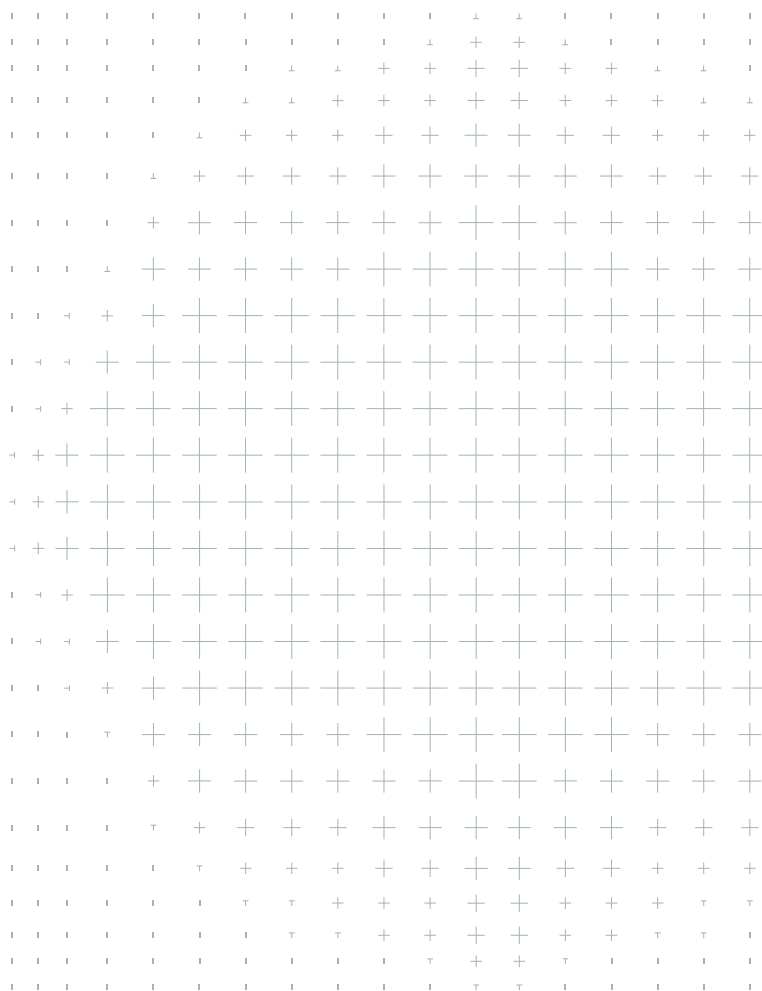


Advanced Pressure Mapping System

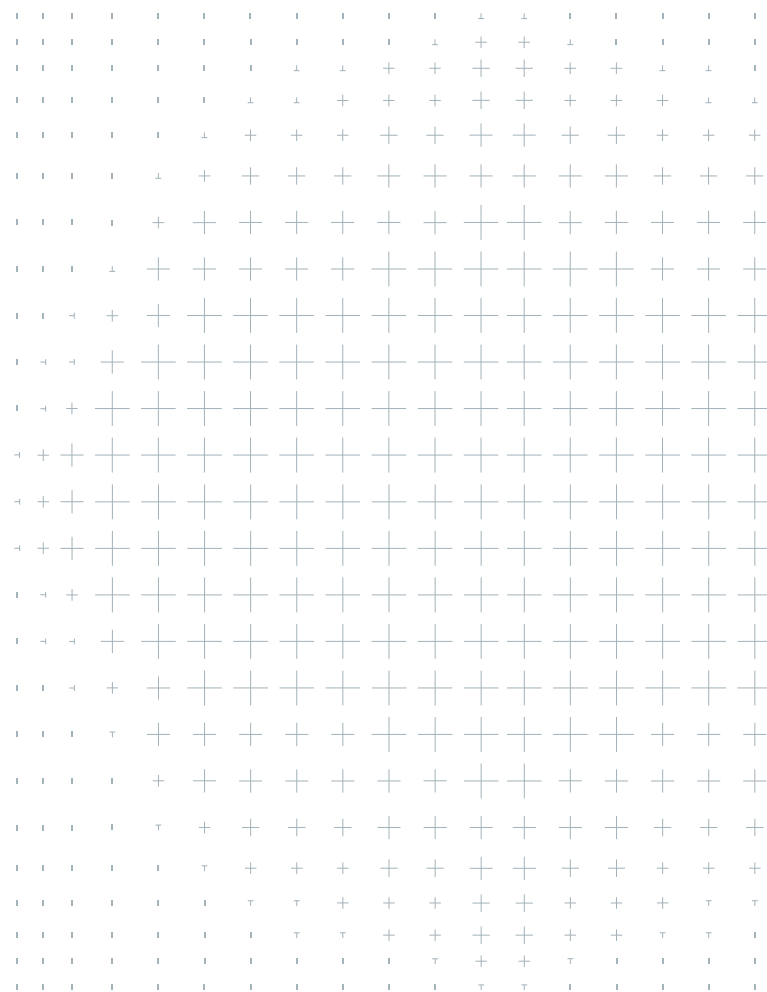
사용자 매뉴얼 | User Manual | 用户手册



사용자 매뉴얼 01

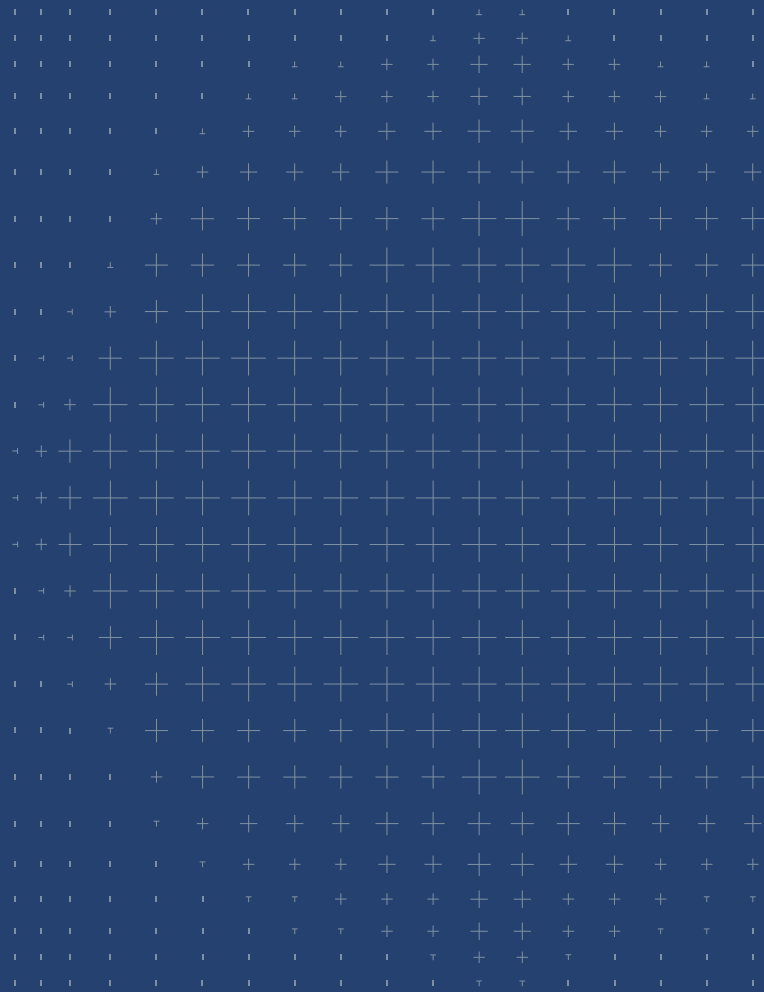
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Advanced Pressure Mapping System

사용자 매뉴얼



안전을 위한 주의사항

본 제품을 사용하기 전에 본 설명서 내용을 자세히 정독하시고 제품에 대하여 숙지하시기 바랍니다.
신체 부상과 제품 손상을 방지하기 위하여, 안전 관련 설명과 경고 내용에 주의를 기울이시기 바랍니다.
설명서와 제품에 표시된 모든 안내 및 주의 사항을 읽어 주십시오.

