

A photograph of four business professionals (three women and one man) sitting around a table in an office. They are all smiling and high-fiving each other. A laptop is open on the table in front of them. The entire image has a yellowish tint.

**Artificial Intelligence  
Cardiovascular Prevention  
Monitoring Cloud service**



# Treat your heart right !

When a person experiences pain in their heart, they go for a blood pressure checkup but normal blood pressure doesn't mean the person has healthy heart. Treat your heart with care its most important organ of human body, our product will help the world to take the human blood pressure reading along with cardio diagram; it will take the humanity a step forward.

# Product Highlight

- World's first blood pressure and ECG device
- Measures blood pressure accurately compare to mercury sphygmomanometer
- Reads heartbeat accurately, very accurate quantity examine the heart beat
- Anti bacterial cuffs taken antibiotic sphygmomanometer sleeve set can prevent the germs from infecting.
- First aid use, can drench with rain using normally in the open air.

# OSTAR Winning record



OSTAR was established in 2004 and has won more than 100 global awards. Won six gold medals for inventions from four countries

- OSTAR won the R&D 100 Award in 2020.
- OSTAR won the Gold Medal of the Ministry of Health and Welfare in 2015



# 2020 R&D 100 Award winner

Artificial intelligence heart disease early warning technology

OSTAR Meditech Corp. (First Place in R&D World) Second Place is University of Maryland, followed by Toyota Central R&D Laboratory, MIT Lincoln Laboratory



## IT/Electrical category

**Artificial intelligence early warning heart disease technology**

OSTAR Meditech Corp.

**Cluster Integrity, Exception Resolution, and Reclustering Algorithm (CIERRA)**

Los Alamos National Laboratory  
University of Maryland

**Deep Sub-Micron Process MOSFETs with Maximum Gate Voltage of 280 V for Li-ion Battery Management IC**

Toyota Central R&D Labs, Inc.  
DENSO Corp.

# Product description

## AI811 AI sphygmomanometer

No need to go back to factory  
for calibration.

01

patented AI artificial intelligence automatic correction

02

Six Invention patent Gold  
Medal in 4 countries

03

Suitable for high mountain  
use, accurate field test in  
Taiwan Wuling mountain  
(with height of 3275 meters  
and temperatures as low as  
11 degrees C)

04



05

Suitable for use in aircraft  
Used in cardiac hospitals

06

S3 CPU (Central Processing  
Unit)

07

Accurately calculate blood  
pressure

08

Passed TDFA, CDFA, and CE  
certificate

# **Feature of OSTAR AI811 AI sphygmomanometer**

- Automatic correction technology
- Function of heart monitoring
- Integration of cloud intelligent transmission

# Product description

## P2 Sphygmomanometer Ferrari

MIL-STD 810G – The best materials and circuit design

01

Patented atrial fibrillation detection technology

02

Patented heart spectrum detection technology

03

Patented AI automatic correction function technology

04



05

No need to go back to factory for calibration

06

3 CPUs and 2 Sensors detect heart noise, ensure

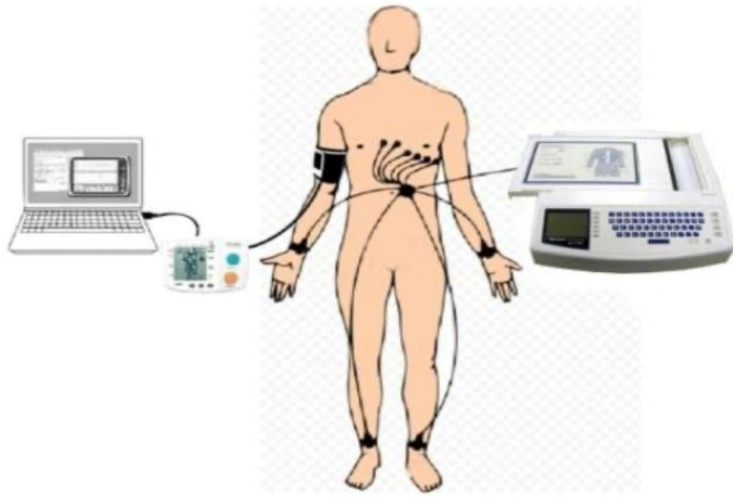
07

Suitable for use in aircraft

08

Used in cardiac hospitals  
Passed TDFA, CDFA, and CE certificate





Synchronous measurement of ECG and Blood Pressure Monitor with Spectrum

Clinical trials in taiwan teaching hospital comparison of ECG and heart pulse the clinical result have been published in the journal PLOS ONE

