Smart Healthcare Solutions from Taiwan
- iMADC Medication Management System

Enabling Intelligent Healthcare by AIoT

intel® | IOT Solutions Alliance   HIPAA COMPLIANT   Microsoft Azure

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2023 Q4

Company Background

2016 — Company Founded

2017 — Develop and install the 1st Medical Material Delivery Robot in Taiwan

2018

2019 — Taiwan Business Weekly Interview

2020 — Business Next Neo Star TOP 30

2021

2022 — Establish imedtac (Thailand) Co., Ltd.

Help design Yuanlin Christian Hospital The 1st smart hospital in Asia

Win 2017 InnoAward of Taiwan

Establish Shanghai branch & Wuhan RD center

ADC Win 2019 InnoAward of Taiwan

Win 2021 ASOCIO Award

Facts of Company

- Found in 2016
- Group employee 105
  Taiwan. China. Thailand
- Major Investor

  CHT / Inventec / New Kimpo / ABICO Group / Taiwan National Development Fund

Ken Yu
CEO

Jason Miao
Sales Director

Beren Hsieh
Thailand Branch Manager

imedtac — Transforming Healthcare Through AIoT

中華電信 Chunghwa Telecom

英業達 Inventec

金寶電子 Kinpo Electronics, Inc.

AUO Display Plus

行政院國家發展基金管理會 National Development Fund, Executive Yuan

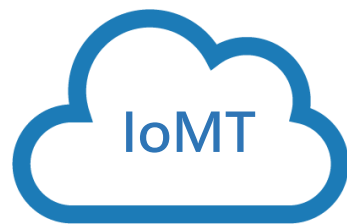Transforming Healthcare Through AIoT

The strength of imedtac

Study in-depth about the needs in hospital

+

Have great experience with the latest IoMT technology

=

Stockholders
- ✓ Doctor
- ✓ Caregiver
- ✓ Patient

Topics
- ✓ Improve efficiency
- ✓ Decrease human error
- ✓ Optimize operation

IoMT

IoMT application
- ✓ Epaper
- ✓ Pressure sensor
- ✓ ToF sensor
- ✓ Medical device
- ✓ AI engine
- ✓ Identification
- ✓ Robot
- ✓ RTLS, etc.

Informatization

Intelligentization

Interconnected

The smart healthcare solutions provide integrate latest IoMT technology into world-class healthcare system

- ✓ System integrate
- ✓ Software develop
- ✓ On-site optimize
- ✓ Cloud platform

An Enabler of Intelligent Healthcare Transformation

1

Smart hospital

We work closely with the caregivers in the hospital and provide our smart solutions to solve the problems and pain points that hospitals are forcing.

2

Smart healthcare

Provide instant vital sign and care information to the caregiver to release their workload which will achieve the data-driven care.

3

Health promotion

Leverage AIoT devices to help users manage their own health condition and achieve QoL, Quality of Life, goal.

Imedtac WW Smart Healthcare Success Case

Taipei Medical University Hospital
Provide: iMVS vital sign solution, iMWard smart ward solution

National Taiwan University Hospital Hsinchu Biomedical Park Branch

Provide: iMWard smart ward solution, Epaper door information solution, smart dialysis solution

Kaohsiung Medical University Chung-Ho Memorial Hospital
Provide: iMADC automated dispensing cabinet, smart operation platform, smart counter

MacKay Memorial Hospital
Provide: iMRobot-S service robot

China Medical University Hsinchu Hospital

Provide: iMWard smart ward solution, Smart room solutions

Kaohsiung Municipal Siaogang Hospital

Provide: iMADC automated dispensing cabinet

Taipei Municipal Wanfang Hospital
Provide: iMVS vital sign solution

Tri-Service General Hospital
Provide: iMRobot-L logistic robot

National Cheng Kung University Hospital

Provide: iMWard smart ward solution

Far Eastern Memorial Hospital
Provide: iMVS vital sign solution, iMRobot-T transportation robot

ChangHua Christian Hospital
Provide: iMVS vital sign solution, iMRobot-T transportation robot, smart counter, security management system for infant ward, smart operation platform, smart ICU

Yuanlin Christian Hospital
Provide: iMWard smart ward solution, iMRobot-T transportation robot, smart dialysis solution, smart counter, smart operation platform, smart ICU

Imedtac Thailand / Vietnam Smart Healthcare Success Case

Thailand

Thonburi Hospital. Bangkok Thailand
Provide : EPD iMWard. Nursing Station. Vital Sign Kiosk. ADC. ToF Patient Safety

