



April 19, 2024

Edan Instruments, Inc
Tracy Yue
Regulatory Affairs Engineer
15 Jinhui Road, Jinsha Community, Kengzi Sub-district
Pingshan District
Shenzhen, Shenzhen 518122
China

Re: K232962

Trade/Device Name: Patient Monitor (iX10, iX12, iX15)

Regulation Number: 21 CFR 870.1025

Regulation Name: Arrhythmia Detector And Alarm (Including ST-Segment Measurement And Alarm)

Regulatory Class: Class II

Product Code: MHX, DPS, DSI, MLD, DRT, DXN, DSK, FLL, DQA, CCK, CBS, CBR, CCL, CBQ,
NHO, NHQ, NHP

Dated: March 22, 2024

Received: March 22, 2024

Dear Tracy Yue:

We have reviewed your section 510(k) premarket notification of intent to market the device referenced above and have determined the device is substantially equivalent (for the indications for use stated in the enclosure) to legally marketed predicate devices marketed in interstate commerce prior to May 28, 1976, the enactment date of the Medical Device Amendments, or to devices that have been reclassified in accordance with the provisions of the Federal Food, Drug, and Cosmetic Act (the Act) that do not require approval of a premarket approval application (PMA). You may, therefore, market the device, subject to the general controls provisions of the Act. Although this letter refers to your product as a device, please be aware that some cleared products may instead be combination products. The 510(k) Premarket Notification Database available at <https://www.accessdata.fda.gov/scripts/cdrh/cfdocs/cfpmn/pmn.cfm> identifies combination product submissions. The general controls provisions of the Act include requirements for annual registration, listing of devices, good manufacturing practice, labeling, and prohibitions against misbranding and adulteration. Please note: CDRH does not evaluate information related to contract liability warranties. We remind you, however, that device labeling must be truthful and not misleading.

If your device is classified (see above) into either class II (Special Controls) or class III (PMA), it may be subject to additional controls. Existing major regulations affecting your device can be found in the Code of Federal Regulations, Title 21, Parts 800 to 898. In addition, FDA may publish further announcements concerning your device in the Federal Register.

Additional information about changes that may require a new premarket notification are provided in the FDA guidance documents entitled "Deciding When to Submit a 510(k) for a Change to an Existing Device" (<https://www.fda.gov/media/99812/download>) and "Deciding When to Submit a 510(k) for a Software Change to an Existing Device" (<https://www.fda.gov/media/99785/download>).

Your device is also subject to, among other requirements, the Quality System (QS) regulation (21 CFR Part 820), which includes, but is not limited to, 21 CFR 820.30, Design controls; 21 CFR 820.90, Nonconforming product; and 21 CFR 820.100, Corrective and preventive action. Please note that regardless of whether a change requires premarket review, the QS regulation requires device manufacturers to review and approve changes to device design and production (21 CFR 820.30 and 21 CFR 820.70) and document changes and approvals in the device master record (21 CFR 820.181).

Please be advised that FDA's issuance of a substantial equivalence determination does not mean that FDA has made a determination that your device complies with other requirements of the Act or any Federal statutes and regulations administered by other Federal agencies. You must comply with all the Act's requirements, including, but not limited to: registration and listing (21 CFR Part 807); labeling (21 CFR Part 801); medical device reporting (reporting of medical device-related adverse events) (21 CFR Part 803) for devices or postmarketing safety reporting (21 CFR Part 4, Subpart B) for combination products (see <https://www.fda.gov/combination-products/guidance-regulatory-information/postmarketing-safety-reporting-combination-products>); good manufacturing practice requirements as set forth in the quality systems (QS) regulation (21 CFR Part 820) for devices or current good manufacturing practices (21 CFR Part 4, Subpart A) for combination products; and, if applicable, the electronic product radiation control provisions (Sections 531-542 of the Act); 21 CFR Parts 1000-1050.