**Electrocardiogram : ECG (Electro-Cardio-Gram) vs.**

**Heart Map : PCG (Pulse-Cardio-Gram) (by OSTAR Spectrum Technology)**

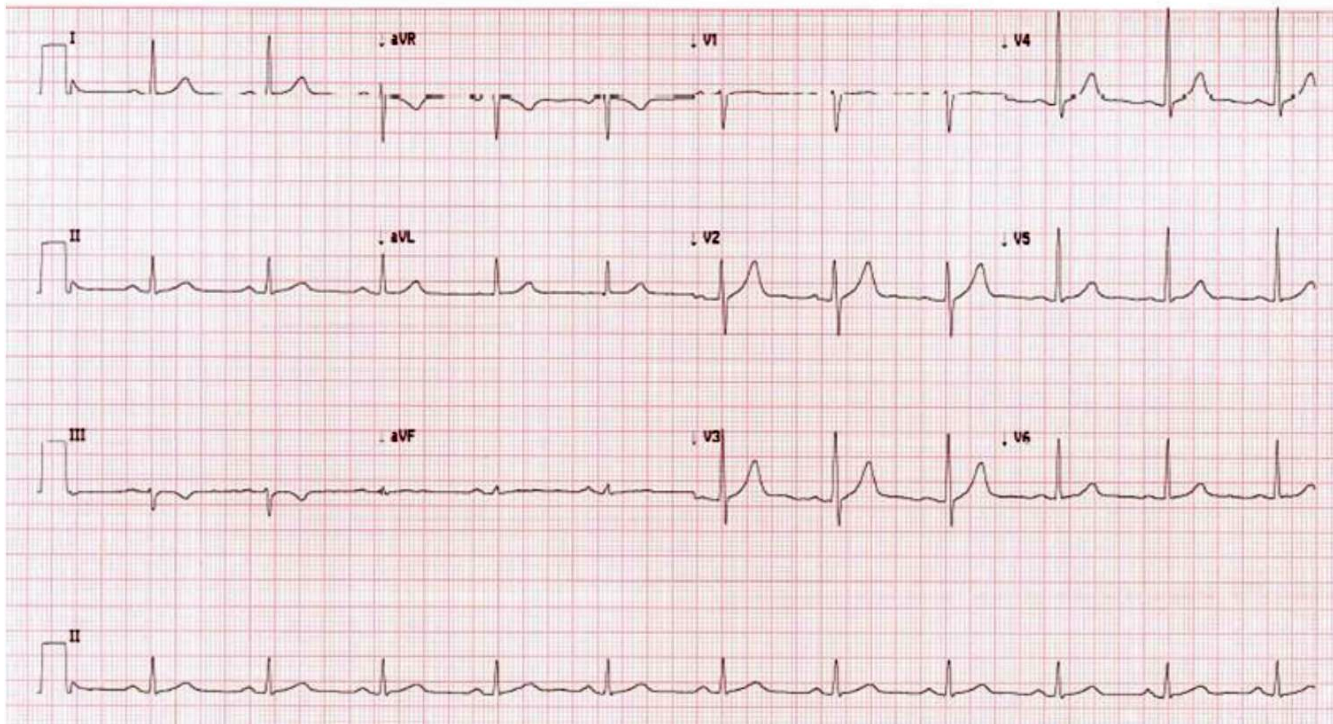
# (1) age:58 male Normal electrocardiogram(ECG)

ID:  
Accession Num:  
Name:  
Age: 58  
Sex: Male

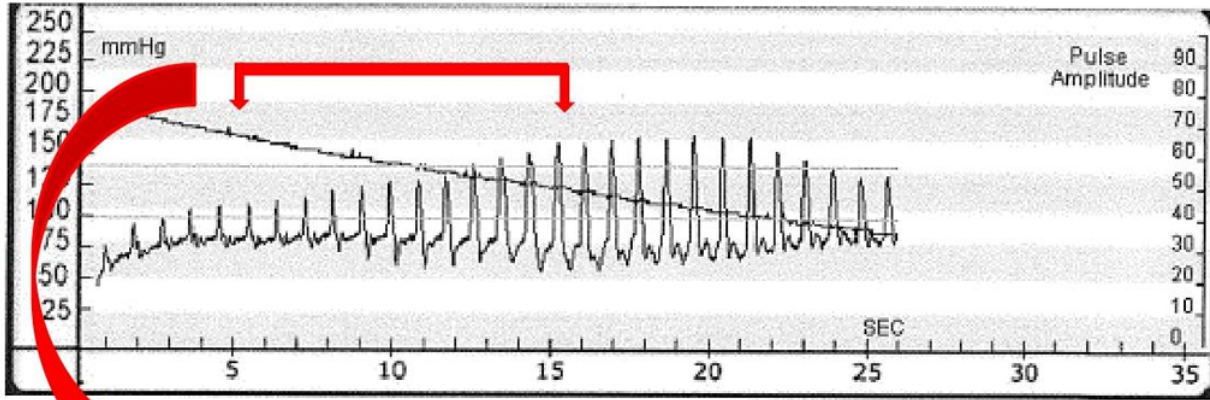
24-Mar-2016 11:41:21

Vent rate: 66 BPM  
PR int: 195 ms  
QRS dur: 82 ms  
QT/QTc: 387/400 ms  
P-R-T axes: 56 12 6

SINUS RHYTHM  
NORMAL ECG



**(1) age : 58male Normal heart pulse (PCG)**



**X axis:**

**Measuring time**

**Y axis:**

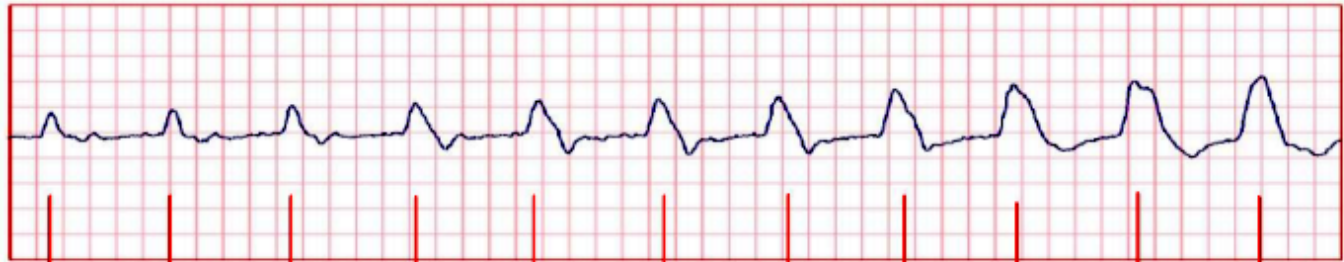
**Pulse amplitude**

The 10-second range corresponding to the heart pulse and electrocardiogramThe picture above shows the wave form of the brachial artery when measuring the blood pressure of the arm.

