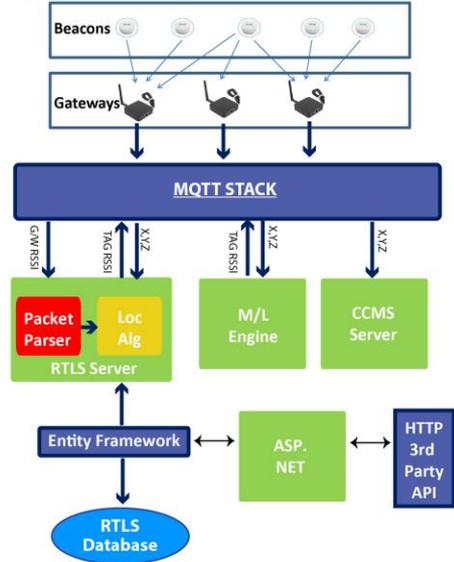


Wi-fi

3



Server



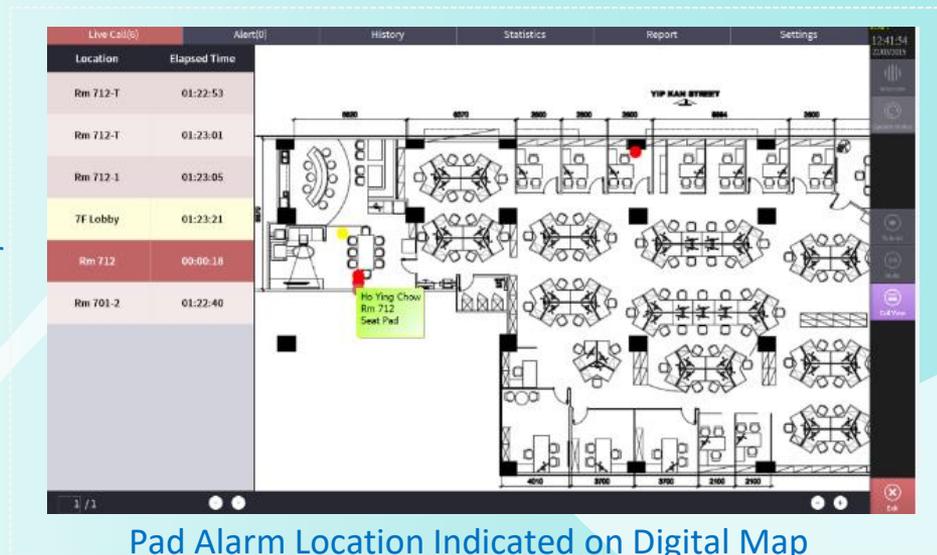
RTLS System

Seat & Bed Pad Alarm

Nurse will be alerted once the patient leaving the bed or wheelchair to avoid falling down.



Seat Pad with wireless Transmitter

Location	Elapsed Time
Rm 712-T	01:22:53
Rm 712-T	01:23:01
Rm 712-1	01:23:05
7F Lobby	01:23:21
Rm 712	00:00:18
Rm 701-2	01:22:40

Ho Ying Chow
Rm 712
Seat Pad

YIP KAN STREET

Pad Alarm Location Indicated on Digital Map

Anti-wondering

Integration of Real Time Location System (RTLS) & RFID tag to provide Anti-wandering system. The RFID tag is placed under the insole of shoes. Nurse will be alerted once the patients walking out of the entrance.



Floor Plan - 7/F RCHE
03:14:49 PM - 06/10/15

Location	Elapsed Time
T2-13E	02:14:04
Rm 701-4	27:47:46
Rm 701 Toilet-1	27:47:46
Rm 701-3	27:47:45
Rm 701 Toilet-2	27:47:47
Rm 701 Toilet-1	27:47:47
Rm 701-5	27:47:47
Rm 701-1	27:47:55
T3_13E Unsafe	70:11:28
T2-13E	71:44:42

Real Time Tracking on your floor plan



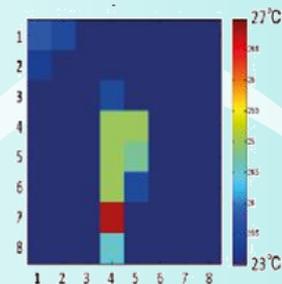
1 / 2

Residents location are shown in the digital map

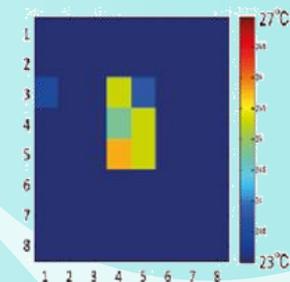
Toilet Fall Detection



- IR thermal sensor for perfect privacy for living space and washrooms
- Fall detection
- Occupancy detection
- Activity tracking
- No need to wear a device
- Always work