Samitivej Hospital Bangkok Thailand
Provide : Smart ICU-MDI System

Samutprakan Hospital Samutprakan Thailand
Provide Vital Sign Kiosk iMVS-AIO

Overbrook Hospital. Chiang Rai,North. Thailand
Provide Vital Sign Kiosk iMVS-AIO

Bangkok Christian Hospital. Thailand
Provide : Vital Sign Kiosk iMVS-AIO

Vietnam

Shing Mark Hospital. Vietnam
Provide : EPD iMWard. Smart Nursing Station. Vital Sign Kiosk. ADC. ToF Patient Safety. iMQueeuing

Vietduc Hospital. Vietnam
Provide : Vital Sign Kiosk IMVS-AIO. iMTelehealth.

Hoa Hao Vinmec HCM Hospital. Vietnam
Provide Vital Sign Kiosk iMVS-AIO

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Imedtac Malaysia Smart Healthcare Success Case

Proposing

**ParkCity Medical Centre (PMC) ,
Ramsay Sime Darby Group**
-35 rooms Paediatric Ward ;
completed Jan 2023

Sg.Long Specialist Centre
Mock-up room in progress
New ward - 14 rooms; completion Q2

KPJ Puteri Specialist , Johor
Proof-of-Concept completed
Q4 2024 - 60 rooms ward

Thomson Medical Centre
Proof-of-Concept in progress
New ward - 36 rooms

Design In

KPJ Damansara Specialist Hospital (DSH2)
Proof-of-Concept & UAT completed
3VVIP rooms & Premium Ward
 completion Q2

**Gleneagle Hospital, Penang,
Malaysia**
Provide : EPD.

**PPUM , Kuala Lumpur,
Malaysia**
Provide : iMOR-Tele

Prince Court Medical Centre
Mock-up room completed
24 rooms Paediatric Ward

**HMI , Mahkota,
Malaysia**
Provide : EPD /
Nursing Station /
Bedside computer

AIoT Solutions In Smart Hospital

Smart Nurse Station

Infant tracking solution

Smart Dialysis

Telecare

Smart Ward

Smart Operation Room

Smart Clinic

Transportation Robot

Smart Counter

RTLS

Self-service Kiosk and Broadcasting

Vital sign kiosk

Reception Robot

Multimedia interaction

Logistics Management

6 (4+2) Category Helps Digital Healthcare Transforming

Smart OR Solution

Telehealth & Vital Collect

Telehealth Solution to *Deliver Timely, Specialized Care*

Medication Mgmt. / Patient Safety

Technology Disinfection
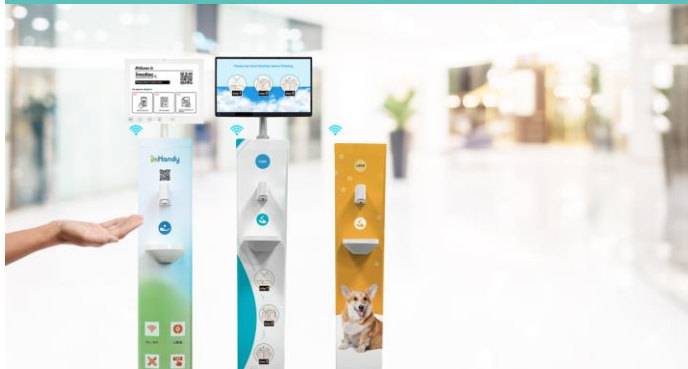
Clinical (Brain Care & HIFU)

Smart Animal Healthcare

Medication Safety

Smart Medication Management Solution Scenario

Medication storage

Drugs delivery

Pharmacy

Pharmacy Management System/ Hospital Information System

Nurse station

Special clinic

Bigger volume for Comprehensive management

Critical drug management

iMADC – Automated Dispensing Cabinet

Reduce the burden on the pharmacist

Reduce the burden on the nurse

Optimize the procedure of medicine dispensing

Decrease the preparation time of medicine dispensing

Improve the quality of patient care

Medicine inventory management

RFID Recognition	Face ID Recognition	Prescription scan	Medicine list	Drawer guiding	Dispensing record

Medication Management - ADC

Successful Cases

門診藥局(大)   病房(小)

Manage controlled/high-value medicines and reduce human error with automated dispensing control

Solution Benefits

✓ Able to integrate with EMR/HIS and synchronize with clinical orders

✓ Multiple authority management function: Password/ RFID badge to optimize medication security