(1) age : 58male Normal

heart pulse (PCG) and electrocardiogram (ECG) comparison

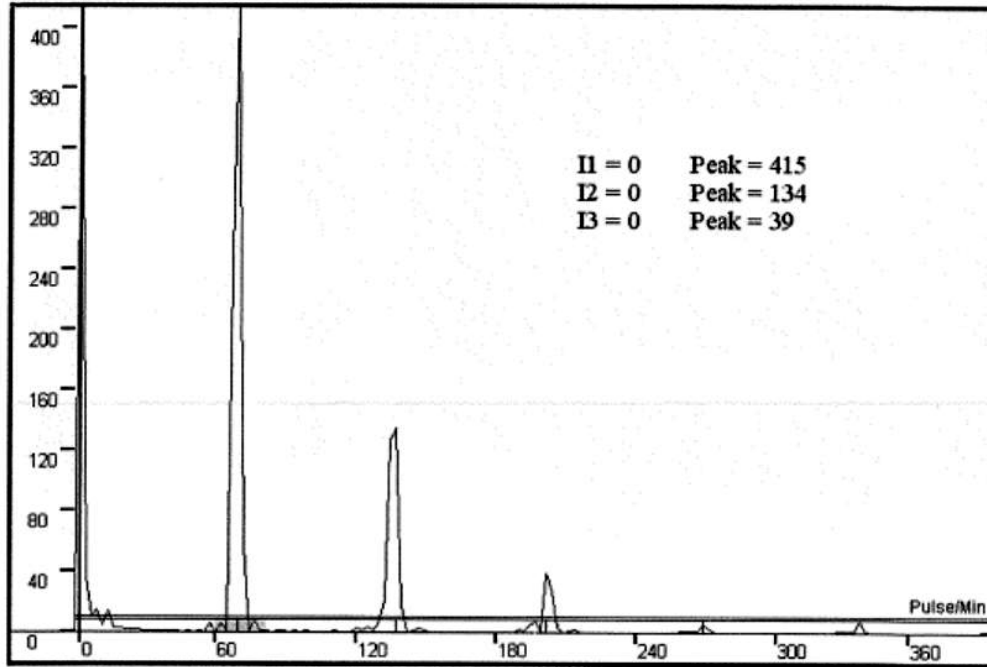
PCG Zoom in  
5~15 Second



ECG



## (1)age : 58male Normal Heart Spectrum Waveform



**I1/I2/I3 : 0/0/0**

**I1+I2+I3=0**

**PCG: normal**

**Cardiac chart (PCG) converted to  
heart spectrum waveform**

## (2) 74-Year-old man with atrial fibrillation electrocardiogram(ECG)

ID:  
Accession Num:  
Name:  
Age:  
Sex:

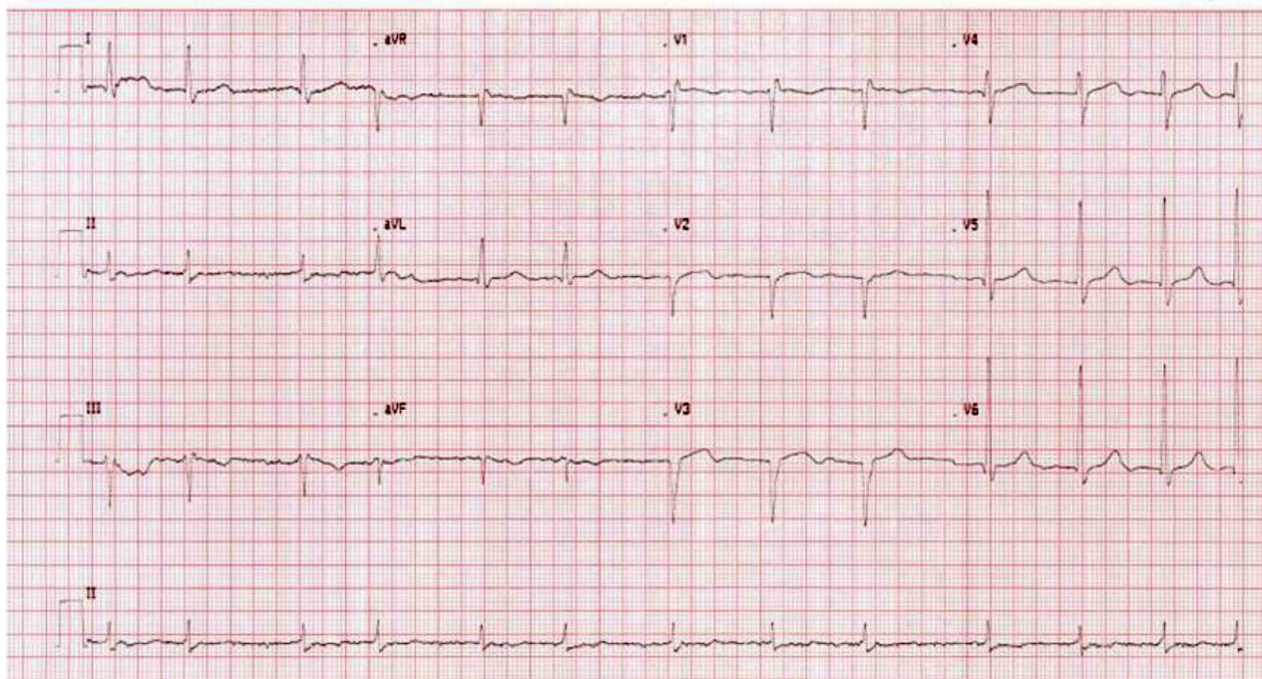
22-Feb-2016 15:32:34

Heart rate: 72 BPM  
PR int: 0 ms  
QRS dur: 115 ms  
QT/QTc: 424/448 ms  
P-R-T axes: 999 -19 -25