Temperature distribution when thermal sensor detects a human falling below the sensor. The number of high temperature pixels is larger



Temperature distribution when thermal sensor detects a human in normal state

Vital Sign Monitoring



- SaaS Cloud-based service analytics
- Health-data Collection System which can be integrated with personal electronic health records.
- For health profession remote and long-term monitoring
- Abnormal data alert to nursing staff

Wearable ECG Sensor



Data Parameter

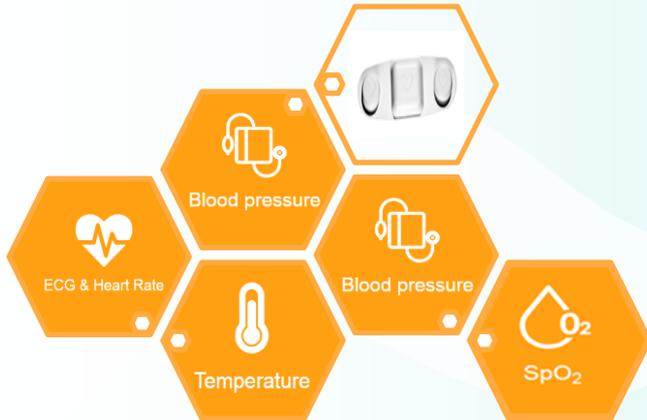
- ECG Rhythm
- Heart Rate
- RR-interval
- Respiratory Rate
- 3-Axis Accelerometer

Cardiac Patch Specs

- Up to 120 Hour Rechargeable
- Up to 96 Hour Cache
- IPX7 Water Resistant
- BLE Network
- Size: 90 x 20 x 7.9 mm
- Weight: 7.5 grams

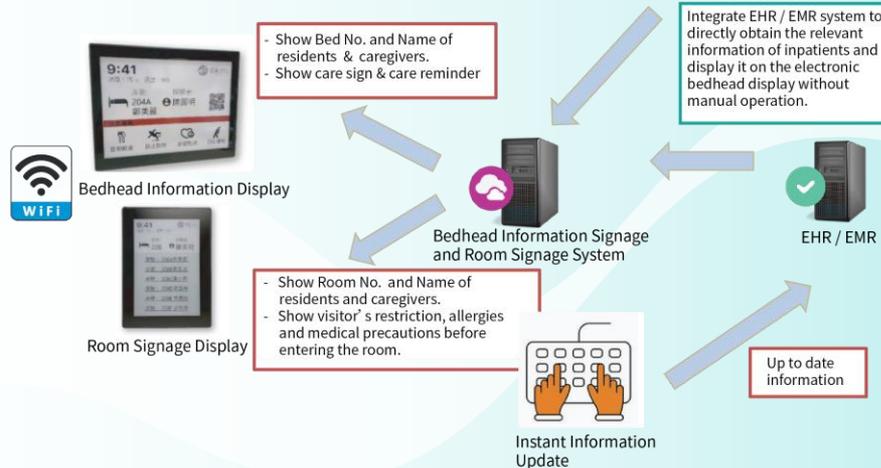
Data Specs

- 128 Hz ECG
- Heart Rate: 40 to 300 bpm
- Respiratory: 5 to 35 brpm
- 3-Axis ACC; 5 Hz
- FDA/NMPA: ECG, Heart Rate
- CE: ECG, Heart Rate, Respiratory



Care Service Management System

The Bedhead Patient Care Signage and Room Signage can connect wirelessly to the EHR / EMR system of Hospital or Elderly Home for real-time update of patient's critical information. Layout and content can be customized to show room identification and patient care sign such as visitor restrictions, allergies or medical precautions. Through paperless digital system integration, all nursing staff has timely up-to-date patient information at a glance for accurate and effective communication to avoid medical and nursing mistakes.