✓ Real-time medicine inventory management, show medication log and statistics report

https://www.youtube.com/watch?v=HrJmwVX2d48

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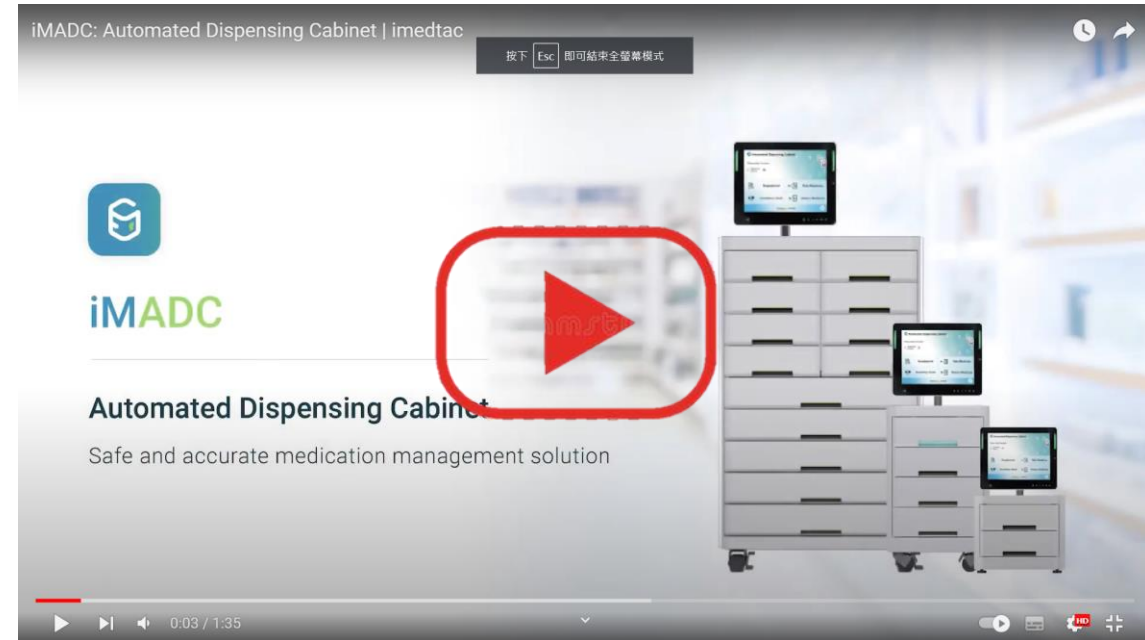
Benefits for Smart Medication Management

Pharmacist

- ✓ Medication safety
- ✓ Inventory management
- ✓ Replenishment notification
- ✓ Dispensing efficiency improvement
- ✓ Optimization of controlled drugs management