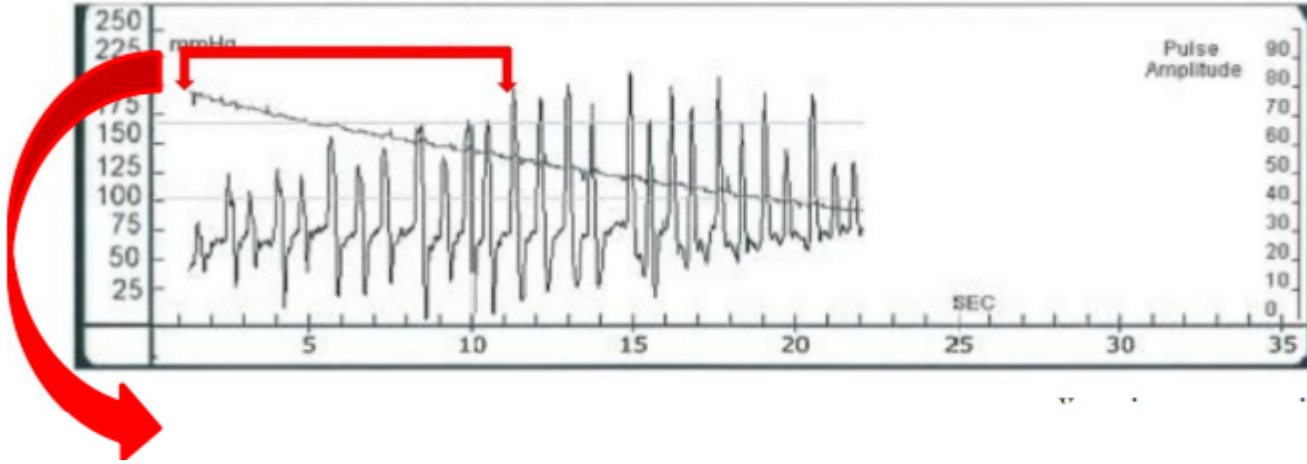
ATRIAL FIBRILLATION  
INCOMPLETE RIGHT BUNDLE BRANCH BLOCK (90+ MS QRS DURATION, TERMINAL R IN V1/V2, 40+ MS S IN I/AVL/V4/V5/V6)  
MODERATE ST DEPRESSION (0.05+ MV ST DEPRESSION), PROBABLY DIGITALIS EFFECT  
ABNORMAL ECG

男  
030.03.07

①



## (2) 74-year-old man with atrial fibrillation(PCG)



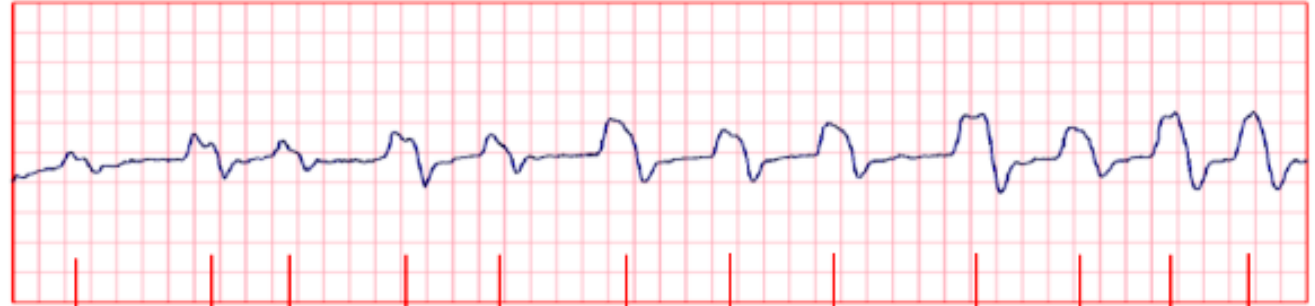
**X axis:**  
**Measuring time**

**Y axis:**  
**Pulse amplitude**

The 10-second range corresponding to the heart pulse and electrocardiogram The picture above shows the waveform of the brachial artery when measuring the blood pressure of the arm

## (2) A 74-year-old man with atrial fibrillation heart pulse(PCG) versus electrocardiogram (ECG)

PCG Zoom in  
1~11 Second



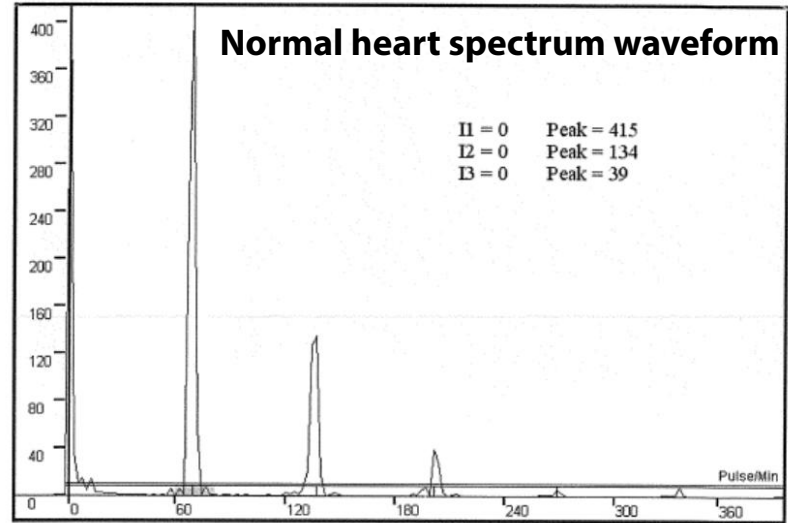
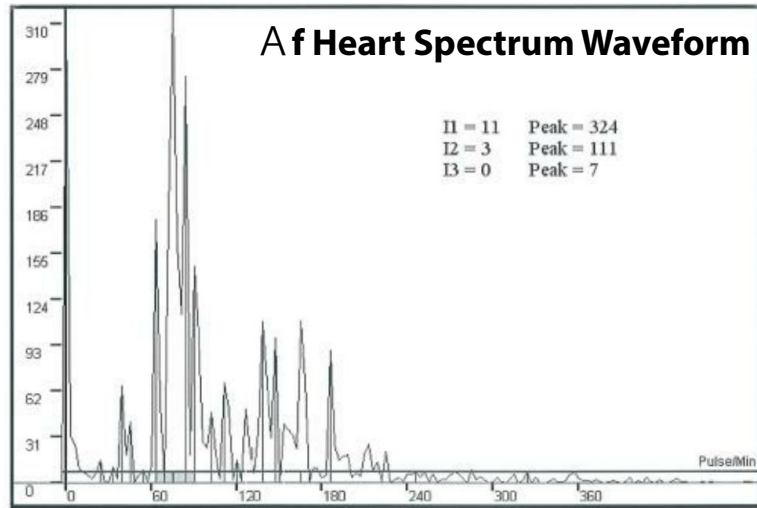
X: 25mm/s Y: 10mm/4mV