Also, please note the regulation entitled, "Misbranding by reference to premarket notification" (21 CFR 807.97). For questions regarding the reporting of adverse events under the MDR regulation (21 CFR Part 803), please go to <https://www.fda.gov/medical-devices/medical-device-safety/medical-device-reporting-mdr-how-report-medical-device-problems>.

For comprehensive regulatory information about medical devices and radiation-emitting products, including information about labeling regulations, please see Device Advice (<https://www.fda.gov/medical-devices/device-advice-comprehensive-regulatory-assistance>) and CDRH Learn (<https://www.fda.gov/training-and-continuing-education/cdrh-learn>). Additionally, you may contact the Division of Industry and Consumer Education (DICE) to ask a question about a specific regulatory topic. See the DICE website (<https://www.fda.gov/medical-devices/device-advice-comprehensive-regulatory-assistance/contact-us-division-industry-and-consumer-education-dice>) for more information or contact DICE by email (DICE@fda.hhs.gov) or phone (1-800-638-2041 or 301-796-7100).

Sincerely,


Jennifer W. Shih -S

Jennifer Shih Kozen
Assistant Director
Division of Cardiac Electrophysiology,
Diagnostics and Monitoring Devices

Office of Cardiovascular Devices
Office of Product Evaluation and Quality
Center for Devices and Radiological Health

Enclosure

Indications for Use

510(k) Number (if known)

K232962

Device Name

Patient Monitor, Model: iX10, iX12, iX15

Indications for Use (Describe)

The iX series Patient Monitors including iX10, iX12, iX15 are intended to be used for monitoring, storing, recording, and reviewing of, and to generate alarms for, multiple physiological parameters of adults and pediatrics (including neonates).

The monitors are intended for use by trained healthcare professionals in hospital environments.

The monitored physiological parameters include: ECG, respiration (RESP), temperature (TEMP), functional oxygen saturation of arterial hemoglobin (SpO2), pulse rate (PR), non-invasive blood pressure (NIBP), invasive blood pressure (IBP), carbon dioxide (CO2), cardiac output (C.O.), and Anaesthesia gas (AG).

The arrhythmia detection and ST Segment analysis are intended for adult patients.

The NIBP monitoring supports iCUFS algorithm and iFAST algorithm. The iCUFS algorithm is intended for adult, pediatric and neonatal patients. The iFAST algorithm is intended for adult and pediatric patients (≥ 3 years of age). Both measurement algorithms are also intended for use with pregnant women, including pre-eclamptic patients. NIBP MAP is not applicable to pregnant women.

The Spot Temp with T2A module can only measure temperature of adult and pediatric (> 1 year of age) patients.

The monitors are not intended for MRI environments.

The cardiac output (C.O.) is only intended for adult patients.

Type of Use (Select one or both, as applicable)

☒ Prescription Use (Part 21 CFR 801 Subpart D)

☐ Over-The-Counter Use (21 CFR 801 Subpart C)

CONTINUE ON A SEPARATE PAGE IF NEEDED.

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510(k) Summary

**Prepared in accordance with the content and format regulatory
requirements of 21 CFR Part 807.92**

1. Submitter:**Applicant:**

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Kengzi Sub-District, Pingshan District,
Shenzhen, 518122 P.R.China.
Tel: +86(0755) 26858736
Fax: +86(0755) 26882223

Contact person:

Tracy Yue

Preparing date:

September 21, 2023

2. Device name and classification:**Trade name:**

Patient Monitor, Model: iX10, iX12, iX15

Common/Usual Name:

Patient Monitor

Classification Name:

21 CFR 870.1025

Monitor, Physiological, Patient(With Arrhythmia Detection Or Alarms)

Regulatory class:

Class II

Primary product code:

MHX-Monitor, Physiological, Patient (With Arrhythmia Detection Or Alarms)