콩테크 주식회사

Website: <http://www.kong-tech.com>

E-mail: kongtech@kong-tech.com

Tel: 1522-9928 Fax : 070-5143-6695

APMS에 문제가 있거나 질문사항이 있으시면
위의 연락처로 문의하세요.

저작권 및 안내

1. 저작권 법에 따라 본 설명서는 콩테크(주)의 서면 동의 없이 전체 또는 일부를 무단 복사, 복제, 번역 또는 다른 매체 형태로 바꿀 수 없습니다.
2. 본 설명서는 인쇄상의 잘못이 있을 수 있으며 사전 통보 없이 내용이 변경될 수 있습니다.
3. 콩테크(주)는 본 사용자 매뉴얼에 기재된 내용을 준수하지 아니하여 발생한 모든 피해에 대하여 책임을 지지 않습니다.
4. 제품 외관, 사양 등은 성능 개선을 위해 예고없이 변경될 수 있습니다.

경고

표시사항을 위반할 시 심각한 상해나 사망이 발생할 수 있습니다.

주의

표시사항을 위반할 시 경미한 상해나 제품 손상이 발생할 가능성이 있습니다.

사용자 매뉴얼

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3. 사용하기 04

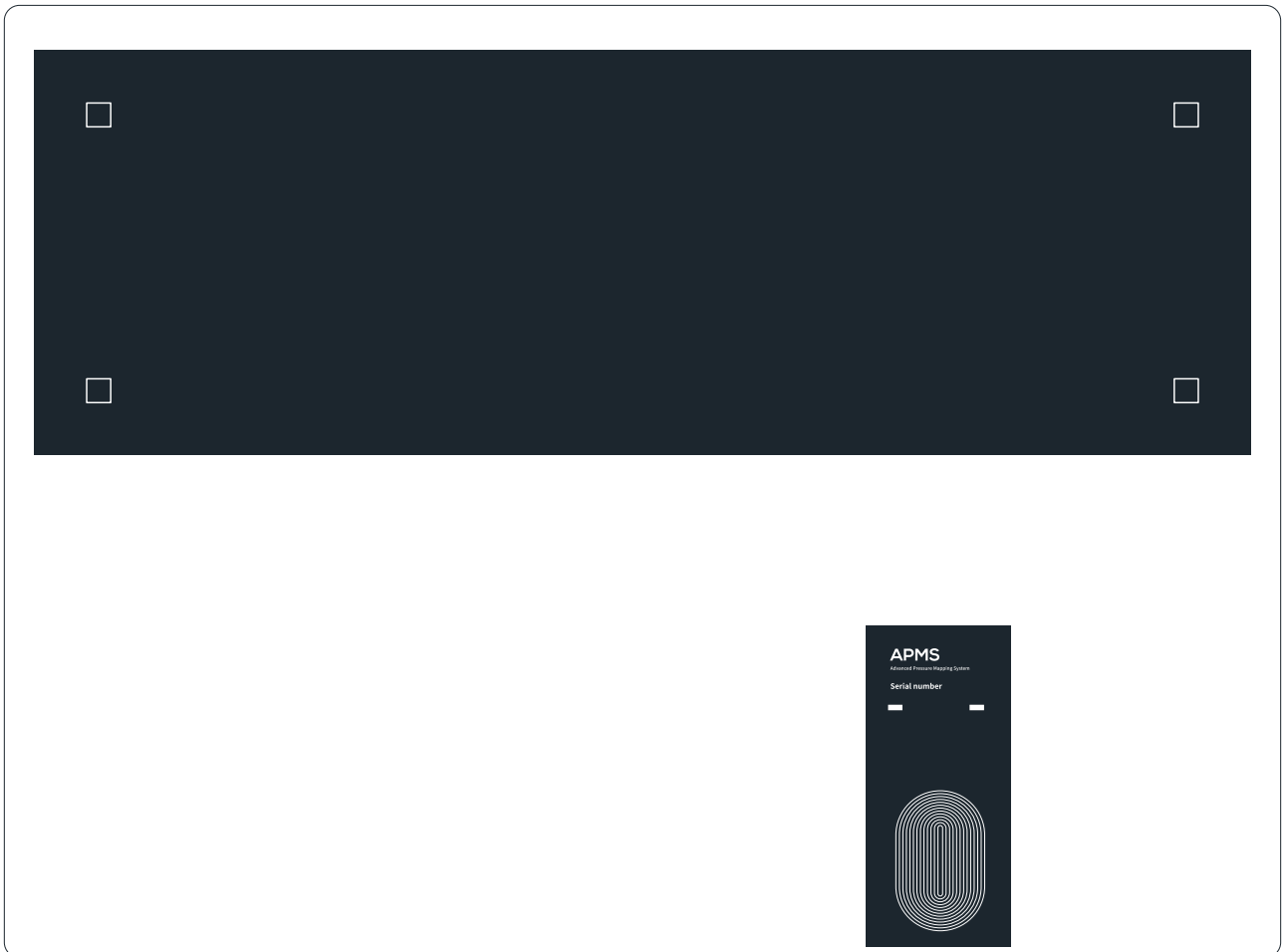
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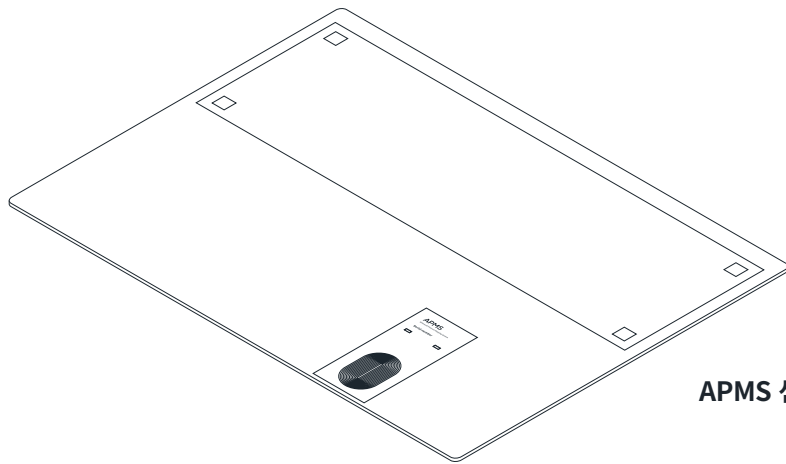
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1. 제품 소개