ECG





## (2) A 74-year-old man with atrial fibrillation heart spectrum waveform



**Cardiac chart (PCG) converted to heart spectrum waveform**

# OSTAR Heart Papers

## Google

### “PLOS ONE OSTAR”

#### Assessment of the clinical efficacy of the heart spectrum blood pressure monitor for diagnosis of atrial fibrillatio...

Wei-Fong Kao, Sen-Kuang Hou, Chun-Yao Huang, Chun-Chieh Chao, Chung-Chih Cheng, Yi-Jung Chen

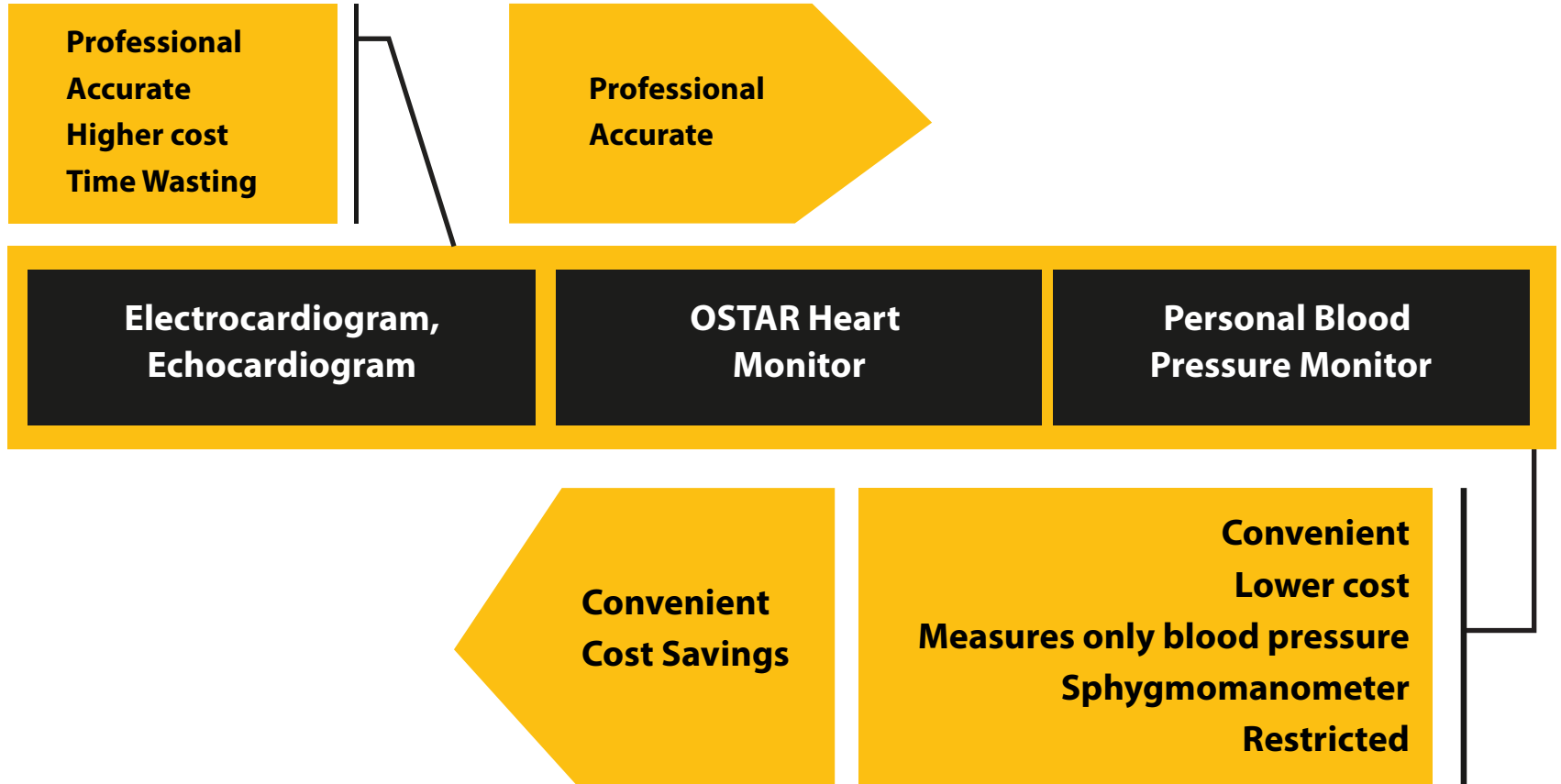
### Abstract

Abstract  
Introduction  
Materials and methods  
Results  
Discussion  
Conclusions  
Supporting information  
References