Nurse

- ✓ Dispensing work flow optimization
- ✓ Workload reduction
- ✓ Care quality improvement
- ✓ Medication safety
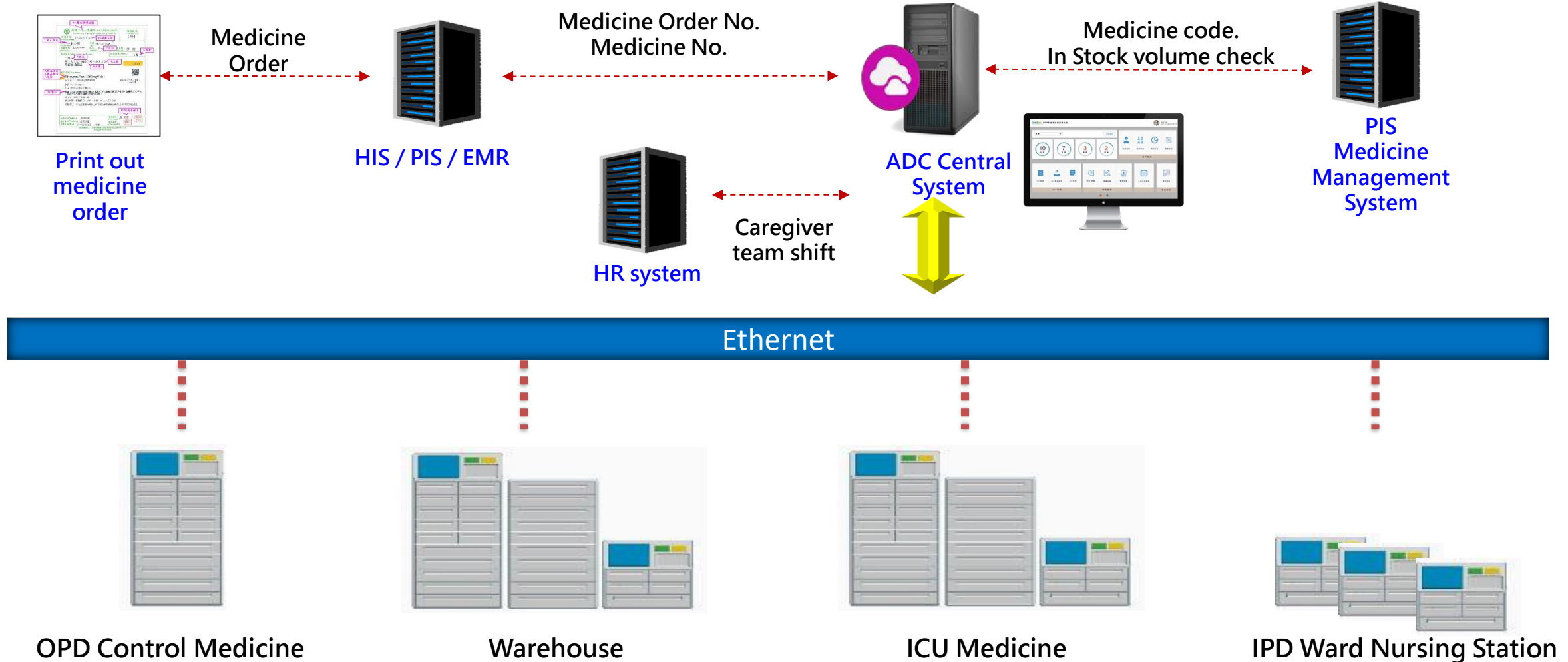- ✓ Timely prescription collection

Administrator

- ✓ Human error reduction
- ✓ Work flow optimization
- ✓ Operation refinement
- ✓ High level of compatibility
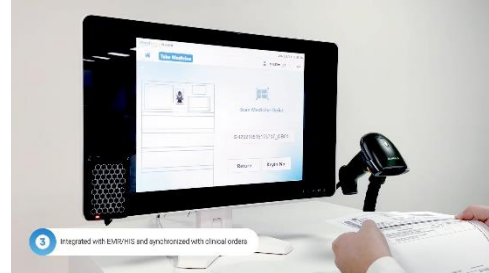
System Structure & Scenarios

Print out medicine order

Medicine Order

HIS / PIS / EMR

Medicine Order No.
Medicine No.

ADC Central System

Medicine code.
In Stock volume check

PIS Medicine Management System

HR system

Caregiver team shift

Ethernet

OPD Control Medicine

Warehouse

ICU Medicine

IPD Ward Nursing Station

\Integrate Cutting-Edge Technology

RFID Card reading

Medicine Order Bar Code Reading

Scan medicine order

- OPD
- ER
- UD

Medicine Use Listing

Drawer unlock

- Precise medicine management, avoid human error
- Reduce work load & malpractice claim

- Realtime Inventory Status
- Reduce overtime & overdue

Connecting with Caregiver Team Shift Schedule

Configurable Shift Schedule

HR Shift System

**HR Database
&
ID Card / PW /
Biological
characteristics**

Transforming Healthcare Through AIoT

Inventory Check after Each Use

Central Management Platform

ADC

- **Medicine Validity Period Management**
- Record each use, dept., user / doctor & consumption rate for supplement strategy.

iMADC-AIO-G3.0 Specifications

	Description

Specifications	1. Dimensions: 710(W)*700(D)*1520(H)(wheels included)(mm)
	 2. Material: SECC
	 3. Cleaning: wipe with 75% alcohol or diluted bleach
	 4. Ports: LAN Port (RJ45) x 1, USB Port x 1
	 5. Power: 1 (AC input 100~240V)
	 6. Monitor stand: 2-section (supports 10kg of weight)
	 7. Large drawer size: 700(W) * 110(D) * 580(H) (mm)
	 8. Small drawer size: 350(W) * 110(D) * 580(H) (mm)
	 9. Number of drawers: 8 small ones + 5 large ones
	    – Layers 1~4: 2 small drawers per layer
	    – Layers 5~9: 1 large drawer per layer
	 10. Supports monitor with 1024*768 resolution