**Subsequent product
code:**

Regulation number/Device	Product Code
21 CFR 868.2375 Electrocardiograph	DPS
21 CFR 870.2340 Detector and Alarm, Arrhythmia	DSI
21 CFR 870.1025 Monitor, ST Segment with Alarm	MLD
21 CFR 870.2300 Monitor, Cardiac (Incl. Cardiotachometer & Rate Alarm)	DRT
21 CFR 870.1130 System, Measurement, Blood-Pressure, Non-Invasive	DXN
21 CFR 870.1110 Computer, Blood-Pressure	DSK
21 CFR 880.2910 Thermometer, Electronic, Clinical	FLL
21 CFR 870.2700 Oximeter	DQA

21 CFR 868.2375 Monitor, Breathing Frequency	BZQ
21 CFR 870.1400 Analyzer, Gas, Carbon-Dioxide, Gaseous-Phase	CCK
21 CFR 868.1620 Analyzer, Gas, Halothane, Gaseous-Phase (Anesthetic Conc.)	CBS
21 CFR 868.1700 Analyzer, Gas, Nitrous-Oxide, Gaseous Phase (Anesthetic Conc.)	CBR
21 CFR 868.1720 Analyzer, Gas, Oxygen, Gaseous-Phase	CCL
21 CFR 868.1500 Analyzer, Gas, Enflurane, Gaseous-Phase (Anesthetic Concentration)	CBQ
21 CFR 868.1500 Analyzer, Gas, Desflurane, Gaseous-Phase (Anesthetic Concentration)	NHO
21 CFR 868.1500 Analyzer, Gas, Isoflurane, Gaseous-Phase (Anesthetic Concentration)	NHQ
21 CFR 868.1500 Analyzer, Gas, Sevoflurane, Gaseous-Phase (Anesthetic Concentration)	NHP

3. Predicate Device(s):

- 1) Edan Instruments, Inc., Patient Monitor Model iM50, iM60, iM70, iM80, K202336 (Primary)
- 2) Shenzhen Mindray Bio-Medical Electronics Co., LTD., VS9 Vital Signs Monitor, K211475 (Reference)
- 3) Edan Instruments, Inc., Vital signs monitor Model iM3, K180380 (Reference)
- 4) Edan Instruments, Inc., Vital signs monitor Model iM3s, K202892 (Reference)
- 5) Edan Instruments, Inc., Patient Monitor Model RespArray, K220308 (Reference)
- 6) Shenzhen Mindray Bio-Medical Electronics Co., LTD., BeneVision N Series Patient Monitors, K182075 (Reference)

- 4. Device Description:** The iX series Patient Monitors including iX10, iX12, iX15 can perform long-time continuous monitoring of multiple physiological parameters. Also, it is capable of storing, displaying, analyzing and controlling measurements, and it will indicate alarms in case of abnormalities so that doctors and nurses can respond to the patient's situation as appropriate.
- 5. Indication for Use** The iX series Patient Monitors including iX10, iX12, iX15 are intended to be used for monitoring, storing, recording, and reviewing of, and to generate alarms for, multiple physiological parameters of adults and pediatrics (including neonates). The monitors are intended for use by trained healthcare professionals in hospital environments. The monitored physiological parameters include: ECG, respiration (RESP), temperature (TEMP), functional oxygen saturation of arterial hemoglobin (SpO2), pulse rate (PR), non-invasive blood pressure (NIBP), invasive blood pressure (IBP), carbon dioxide (CO2), cardiac output (C.O.), and Anaesthesia gas (AG). The arrhythmia detection and ST Segment analysis are intended for adult patients. The NIBP monitoring supports iCUFFS algorithm and iFAST algorithm. The iCUFFS algorithm is intended for adult, pediatric and neonatal patients. The iFAST algorithm is intended for adult and pediatric patients (≥ 3 years of age). Both measurement algorithms are also intended for use with pregnant women, including pre-eclamptic patients. NIBP MAP is not applicable to pregnant women. The Spot Temp with T2A module can only measure temperature of adult and pediatric (> 1 year of age) patients. The monitors are not intended for MRI environments. The cardiac output (C.O.) is only intended for adult patients.