Reader Comments (1)  
Figures

Atrial fibrillation (AF) is the most common arrhythmia. The most common diagnostic method, 12-lead electrocardiogram (ECG), can record episodes of arrhythmia from which the type and severity can be determined. The Heart Spectrum Blood Pressure Monitor (P2; OSTAR Meditech Corp., New Taipei City, Taiwan) is used to measure cardiovascular pressure change with fast Fourier transform (FFT) analysis to obtain heart rate frequency variability and accurate blood pressure data. We compared the diagnostic efficacy of the Heart Spectrum Blood Pressure Monitor to a 12-lead ECG (gold standard) for patients with AF. Three measurement methods were used in this study to analyze the heart index and compare the results with simultaneous 12-lead ECG: blood pressure; mean arterial pressure, which was calculated from individual blood pressure as a constant pressure; and a constant pressure of 60 mmHg. The physician used a 12-lead ECG and the Heart Spectrum Blood Pressure Monitor simultaneously. The Heart Spectrum Blood Pressure Monitor used FFT analysis to diagnose AF, and the findings were compared to the 12-lead ECG readings. This unblinded clinical trial was conducted in the emergency department of Taipei Medical University Hospital. Twenty-nine subjects with AF and 33 without AF aged 25 to 97 y (mean, 63.5 y) were included. Subjects who were exposed to high-frequency surgical equipment during testing, those with cardiac pacemakers or implantable defibrillators, and pregnant women were excluded. The sensitivity, specificity, positive predictive value (PPV), and negative predictive value (NPV) were 97%, 97%, 97%, and 97%, respectively, for method 1; 90%, 100%, 100%, and 91%, respectively, for method 2; and 100%, 94%, 94%, and 100%, respectively, for method 3. The sensitivity, specificity, PPV, and NPV for both methods ranged between 90% and 100%, indicating that the Heart Spectrum Blood Pressure Monitor can be effectively applied for AF detection.

# OSTAR Heart Spectrum Technology



# Heart diseases are the most urgent problem in the world

- Heart and cardiovascular diseases rank first in the top ten causes of death in the World, and how to reduce cardiovascular diseases is the world's biggest issue in the Future.
- COVID-19 Taiwan has a total of 847 deaths by November 08, 2021. It is a terrible disease. In 2021, there were 38,984 deaths from cardiovascular diseases in Taiwan In one year. Therefore, cardiovascular disease is a disease that needs more attention.
- The biggest pain point now is that sphygmomanometers all over the world are Inaccurate. Patients cannot measure accurate blood pressure, miss the opportunity To seek medical treatment and inaccurate measurement is even more dangerous in Hospital.
- Prevention is the best way. First, find medical equipment that can measure blood Pressure accurately. You can measure blood pressure without returning to the Factory for correction.
- The second is to be able to find heart diseases while measuring blood pressure. If Patients take measurement every day, when abnormalities occur, whether it is high Blood pressure or abnormal heart noise, they can deal with it in advance. Therefore, the doctor can treat them without waiting for myocardial infarction or stroke to be Sent to the hospital too late.

# OSTAR Advantages in use

- AI smart calibration patented technology, the blood pressure monitor does not need to be returned to the factory for calibration
- Measure blood pressure and detect patients' heart disease
- Taiwan's clinically proven accuracy in sensibility of atrial AF is 90%, preventing frequent measurement of ECG
- Smart AI cloud transmission saves medical staff record time, reduces user input errors, and assists in upgrading it to a smart hospital
- We can copy the successful experience of Taiwan



# Recommend to introduce OSTAR into the hospital

## Save time

Use artificial intelligence to save more than 30% of the operating time of nursing staff

## Correctness

Reduce measurement data input errors and improve efficiency

## Save money:

Reduce hospital expenditures and build a paperless green hospital

## Time-saving + correct + convenient + labor-saving

Provide necessary solutions for AI smart hospitals

## Find out heart problems quickly

While measuring blood pressure, it uses artificial intelligence heart spectrum analysis technology to find heart noise and assist doctors to quickly find heart problems.

## Precise

Automatic blood pressure correction patent does not need to be returned to the factory for correction

## Technology

Possess complete hardware and software design capabilities, which can be professionally customized

## Software service

Taiwan National Hospital Software Cooperation Professional hospital software design

## Telemedicine in Taiwan hospitals

Can be connected to the medical database of the hospital across the country

## Clinical papers, patents & awards

TMU Clinical Experiment international Journal PLOS ONE

Multiple patent certifications

American R&D 100 Awards/IT

Taiwan's Ministry of Health and Welfare Gold Award

Russian Invention Gold Medal

Hong Kong Innovative Technology Invention Gold Medal Award

Japan International Invention Gold Medal Award

# OSTAR BPM advantage analysis

Company Item	OSTAR	US Brand (I)	Japan Brand (II)
Price	USD 900~1200	USD 3500~\$4500	USD 100~300
Market share(%)	Taiwan Hospital 45%	The largest brand in the global hospital	Taiwan's No. 1 Household Brand
Market segmentation	Arrhythmia, myocardial infarction, hypertension, Automatic blood pressure correction	Myocardial infarction, hypertension	hypertension
Marketing Channel	Hospital professional equipment	Hospital professional equipment	Pharmacy, Internet home
Technology or service	<ol style="list-style-type: none"> <li>1. Save time and labor: save doctors and nurses time</li> <li>2. Avoid misjudgment</li> <li>3. Accurate blood pressure: the only automatic self checking and correction</li> <li>4. With the function of heart spectrum analysis to assist doctors in the current judgment and further diagnosis and treatment</li> <li>5. OSTAR technology can be professionally customized</li> </ol>	<ol style="list-style-type: none"> <li>1. No automatic blood pressure correction</li> <li>2. No arrhythmia function</li> <li>3. Cannot be customized</li> </ol>	