Highlights	1. Monitor stand: 2-section (supports 10kg of weight)
	 2. Extensions (optional):
	    • Barcode Reader/Facial Recognition/Card Reader/2 Extra Drawers
	 3. iMADC-AIO modules: (based on the size of the pill box)
	    • Module A1: Large*52, Medium*18, Small*16
	    • Module B:1 Large*36, Medium*24, Small*40
	    • Module C:1 Large*44, Medium*12, Small*40

iMADC-AIO-A1

Small Box	Medium Box	Big Box	Total
16	18	52	86

(1L)
| (1L-04) |
| (1L-03) |
| (1L-02) |
| (1L-01) |

(1R)
| (1R-04) |
| (1R-03) |
| (1R-02) |
| (1R-01) |

(4L)
(4L-07)	(4L-08)
(4L-05)	(4L-06)
(4L-03)	(4L-04)
(4L-01)	(4L-02)

(4R)
(4R-07)	(4R-08)
(4R-05)	(4R-06)
(4R-03)	(4R-04)
(4R-01)	(4R-02)

(7)
(7-07)	(7-08)
(7-05)	(7-06)
(7-03)	(7-04)
(7-01)	(7-02)

(2L)
| (2L-04) |
| (2L-03) |
| (2L-02) |
| (2L-01) |

(2R)
| (2R-04) |
| (2R-03) |
| (2R-02) |
| (2R-01) |

(5)
(5-08)	(5-09)	(5-10)
(5-05)	(5-06)	(5-07)
(5-03)	(5-04)
(5-01)	(5-02)

(8)
(8-07)	(8-08)
(8-05)	(8-06)
(8-03)	(8-04)
(8-01)	(8-02)

(3L)
| (3L-04) |
| (3L-03) |
| (3L-02) |
| (3L-01) |

(3R)
| (3R-04) |
| (3R-03) |
| (3R-02) |
| (3R-01) |

(6)
(6-10)	(6-11)	(6-12)
(6-07)	(6-08)	(6-09)
(6-04)	(6-05)	(6-06)
(6-01)	(6-02)	(6-03)

(9)
(9-07)	(9-08)
(9-05)	(9-06)
(9-03)	(9-04)
(9-01)	(9-02)

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iMADC-AIO-B1

Small Box	Medium Box	Big Box	Total
40	24	36	100

(1L)
| (1L-04) |
| (1L-03) |
| (1L-02) |
| (1L-01) |

(1R)
| (1R-04) |
| (1R-03) |
| (1R-02) |
| (1R-01) |

(4L)
(4L-07)	(4L-08)
(4L-05)	(4L-06)
(4L-03)	(4L-04)
(4L-01)	(4L-02)

(4R)
(4R-07)	(4R-08)
(4R-05)	(4R-06)
(4R-03)	(4R-04)
(4R-01)	(4R-02)

(7)
(7-10)	(7-11)	(7-12)
(7-07)	(7-08)	(7-09)
(7-04)	(7-05)	(7-06)
(7-01)	(7-02)	(7-03)

(2L)
| (2L-04) |
| (2L-03) |
| (2L-02) |
| (2L-01) |

(2R)
| (2R-04) |
| (2R-03) |
| (2R-02) |
| (2R-01) |

(5)
(5-11)		(5-12)	
(5-09)		(5-10)	
(5-05)	(5-06)	(5-07)	(5-08)
(5-01)	(5-02)	(5-03)	(5-04)

(8)
(8-07)	(8-08)
(8-05)	(8-06)
(8-03)	(8-04)
(8-01)	(8-02)

(3L)
(3L-07)	(3L-08)
(3L-05)	(3L-06)
(3L-03)	(3L-04)
(3L-01)	(3L-02)

(3R)
(3R-07)	(3R-08)
(3R-05)	(3R-06)
(3R-03)	(3R-04)
(3R-01)	(3R-02)

(6)
(6-10)	(6-11)	(6-12)
(6-07)	(6-08)	(6-09)
(6-04)	(6-05)	(6-06)
(6-01)	(6-02)	(6-03)

(9)
(9-07)	(9-08)
(9-05)	(9-06)
(9-03)	(9-04)
(9-01)	(9-02)

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iMADC-AIO-C1

Small Box	Medium Box	Big Box	Total
40	12	44	96

(1L)

| (1L-04) |
| (1L-03) |
| (1L-02) |
| (1L-01) |

(1R)

| (1R-04) |
| (1R-03) |
| (1R-02) |
| (1R-01) |

(4L)

(4L-07)	(4L-08)
(4L-05)	(4L-06)
(4L-03)	(4L-04)
(4L-01)	(4L-02)