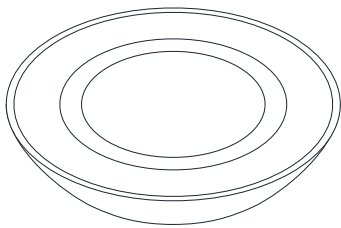
APMS(Advanced Pressure Mapping System)는 무선 압력 측정 장비입니다. 유리 세정 장비의 압력을 측정하는 것에 최적화되어 있으며, 장비를 최적의 상태로 유지하는 데 도움이 됩니다. 센서는 매우 얇고 완전 방수이기 때문에 유리 위에 놓고 그대로 측정할 수 있습니다. 또한 전용 보정 장치를 사용하여 신뢰할 수 있는 데이터를 제공합니다.



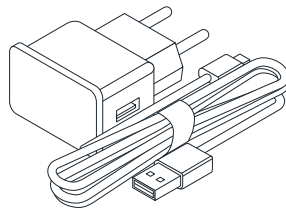
2. 제품 구성



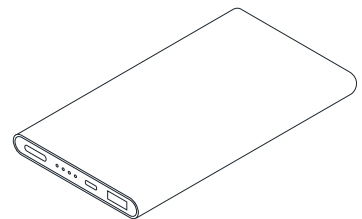
APMS 센서



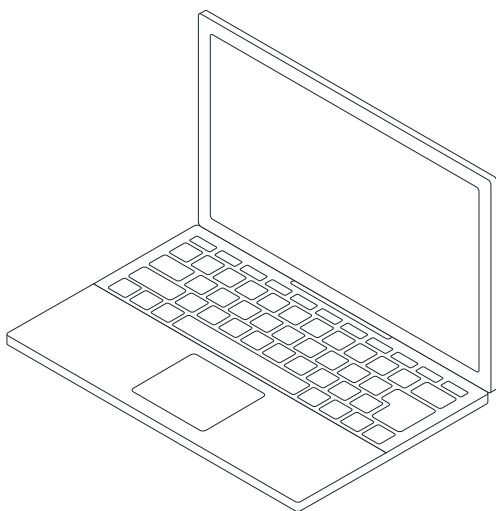
무선 충전기



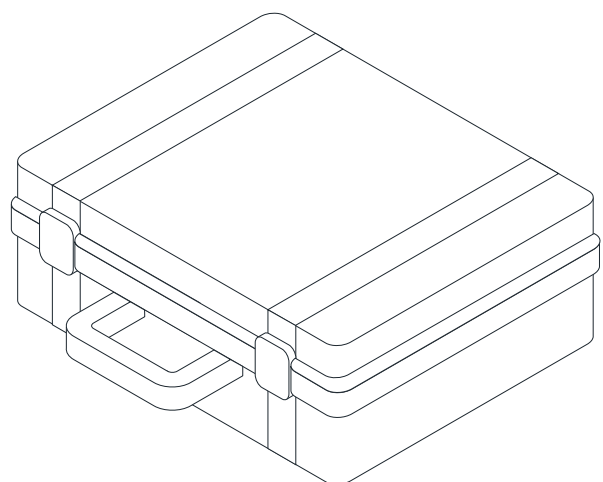
충전 어댑터 & 케이블



배터리 10,000mAh
(선택사항)



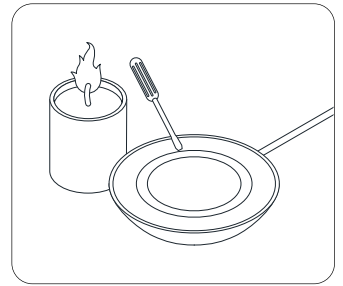
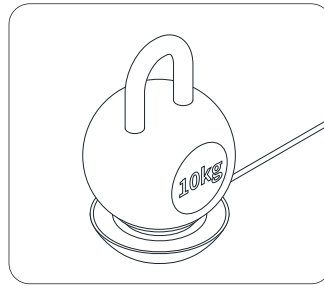
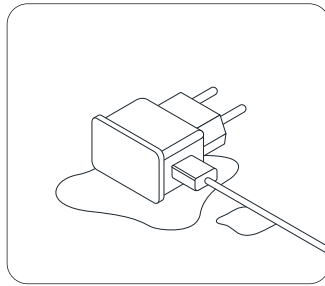
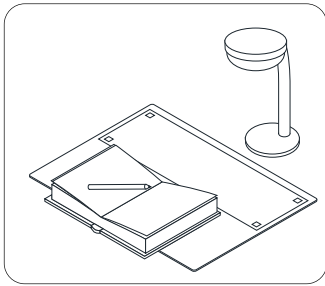
노트북
(선택사항)



케이스

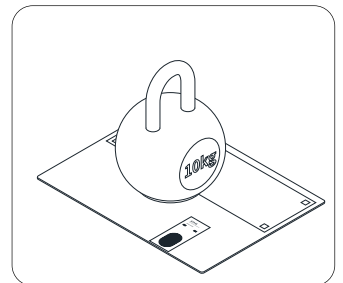
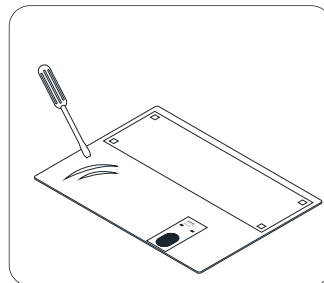
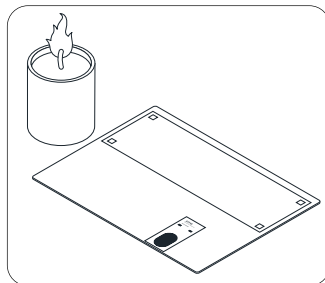
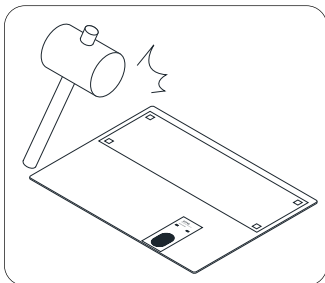
⚠ 경고