- Patient journey optimization for automatic scheduling of care service tasks to be performed by staff
- Mobile devices for easy access of daily to-do list
- Reminders and alerts
- Improve workflow efficiency
- Enhance communications between shafts
- Mitigate risks
- Upgrade quality of care

Patient Room Door Sign

- Show patient names and bed location
- Alert visitor restriction, allergies or medical precautions to clinicians and visitors
- Patient care team information
- Easy to read
- Easy installation
- Long battery life. Information always on, even during power outage
- No light pollution to disturb patients



Patient Care Sign

- Connect wirelessly to HER and EMR system for real-time update
- Show patient alerts: visitor restrictions, allergies, medical precautions
- Medical conditions
- Medications prescribed and schedule
- Optional nurse call button and response time stamp

Prevent Covid-19 with UV-C



UV-C Disinfection Machine

UV-Wavelength
254nm (UV-C rays) x 6 (36W) CE Certified

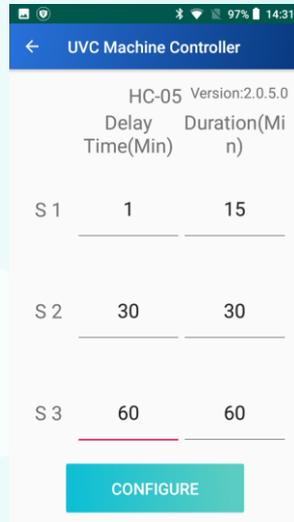
Human Detection IR Sensor (Max. 6 meters)
UV-C lights will automatically turn off if someone approaches

Rotation Reflector
Rotation reflector for protection of UV-C lights

Personal Hygiene and Care

360 ° Disinfection Coverage

Installed with silent universal brake wheels and timer , easy and light weight to operate



- 99.99% elimination of pathogens (including airborne) using 254nm UVC
- Safe and reliable control using timer and App
- Human IR sensor to stop operation if someone enters the space
- Reduce public area infection and lower operation costs
- Relief disinfection workload in shortage of healthcare personnel
- Lab certified

Software Demonstration

Cice Smart Health Care Software

A paid service provided by HKC for remote monitoring all devices & sensors.



Patient Focus



Performance
Management



Information Systems



Integration of Care
Takers



Device Status
Monitoring



Reducing
Disparities

Cloud-based Central Control and Monitoring System Dashboard



香港通訊

5 / 5 / 2022 10:01
ENG 中文(繁體) 中文(简体)
User Name : Mary

Hello Mary !