(4R)

(4R-07)	(4R-08)
(4R-05)	(4R-06)
(4R-03)	(4R-04)
(4R-01)	(4R-02)

(7)

(7-07)	(7-08)
(7-05)	(7-06)
(7-03)	(7-04)
(7-01)	(7-02)

(2L)

(2L-05)	(2L-06)
(2L-03)	(2L-04)
(2L-02)	
(2L-01)	

(2R)

(2R-05)	(2R-06)
(2R-03)	(2R-04)
(2R-02)	
(2R-01)	

(5)

(5-11)		(5-12)	
(5-09)		(5-10)	
(5-05)	(5-06)	(5-07)	(5-08)
(5-01)	(5-02)	(5-03)	(5-04)

(8)

(8-07)	(8-08)
(8-05)	(8-06)
(8-03)	(8-04)
(8-01)	(8-02)

(3L)

(3L-05)	(3L-06)
(3L-03)	(3L-04)
(3L-02)	
(3L-01)	

(3R)

(3R-05)	(3R-06)
(3R-03)	(3R-04)
(3R-02)	
(3R-01)	

(6)

(6-10)	(6-11)	(6-12)
(6-07)	(6-08)	(6-09)
(6-04)	(6-05)	(6-06)
(6-01)	(6-02)	(6-03)

(9)

(9-07)	(9-08)
(9-05)	(9-06)
(9-03)	(9-04)
(9-01)	(9-02)

Transforming Healthcare Through AIoT

iMADC-_Medication Box Size

Small Box
(W)130 * (D)80 * (H)75 mm

Medium Box
(W)180 * (D)80 * (H)75 mm

Big Box
(W)280 * (D)80 * (H)75 mm

Small Drawer
(W)350 * (D)110 * (H)580 mm

Big Drawer
(W)700 * (D)110 * (H)580 mm

iMADC-DKP-G1.0 Specifications

iMADC-DKP_G1.0

	Description
Specifications	1. Dimensions: 420(W)*600(D)*350(H) (mm) 2. Material: SECC 3. Cleaning: wipe with 75% alcohol or diluted bleach 4. Ports: LAN Port (RJ45) x 1, USB Port x 1 5. Power: 1 (AC input 100~240V) 6. Monitor stand: 2-section (supports 10kg of weight) 7. Small drawer size: 350(W) * 110(D) * 580(H) (mm) 8. Number of drawers: 2 small ones 9. Supports monitor with 1024*768 resolution
Highlights	1. Monitor stand: 2-section (supports 10kg of weight) 2. Extensions (optional): • Barcode Reader/Facial Recognition/Card Reader/2 Extra Drawers 3. iMADC-DKP modules: (based on the size of the pill box) • Module A: Large*6 • Module B: Large*3, Small*6 • Module C: Small*12

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Drawer Partitions

● Small Drawer
  - 600mm (D) x 400mm (W)
  - Locks the drawer only
  - Flexibility in choosing the combination of partitions

(1-03)		(2-03)	
(1-02)		(2-02)	
(1-01)		(2-01)	
(1)		**(2)**	

Small Pill Box	Large Pill Box	Total
0	6	6

Mode-A

(1-05)	(1-06)	(2-03)	
(1-03)	(1-04)	(2-02)	
(1-01)	(1-02)	(2-01)	
(1)		**(2)**	

Small Pill Box	Large Pill Box	Total
6	3	9

Mode-B

(1-05)	(1-06)	(2-05)	(2-06)
(1-03)	(1-04)	(2-03)	(2-04)
(1-01)	(1-02)	(2-01)	(2-02)
(1)		**(2)**	

Small Pill Box	Large Pill Box	Total
12	0	12

Mode-C

iMADC-DKP-L_G1.0 Specifications

Pharmacy Department

Application	**Function Description** 1. Double control user authority：RFID card reading. facial recognition 2. Medicine Order：monitor check list. medicine with picture comparison. LASA Alarm 3. Medicine Safety：medicine order barcode scan. correspond drawer and box unlock. 4. Management Function：expiration date notice. Inventory review.
Qualitative benefit	1. Precision medicine use management. 2. Avoid wrong medicine never event. 3. Reduce caregiver loading. 4. Realtime inventory control. 5. Reduce repeatedly entering quarantine area to reduce infection risk. 6. Decrease **50%** medication time 7. Decrease **70 %** withdrawal time 8. More than **100%** accuracy 9. Only takes **1~3 minutes** to do the restriction drug check during the nursing shift

iMADC - Success Story

✓ Location
- Kaohsiung Municipal Siaogang Hospital, Taiwan - Pharmacy Department

高雄市立小港醫院
(委託財團法人私立高雄醫學大學經營)
Kaohsiung Municipal Siaogang Hospital

✓ Application

Function Description
Double control user authority：RFID card reading. facial recognition
Medicine Order：monitor check list. medicine with picture comparison. LASA Alarm
Medicine Safety：medicine order barcode scan. correspond drawer and box unlock.
Management Function：expiration date notice. Inventory review.