6. Predicate Device Comparison

The table below compares the indication for use and key technological feature of the subject devices to the predicate device (Patient Monitor Model iM50, iM60, iM70, iM80, K202336).

Note: "/" means no such functions in predicate device.

	Subject Device (iX10, iX12, iX15)	Predicate Device (iM50, iM60, iM70, iM80)
K#	K232962	K202336
Intended Use/Indications for Use		
Description	The iX series Patient Monitors including iX10, iX12, iX15 are intended to be used for monitoring, storing, recording, and reviewing of, and to generate alarms for, multiple physiological parameters of adults and pediatrics (including neonates). The monitors are intended for use by trained healthcare professionals in hospital environments. The monitored physiological parameters	The monitors are intended to be used for monitoring, storing, recording, and reviewing of, and to generate alarms for, multiple physiological parameters of adults, pediatrics and neonates. The monitors are intended for use by trained healthcare professionals in hospital environments.

	include: ECG, respiration (RESP), temperature (TEMP), functional oxygen saturation of arterial hemoglobin (SpO2), pulse rate (PR), non-invasive blood pressure (NIBP), invasive blood pressure (IBP), carbon dioxide (CO2), cardiac output (C.O.), and Anaesthesia gas (AG). The arrhythmia detection and ST Segment analysis are intended for adult patients. The NIBP monitoring supports iCUPS algorithm and iFAST algorithm. The iCUPS algorithm is intended for adult, pediatric and neonatal patients. The iFAST algorithm is intended for adult and pediatric patients (≥ 3 years of age). Both measurement algorithms are also intended for use with pregnant women, including pre-eclamptic patients. NIBP MAP is not applicable to pregnant women. The Spot Temp with T2A module can only measure temperature of adult and pediatric (> 1 year of age) patients. The monitors are not intended for MRI environments. The cardiac output (C.O.) is only intended for adult patients.	The monitored physiological parameters include: ECG, respiration (RESP), temperature (TEMP), oxygen saturation of arterial blood (SpO2), pulse rate (PR), non-invasive blood pressure (NIBP), invasive blood pressure (IBP), carbon dioxide (CO2), cardiac output (C.O.), and Anaesthesia gas(AG). The arrhythmia detection and ST Segment analysis are intended for adult patients. The monitors are not intended for MRI environments.
ECG module		
Lead Mode	3 Electrodes; 5 Electrodes; 6 Electrodes; 10 Electrodes	3 Electrodes; 5 Electrodes; 6 Electrodes; 10 Electrodes
Arrhythmia analyses	ASYSTOLE, VFIB/VTAC, COUPLET, VT > 2, BIGEMINY, TRIGEMINY, VENT, R on T, PVC, TACHY, BRADY, MISSED BEATS, IRR, VBRADY, PNC, PNP	ASYSTOLE, VFIB/VTAC, COUPLET, VT > 2, BIGEMINY, TRIGEMINY, VENT, R on T, PVC, TACHY, BRADY, MISSED BEATS, IRR, VBRADY, PNC, PNP
	The arrhythmia detection algorithm is the same as predicate device K202336	
ST value		
Measurement Range	-2.0 mV to +2.0 mV	-2.0 mV to +2.0 mV
Pace		
Pulse Indicator	Amplitude: ±2 mV to ±700 mV Width: 0.1 ms to 2.0 ms Ascending time: 10 μs to 100 μs	Amplitude: ±2 mV to ±700 mV Width: 0.1 ms to 2.0 ms Ascending time: 10 μs to 100 μs