# Used by Many Medical Centers



聯合陽明院區  
洗腎室



大都會客運  
駕駛行前量測



臺北市政府  
市民健康照護計畫



聯合仁愛院區  
教學



萬芳醫院教學



桃園國軍醫院教學

新店慈濟醫院2樓門診



羅東聖母醫院洗腎中心/病房/急診



台中市  
24-33  
情侶攜手逃難 決定'老手'一輩子



台大醫院心臟科門診



台大病房





# Used by Many Medical Centers

## 彰化縣遠距照護



## 北醫附醫 記者會



## 台北市政府市民健康生活照護成果



## 台北市政府市民健康生活照護成果

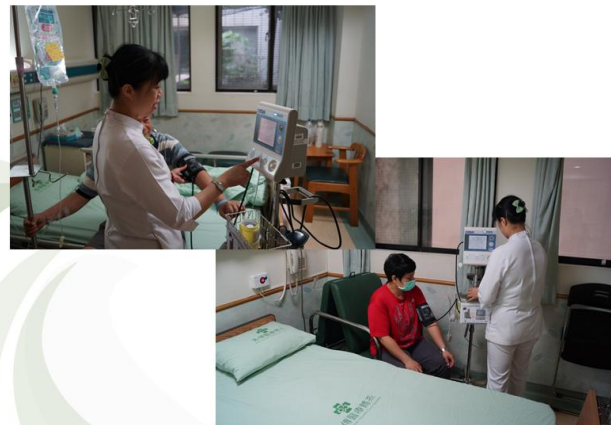


# Used by Many Medical Centers

## 雙和醫院第二大樓16F產後護理之家



## 秀傳醫療 彰濱院區



## 市立聯合醫院仁愛院區 呼吸照護病房



## 北醫附醫於病房使用《病房雲端照護系統》



# OSTAR International and domestic related certification



**衛生福利部醫療器材許可證**  
衛部醫器製字第 004295 號

中文名稱：“派星生醫”雲端多功能病人監視器  
英文名稱：“OSTAR MEDITECH” Patient Monitor

類別：第 I 類：心臟血管用裝置 廠名：派星生醫科技股份有限公司  
規格：詳如中文傳單樣本 製造廠名稱：派星生醫科技股份有限公司  
製造廠地址：新北市新店區民權路 46-4 號 5 樓

效 能：詳如中文傳單樣本  
處 方：空白

事項醫療器材類本部審核與藥事法之規定相關應依下列程序辦理

**派星生醫**  
董事長 邱文達

發證日期 102 年 11 月 27 日  
有效日期 107 年 11 月 27 日

批	准	日	期	年	月	日	年	月	日	年	月	日
效	力	日	期	年	月	日	年	月	日	年	月	日

MF 000910

  
Quality Certified

**Certificate of Registration**  
**Ostar Meditech Corp.**

SF, No.46-4, Min-chuan Rd., Shing-Tien District, New Taipei City, Taiwan  
operates a  
**Quality Management System**  
which complies with the requirements of  
**ISO 13485:2003**

The registration covers the design and manufacturing of medical devices.

Original Certification: 05 July 2012      Registration No: TA17034C  
Renew/Revised Date: 23 June 2018      Expiry Date: 28 June 2018

        
Cathy J Bates      Lorraine Walsh  
President      Accreditation Manager  
TQCSI International (Hong) Pty Ltd      TQCSI International Pty Ltd  
For the TQCSI Certification Approval Panel

The certificate certifies the original certificate issued and is valid so long as it is displayed as an electronic copy on the ISO 9001 cert and website with an electronically signed "TQCSI International Pty Ltd" logo on the ISO 9001 cert of Quality. Please, 110A Lakeside Road, Hendon, WA, 3014, Australia issue certificate subject to the TQCSI Rules of Certification.

 TQCSI INTERNATIONAL PTY LTD  
www.tqcsi.com.au

 AVCB  
www.avcb.com.au



  
Reliability Laboratory

**TEST REPORT**

Report No.: HCR2122024  
Page: 1 of 7  
Date: March 11, 2014

OSTAR MEDITECH CORP.  
S.F. NO. 46-4, MIN-CHUAN RD., SHING-TIEN DIST.,  
NEW TAIPEI CITY, TAIWAN, R.O.C.

The following certificate was extracted and checked for the main or  
Product Description: Blood Pressure Monitor with Spectrus  
Style Item No.: PD No. 1, No. 3  
Manufacturer/ Vendor: Ostar Meditech Corp.  
Country of Origin: Taiwan  
Quantity: Total 1 piece  
Testing Period: Mar. 1, 2014 to Mar. 11, 2014

We have tested the extracted sample(s) as requested and the following results were obtained.  
Test Required: Test for Degree of Protection Provided by Enclosure (IEC 60320 Edition 2.1, 2001)

IP Code	IP4
Front characteristic material	Degree of protection against access to hazardous parts and against solid foreign objects
Second characteristic material	Degree of protection against ingress of water

Test Results: **Compliance**

Methodology applied (in compliance with the requirement and acceptance conditions of IEC 60320 Edition 2.1, 2001) Degree of Protection Provided by Enclosure - (IP4)  
(The detailed description of test result please see attached sheet(s))

Signed for and on behalf of  
SGS TAIWAN LTD.  
Head, Surveillance  


Issue Date: 03/11/2014  
Rev.: Surveillance

SGS TAIWAN LTD. 110, Sec. 2, Airport Rd., Neihu Dist., Taipei City 114, Taiwan, R.O.C.  
Tel: +86 2 2658 8888 Fax: +86 2 2658 8899  
E-mail: sales@sgs.com.tw  
www.sgs.com.tw

MAY 13 2005

**810010 SUMMARY**

This summary of (S109) safety and effectiveness information is being submitted in accordance with the requirements of SMDA 1990 and 21 CFR 807.90.  
The assigned (S109) number is **R050680**