 **25° C**
Outdoor temperature

 **95%**
Humidity

 **Cloudy**

 **Bathroom Call : 5**

 **Bedside Call : 20**

 **Small Bedside Call : 20**

Floor Plan View

Alarm Control

Update **Mute**

Alarm Detail
Location : RM104
Alarm Type : Bedside Call Unit

 **Name : Chan Li Fung**
Gender : F Age:70
Address : Room 104
Remark : Heart Disease

Alarm

Alert

History

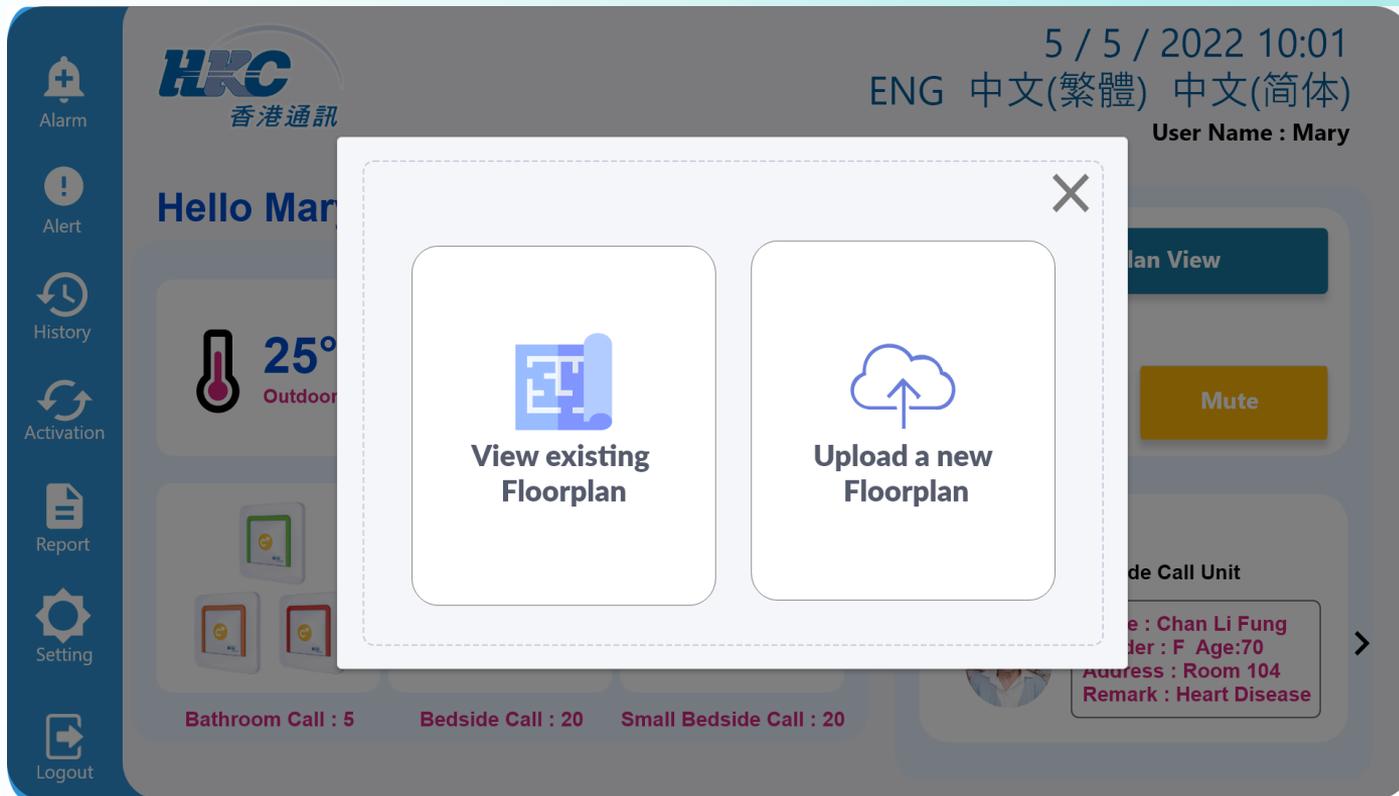
Activation

Report

Setting

Logout

Upload A New Floor Plan / View Existing Floor Plan



The screenshot displays the HKC mobile application interface. At the top right, the date and time are 5 / 5 / 2022 10:01, and the user name is Mary. The interface includes a navigation menu on the left with icons for Alarm, Alert, History, Activation, Report, Setting, and Logout. The main content area shows a weather widget with 25°C Outdoor, a 'Hello Mary' greeting, and a 'Floorplan View' button. A modal dialog is open in the center, containing two options: 'View existing Floorplan' (with a floor plan icon) and 'Upload a new Floorplan' (with a cloud and upload arrow icon). Below the modal, there are call statistics: Bathroom Call : 5, Bedside Call : 20, and Small Bedside Call : 20. On the right, there is a 'Mute' button and a patient information card for Chan Li Fung, a 70-year-old female with a heart disease, residing in Room 104.