PVC																																		
Range	ADU: (0 to 300) PVCs/ min PED/NEO: (0 to 350) PVCs/ min	ADU: (0 to 300) PVCs/ min PED/NEO: (0 to 350) PVCs/ min																																
HR																																		
Measurement range	ADU: 15 bpm to 300 bpm PED/NEO: 15 bpm to 350 bpm	ADU: 15 bpm to 300 bpm PED/NEO: 15 bpm to 350 bpm																																
QT Analysis																																		
QT/QTc/ Δ QTc measurement	QT Range: 200 ms ~ 800 ms QTc Range :200ms ~ 800 ms Δ QTc Range: -600 ms ~ 600 ms	QT Range: 200 ms ~ 800 ms QTc Range :200ms ~ 800 ms Δ QTc Range: -600 ms ~ 600 ms																																
RESP module																																		
Principle of Operation	Impedance between RA-LL, RA-LA	Impedance between RA-LL, RA-LA																																
Measurement Range	0 rpm to 200 rpm	Adult: 0 to 120 rpm Pediatric/neonate: 0 rpm to 150rpm																																
NIBP module (EDAN)																																		
Technique	Oscillometry	Oscillometry																																
Measurement Mode	iCUFS, iFAST	iCUFS																																
EDAN-NIBP(iCUFS)																																		
Intended users	Adult, pediatric, neonates	Adult, pediatric, neonates																																
Measuring parameter	SYS, DIA, MAP, PR	SYS, DIA, MAP, PR																																
Measurement Range	<table><tr><td></td><td>Adult</td><td>Pediatric</td><td>Neonate</td></tr><tr><td>Systolic</td><td>25-290</td><td>25-240</td><td>25-140</td></tr><tr><td>Diastolic</td><td>10-250</td><td>10-200</td><td>10-115</td></tr><tr><td>Mean</td><td>15-260</td><td>15-215</td><td>15-125</td></tr></table>		Adult	Pediatric	Neonate	Systolic	25-290	25-240	25-140	Diastolic	10-250	10-200	10-115	Mean	15-260	15-215	15-125	<table><tr><td></td><td>Adult</td><td>Pediatric</td><td>Neonate</td></tr><tr><td>Systolic</td><td>25-290</td><td>25-240</td><td>25-140</td></tr><tr><td>Diastolic</td><td>10-250</td><td>10-200</td><td>10-115</td></tr><tr><td>Mean</td><td>15-260</td><td>15-215</td><td>15-125</td></tr></table>		Adult	Pediatric	Neonate	Systolic	25-290	25-240	25-140	Diastolic	10-250	10-200	10-115	Mean	15-260	15-215	15-125
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Systolic	25-290	25-240	25-140																															
Diastolic	10-250	10-200	10-115																															
Mean	15-260	15-215	15-125																															
PR from NIBP																																		
Measurement range	40 bpm to 240 bpm	40 to 240 bpm																																
EDAN-NIBP(iFAST)																																		
Intended users	Adult, pediatric	/																																
Measuring parameter	SYS, DIA, MAP																																	
Measurement Range	Adult Mode: SYS: 25 mmHg to 290 mmHg DIA: 10 mmHg to 250 mmHg MAP: 15 mmHg to 260 mmHg Pediatric Mode: SYS: 25 mmHg to 240 mmHg																																	