✓ Benefit
- Precision medicine use management.
- Avoid wrong medicine never event.
- Reduce caregiver loading.
- Realtime inventory control.
- Reduce repeatedly entering quarantine area to reduce infection risk.

iMADC - Success Story

✓ Location
- Lin Shin Hospital, Taiwan – OPD / IPD Pharmacy Department

✓ Application

| Function Description |
| --- |
| Double control user authority：RFID card reading. facial recognition |
| Medicine Order ： monitor check list. medicine with picture comparison. LASA Alarm |
| Medicine Safety ： medicine order barcode scan. correspond drawer and box unlock. |
| Management Function ： expiration date notice. Inventory review. |

✓ Benefit
- Precision medicine use management.
- Avoid wrong medicine never event.
- Reduce caregiver loading.
- Realtime inventory control.
- Reduce repeatedly entering quarantine area to reduce infection risk.

Success Case

- Hospital: Thonburi Hospital (Thailand)
- Scenario: Covid-19 Quarantine Ward
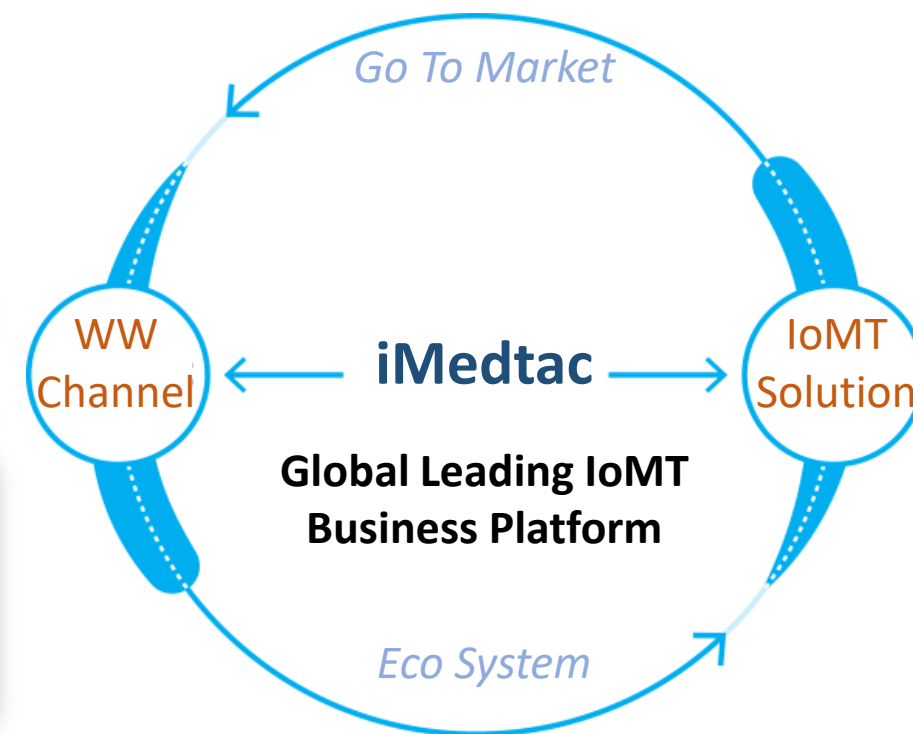- Application: Manages Controlled/High-value Medicine
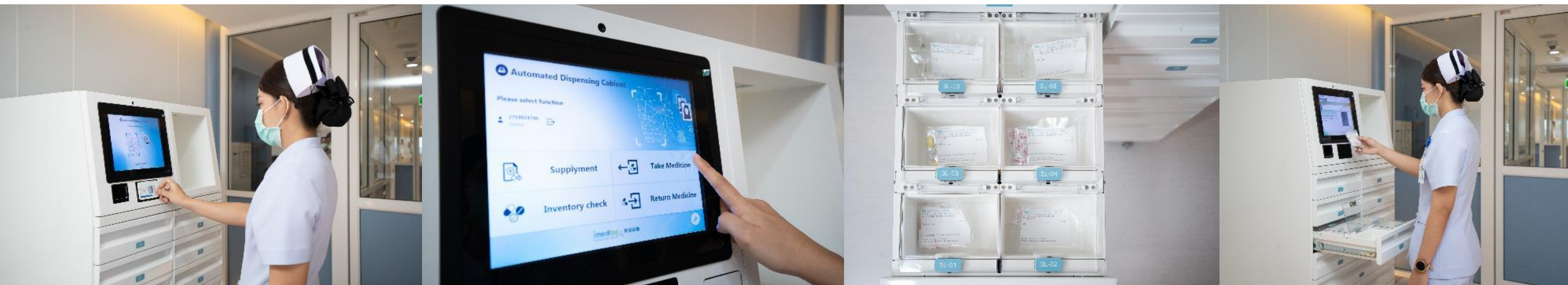
Mission / Offering & Business Model