Drag and drop the health care devices onto specific location

- Alarm
- Alert
- History
- Activation
- Report
- Setting
- Logout



5 / 5 / 2022 10:01
ENG 中文(繁體) 中文(简体)
User Name : Mary

Drag and drop the devices to the actual location on the floor plan



Floor Plan
1/F



Bathroom Call : 5



Bedside Call : 20



Small Bedside Call : 20

Save

Back

Clearly state the location of all devices

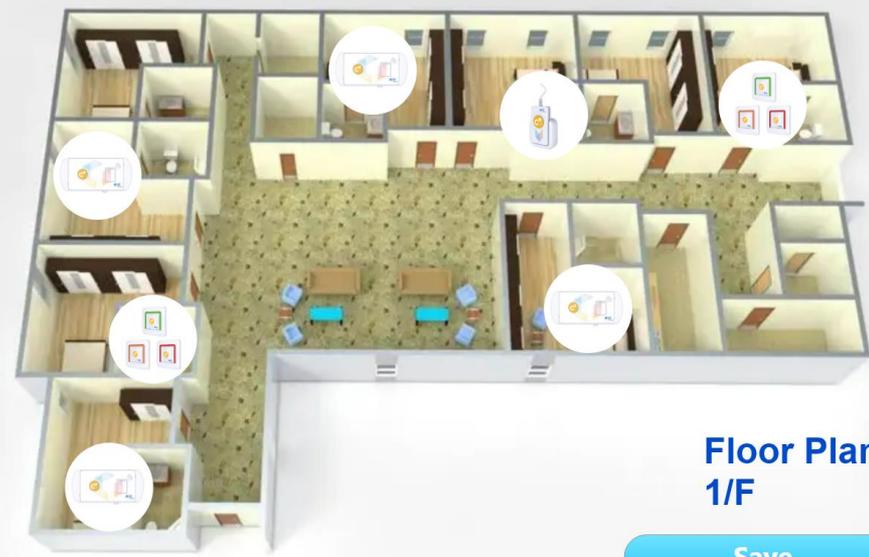


香港通訊

5 / 5 / 2022 10:01
ENG 中文(繁體) 中文(简体)
User Name : Mary

- Alarm
- Alert
- History
- Activation
- Report
- Setting
- Logout

Drag and drop the devices to the actual location on the floor plan



Floor Plan
1/F

- Bathroom Call : 5
- Bedside Call : 20
- Small Bedside Call : 20

Save Home

Clearly state the location of all devices

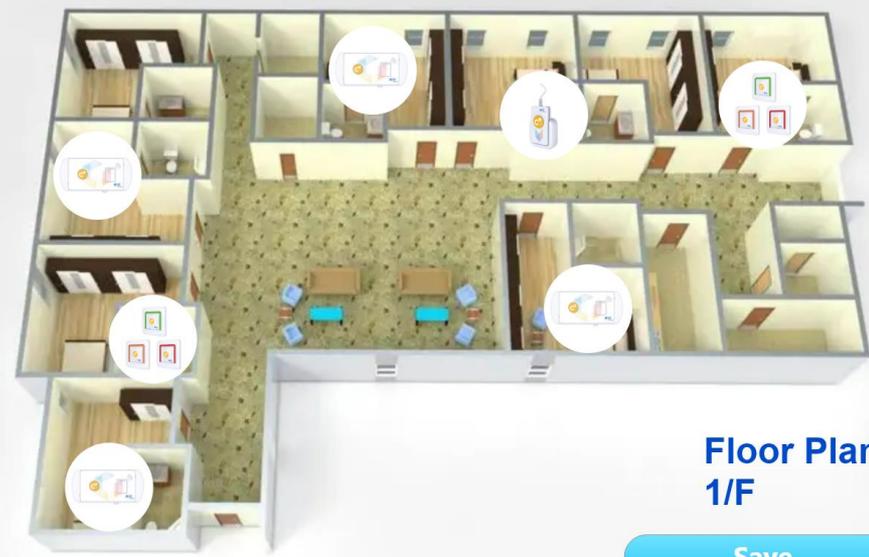


香港通訊

5 / 5 / 2022 10:01
ENG 中文(繁體) 中文(简体)
User Name : Mary

- Alarm
- Alert
- History
- Activation
- Report
- Setting
- Logout

Drag and drop the devices to the actual location on the floor plan



Floor Plan
1/F

- 
Bathroom Call : 5
- 
Bedside Call : 20
- 
Small Bedside Call : 20

Save Home

Device List


Alarm


Alert


History


Activation


Report


Setting


Logout



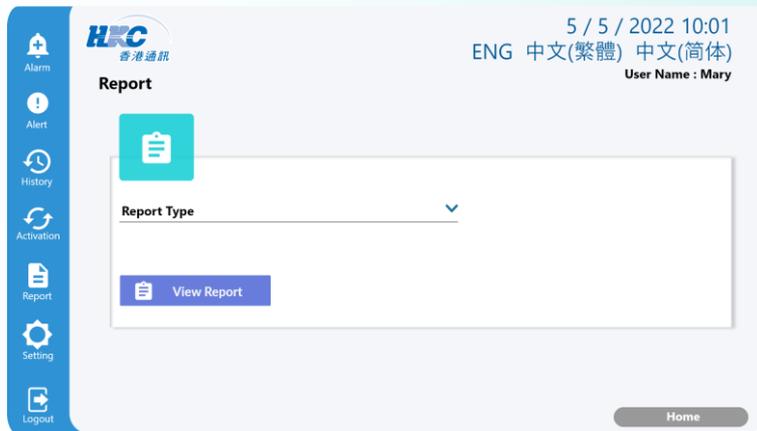
5 / 5 / 2022 10:01
ENG 中文(繁體) 中文(简体)
User Name : Mary

Alarm List G/F , 1/F

	Name	Location	Device	Elapsed Time	Status	Staff
1	User1	1A	Bedside Call Unit	11:34:16	Active	 
2	User2	1B	Bedside Call Unit	11:35:16	Active	 
3	User3	1C	Bedside Call Unit	11:36:16	Complete	
4	User4	1D	Bedside Call Unit	11:45:16	Complete	
5	User5	1E	Bedside Call Unit	12:00:16	Complete	
6	User6	1F	Bedside Call Unit	12:13:16	Complete	
7	User7	1G	Bedside Call Unit	12:30:16	Complete	
8	User8	1H	Bedside Call Unit	12:45:16	Complete	

Home

Summary Report Setting / Select Different Color Theme



5 / 5 / 2022 10:01
ENG 中文(繁體) 中文(简体)
User Name : Mary

Report

Report Type

View Report

Home



5 / 5 / 2022 10:01
ENG 中文(繁體) 中文(简体)
User Name : Mary

Setting

Version : 1.0.1

Select Floor

G/F 1/F 2/F 3/F 4/F

Select Theme Color

Blue

Home

THANKS!



HKC Marketing



HKC 香港通訊



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