	DIA: 10 mmHg to 200 mmHg MAP: 15 mmHg to 215 mmHg	
SpO2 module(EDAN)		
Measurement Range	SpO2 0% to 100% Pulse Rate 25 to 300 bpm	SpO2 0% to 100% Pulse Rate 25 to 300 bpm
Nellcor SpO2 module is the same as K202336		
Temperature(TEMP) module		
Number of channels	2	2
Measurement Range	0 °C to 50 °C(32 °F to 122 °F)	0 °C to 50 °C(32 °F to 122 °F)
Spot Temp module		
Quick Temp (T2A module)	Measurement site: oral/axillary/rectal Monitor mode: 25 °C ~45 °C Predict mode: 35.5 °C ~42 °C Accuracy (Monitor mode): 0.1 °C (25 °C ~ 45 °C)	/
The Quick Temp (T2A) module is similar to K180380, and the performance of the Predict mode of the module is validated by the clinical trial.		
Infrared Temp (TAT-5000S-RS232 Thermometer)	Measuring Range :16 °C ~ 43 °C (61 °F ~ 110 °F)	/
The Infrared Temp module is the same as K202892		
The Quick Temp module and Infrared Temp module is applicable to iX10 and iX12		
IBP module		
Measurement Range	ART, Ao, UAP, BAP, FAP, LV, P1-P4: (-50 to +400) mmHg PA/PAWP: (-6 to +120) mmHg CVP/RAP/LAP/ICP: (-10 to +40) mmHg	Art: (0 to +300) mmHg PA/PAWP: (-6 to +120) mmHg CVP/RAP/LAP/ICP: (-10 to +40) mmHg P1/P2: (-50 to +300) mmHg
C.O. Module		
Technique	Thermodilution Technique	Thermodilution Technique
Measurement range	C.O.: 0.1 to 20L/min TB: 23 °C to 43 °C(73.4 °F to 109.4 °F) TI: -1 °C to 27 °C(30.2 °F to 80.6 °F)	C.O.: 0.1 to 20L/min TB: 23° C to 43 °C(73.4 °F to 109.4 °F) TI: -1 °C to 27 °C(30.2 °F to 80.6 °F)
CO2 Module (EDAN G2)		
Intended Patient	Adult, pediatric, neonatal	Adult, pediatric, neonatal
Measure Parameters	EtCO ₂ , FiCO ₂ , AwRR	EtCO ₂ , FiCO ₂ , AwRR
Measuring Range	CO ₂ :0 mmHg to 150 mmHg (0 % to 20%) AwRR: 0 rpm to 150 rpm	CO ₂ :0 mmHg to 150 mmHg (0 % to 20%) AwRR: 2 rpm to 150 rpm
Respironics and Masimo CO2 module are the same as K202336		
AG module (EDAN G7 module)		
Measure Parameters	CO ₂ , N ₂ O, O ₂ , HAL, ISO, ENF, SEV,	CO ₂ , N ₂ O, O ₂ , HAL, ISO, ENF, SEV,

	DES、AwRR、MAC	DES、AwRR、MAC
Measuring Range	CO ₂ : 0%~15Vol % N ₂ O: 0%~100 Vol % HAL/ISO: 0%-8Vol % ENF: 0%-8 Vol % SEV: 0%-10 Vol % DES: 0%-20 Vol % O ₂ : 0%~100 Vol % AwRR: 2rpm-100rpm	CO ₂ : 0%~15Vol % N ₂ O: 0%~100 Vol % HAL/ISO: 0%-8Vol % ENF: 0%-8 Vol % SEV: 0%-10 Vol % DES: 0%-20 Vol % O ₂ : 0%~100 Vol % AwRR: 2rpm-100rpm
Masimo AG module are the same as K202336		
WI-FI		
IEEE	802.11a/b/g/n	802.11a/b/g/n
Frequency Band	2.4 GHz ISM band & 5 G ISM band	2.4 GHz ISM band & 5 G ISM band
e-Link		
e-Link	Bluetooth Low Energy 4.0	/
Power supply		
AC power		
Requirement	100-240V, 50/60Hz	100-240V, 50/60 Hz
Battery		
Rechargeable Battery	Yes	Yes

As seen in the comparison tables, the subject and predicate device have similar design features and performance specifications. The technological differences between the subject and predicate device do not raise different questions of safety or effectiveness.