"Transforming Healthcare Through IoMT".

iMedtac focusing on building the next generation of integrated care platform with the newest technology of the Internet of Medical Things (IoMT). So the doctors, nurses and patients can use cloud service platform to provide the best quality of comprehensive care and instant multi-party communication.

Hospital | Elderly Center | Homecare

Go To Market

WW Channel ← **iMedtac** → IoMT Solution

Global Leading IoMT Business Platform

Eco System

Our successful case

- Taiwan
  - National Taiwan University Hospital
  - Taipei Veterans General Hospital
  - Taichung Veterans General Hospital
  - National Cheng Kung University Hospital
  - Taipei Medical University Hospital
  - Changhua Christian Hospital
  - National Health Research Institutes
  - China Medical University Hospital
  - Yuanlin Christian Hospital
  - Cheng Hsin General Hospital
  - Kaohsiung Municipal Siaogang Hospital
  - Yuanpei University of Medical Technology
  - Lukang Christian Hospital
  - Po Cheng International Hospital
  - Calo Psychiatric Hospital
  - Hansheng Obs-Gynb Clinic
  - Shui-Mu International Co., Ltd. (A.S.O)
  - ......

- China
  - The Second Affiliated Hospital Zhejiang University School of Medicine
  - Suzhou BenQ Hospital
  - Nanjing BenQ Hospital
  - Zhebei Mingzhou Hospital
  - Shanghai Jing'an District Central Hospital
  - ......

- Worldwide
  - MD Healthcare Co., Ltd. Thailand
  - Bangkok Christian Hospital Thailand
  - Overbrook Hospital Thailand
  - Thailand Hospital Group
  - eDoctor Vietnam
  - Vietnam ShingMark Hospital
  - Thanland of Bangkok, Samitivej Hospital (Intel cooperation project under developing)
  - Vietnam Viet Duc Hospital (Intel cooperation project under developing)
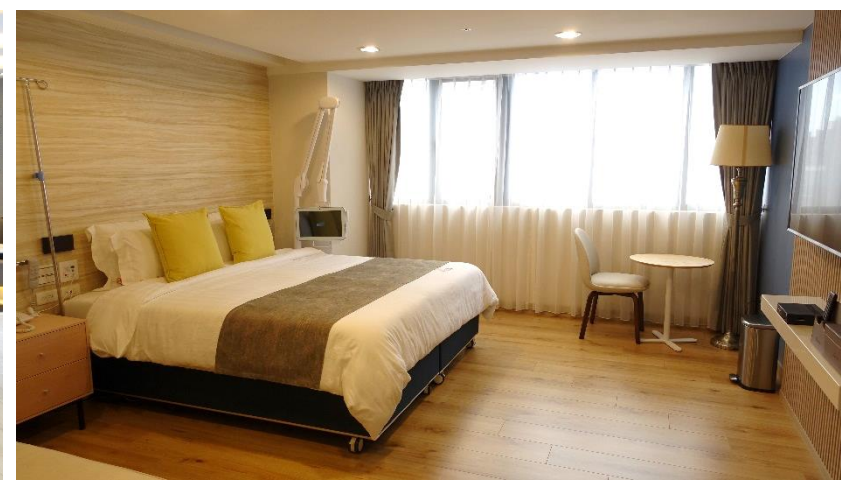 - Qatar HMC Hospital (Intel cooperation project under developing)

Smart hospital development project share

Ward environment control

Broadcasting and queuing

Smart ward

Reception robot

Post-acute-care platform

Smart Vital Sign Station

Thank You