- Submitter's Identification:**  
Cyber Technology Corp.  
SF, No. 48-4, Min-Chuan Rd., Shing-Tien City,  
Taipei (New) 231, Taiwan, R.O.C.
- Product Name:**  
Mr. Steven Chang  
President
- Date of Summary Preparation:** February 25, 2005.
- Name of the Device:**  
Blood Pressure Monitor with Spectrus (Models P2, X1, A1 and K1).
- Information of the (S109) Cleared Device (Final/Initial Device):**  
Cleared Device Number: R050680.
- Device Description:**  
Basically the measuring system works composite of blood pressure measuring circuit via Occlusive method, pressure sensor, measuring cuff at arm, pneumatic pump, inflation and deflation system, housing, display LCD, and measuring software, and so on.  
The main operation for the blood pressure measurement is carried out in such a way that the measuring cuff at arm is inflated to the automated pressure level, then deflated to zero automatically. During the inflation and deflation, the pressure change with respective of time is recorded as the data base of measurement. Then the following measuring results will be calculated against the measurement data base:  
- Blood pressure information including systolic and diastolic pressure (calculated via Occlusive method);  
- Heart beat rate;  
- Heart beat noise calculated via FFT (Fast Fourier Transformation);  
For the display of measuring results and operation interface, the following information were provided for the following different models:  
- For model K1, the personal computer model P9-310-46-XXXX/XYTECH was integrated with the whole measurement system so as to provide the operation interface and display of measuring results including pressure waveform, noise waveform, systolic and diastolic pressure, heart beat rate, and noise index.  
- For model A2, RS 232 is provided for the connection with PC for the measurement operation and display of measurement results. The operation and display details are completely identical to that of model K1.

中小企業創新研究獎證書

CERTIFICATE OF TAIWAN SMALL & MEDIUM ENTERPRISES INNOVATION AWARD

源星生醫科技股份有限公司  
長期從事創新研究，以

This is to certify that  
**OSTAR Meditech Corp.**  
has won the 17th Small and Medium Enterprises Innovation Award for its **Telecare System With Cloud Computing**

遠距醫療照護雲端監測系統  
申請第17屆中小企業創新研究獎，經評審通過，特頒此證，以資鼓勵。

經濟部中小企業處 處長

賴籽桂

中華民國 99 年 12 月 3 日

Director General

Small and Medium Enterprise Administration, MOEA  
Dec. 3, 2010

中小企業創新研究獎證書

CERTIFICATE OF TAIWAN SMALL & MEDIUM ENTERPRISES INNOVATION AWARD

源星生醫科技股份有限公司

長期從事創新研究，以  
智慧型雲端家庭健康照護系統  
申請第23屆中小企業創新研究獎，經  
評審通過，特頒此證，以資鼓勵。

This is to certify that  
**Ostar Meditech Corp.**  
has won the 23rd Taiwan Small and Medium Enterprises Innovation Award for its **OSTAR Smart Cloud Health System**

經濟部部長

李吾先

中華民國 105 年 11 月 18 日

Chih-Kang Lee

Minister  
Ministry of Economic Affairs, R.O.C.  
NOV. 18, 2016



感謝 源星生醫科技股份有限公司  
有熱心贊助醫療儀器，  
不遺餘力，善行義舉令人  
感佩，特致謝忱。

感謝狀



創新研究與特定的器材品牌  
**OSTAR**  
雲端多功能病人監視器  
衛福部金質獎

衛福部自97年迄今第一次頒  
「醫療器材類」金質獎獎項



源星生醫科技股份有限公司 www.ostar.com.tw service@ostar.com.tw  
OSTAR MEDITECH CORP. 電話: 02-29183900 傳真: 02-29183883



臺灣標竿 挑戰世界No.1

2018

生醫產業創新  
藥 技研發發展獎



中小企業創新研究獎證書

CERTIFICATE OF TAIWAN SMALL & MEDIUM ENTERPRISES INNOVATION AWARD

源星生醫科技股份有限公司

長期從事創新研究，以  
雲端多功能病人監視器  
申請第20屆中小企業創新研究獎，經  
評審通過，特頒此證，以資鼓勵。

This is to certify that  
**OSTAR MEDITECH CORP.**  
has won the 20th Taiwan Small and Medium Enterprises Innovation Award for its **OSTAR MEDITECH® Blood Pressure, Heart Rate and Heart Pulse Monitoring System**

經濟部中小企業處處長

李登龍

中華民國 102 年 11 月 22 日

Director General  
Ministry of Economic Affairs, MOEA  
NOV. 22, 2013



中小企業創新研究獎證書

CERTIFICATE OF TAIWAN SMALL & MEDIUM ENTERPRISES INNOVATION AWARD

源星生醫科技股份有限公司

長期從事創新研究，以  
心臟病演算法人工智慧數據雲平台  
申請第25屆中小企業創新研究獎，經  
評審通過，特頒此證，以資鼓勵。

This is to certify that  
**OSTAR MEDITECH CORP.**  
has won the 25th Taiwan Small and Medium Enterprises Innovation Award for its **Heart Disease Algorithm Artificial Intelligence Cloud Data Platform**

經濟部部長

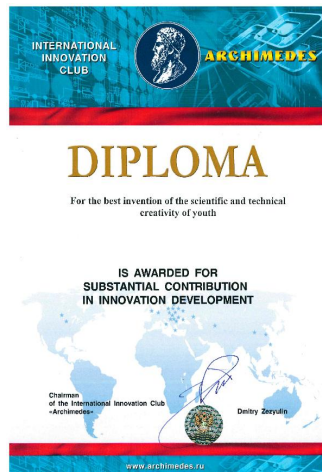
沈榮津

中華民國 107 年 9 月 27 日

Minister  
Ministry of Economic Affairs, R.O.C.  
SEP. 27, 2018



2017台灣產業科技推動協會會員大會  
暨第14屆金根獎頒獎典禮



**Thank You**