7. Performance Data:

Non-clinical data:

Electrical safety and electromagnetic compatibility (EMC)

iX Series Patient Monitors were assessed for conformity with the relevant requirements of the following standards and found to comply:

- ANSI AAMI ES60601-1:2005/(R)2012 & A1:2012, C1:2009/(R)2012 & A2:2010/(R)2012 (Cons. Text) [Incl. AMD2:2021] Medical electrical equipment - Part 1: General requirements for basic safety and essential performance (IEC 60601-1:2005, MOD) [Including Amendment 2 (2021)]
- IEC 60601-1-2:2014+A1:2020 Medical electrical equipment – Part 1-2: General requirements for basic safety and essential performance – Collateral Standard: electromagnetic disturbances – Requirements and tests.

Performance testing-Bench

Edan has conducted functional and system level testing to validate the performance of the devices. The results of the bench testing show that the subject device meets its accuracy specification and meet relevant consensus standards.

- IEC 60601-1-8:2020 Medical electrical equipment - part 1-8: general requirements for basic safety and essential performance - collateral standard: general requirements, tests and guidance for alarm systems in medical electrical equipment and medical electrical systems
- IEC 60601-2-25:2011 Medical electrical equipment - Part 2-25: Particular requirements for the basic safety and essential performance of electrocardiographs
- IEC 60601-2-27:2011 Medical electrical equipment--Part 2-27: Particular requirements for the basic safety and essential performance of electrocardiographic monitoring equipment
- IEC 80601-2-30:2018 Medical electrical equipment - part 2-30: particular requirements for the basic safety and essential performance of automated non-invasive sphygmomanometers
- IEC 60601-2-34:2011 Medical electrical equipment - part 2-34: particular requirements for the basic safety, including essential performance, of invasive blood pressure monitoring equipment
- IEC 60601-2-49:2018 Medical electrical equipment –Part 2-49: Particular requirements for the basic safety and essential performance of multifunction patient monitoring equipment
- ISO 80601-2-55:2018 Medical electrical equipment - part 2-55: particular requirements for the basic safety and essential performance of respiratory gas monitors
- ISO 80601-2-56:2017+A1:2018 Medical electrical equipment - part 2-56: particular requirements for basic safety and essential performance of clinical thermometers for body temperature measurement
- ISO 80601-2-61:2017 Medical electrical equipment - part 2-61: particular requirements for basic safety and essential performance of pulse oximeter equipment
- IEEE ANSI C63.27:2017 American National Standard for Evaluation of Wireless Coexistence
- ANSI AAMI EC57:2012 Testing and reporting performance results of cardiac rhythm and ST segment measurement algorithms

Software Verification and Validation Testing

Software verification and validation testing were conducted and documentation was provided as recommended by FDA's Guidance for Industry and Food and Drug Administration Staff, *"Content of Premarket Submissions for Device Software Functions"*.

Clinical data:

To meet the requirements for the validity and accuracy of the TEMP measurement of the Quick Temp Module (T2A), EDAN conducted clinical investigation according to the requirements of the standard ISO 80601-2-56

Second edition 2017-03 + AMD1:2018: Medical electrical equipment- Part 2-56: Particular requirements for basic safety and essential performance of clinical thermometers for body temperature measurement. A clinical accuracy study evaluated 142 valid cases of sublingual and axillary temperature, which were performed on the following two age groups: >1 and <5 years old and ≥ 5 years old in accordance with ISO 80601-2-56:2017/Amd.1:2018(E) to compare the direct mode of F3000 Temp Module of M3A Vital signs monitor. The age of subjects is from >1 year old to 73 years old. The total number of hyperthermia subjects shall be no less than 30% and no more than 50% of all subjects in the selected age group. Statistical results show that, the temperature measurement function of the T2A module in Predict mode meets the requirements of standard ISO 80601-2-56:2017+AMD1:2018 for temperature measurement and meets the acceptance criteria in clinical protocol. During the entire clinical trial, all subjects are in good condition, and none of the subjects have discomfort symptoms or adverse reactions.

Summary

Both the clinical and non-clinical performance testing showed that the subject devices are as safe and as effective as the predicate device.

8. Conclusion

The performance data demonstrates that iX series Patient Monitor are substantially equivalent to the predicate device.