1. 이 사용 설명서에 기재되어 있지 않은 다른 용도로는 사용하지 마십시오.
2. 사용 설명서를 이해할 수 없는 사람이 제품을 작동시켜서는 안됩니다.
3. 감전의 위험을 피하려면 충전용 코드 또는 플러그를 물이나 다른 액체에 빠뜨리지 마십시오.
4. 충전용 코드를 손상시키거나, 개조하거나, 구부리거나, 당기거나, 비틀거나, 묶지 마십시오.
5. 무거운 물건을 코드 위에 놓거나 코드를 누르지 마십시오.
6. 테이블, 카운터의 날카로운 모서리와 뜨거운 표면으로부터 충전용 코드를 멀리 두십시오.
7. AC어댑터용의 일반 전원 콘센트를 사용하십시오.
8. 전원 플러그의 먼지를 정기적으로 닦아 주십시오.
9. 조금이라도 손상된 충전용 코드나 전원 플러그를 사용하지 마십시오.



⚠ 주의

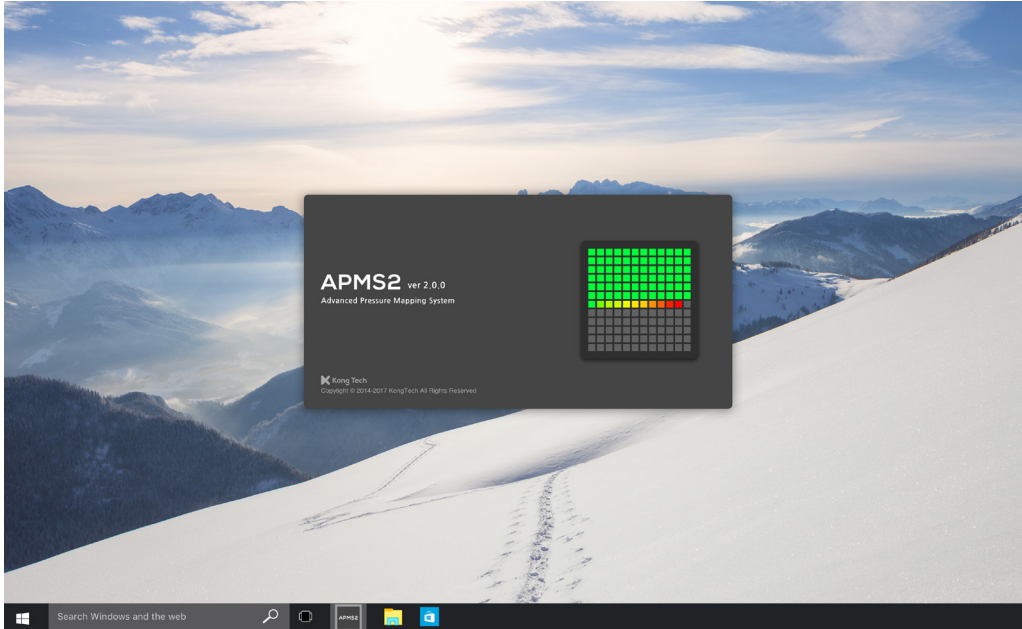
1. 제품을 넘어뜨리지 마십시오.
2. 제품을 떨어뜨리거나 강한 충격을 주지 마십시오.
3. 제품을 이동할 때에는, 작동을 중단하고 제품이 휘지 않도록 양손으로 받치고 이동하십시오.
4. 뽕족하거나 날카로운 물건을 가까이 두지 마십시오. 제품이 찢어 방수가 되지 않을 우려가 있습니다.
5. 이 제품에 올라가거나 무거운 물건을 두지 마십시오.
6. 장치 가까이에 가연성 물체를 두거나 담뱃불을 켜거나 향을 켜지 마십시오.
7. 신체적, 감각적 또는 정신적 능력이 떨어지는 사람(어린이 포함)이나 경험과 지식이 부족한 사람은 이 제품을 사용해서는 안됩니다. 이러한 사람들은 지시를 받거나 교육을 받아야 합니다.
8. 신체적, 감각적 또는 정신적 능력이 떨어지거나 경험과 지식이 부족한 사람이라도 안전한 장치 사용에 관한 지시나 교육을 받고, 이에 관련된 위험을 이해한다면 이 제품을 사용할 수 있습니다.



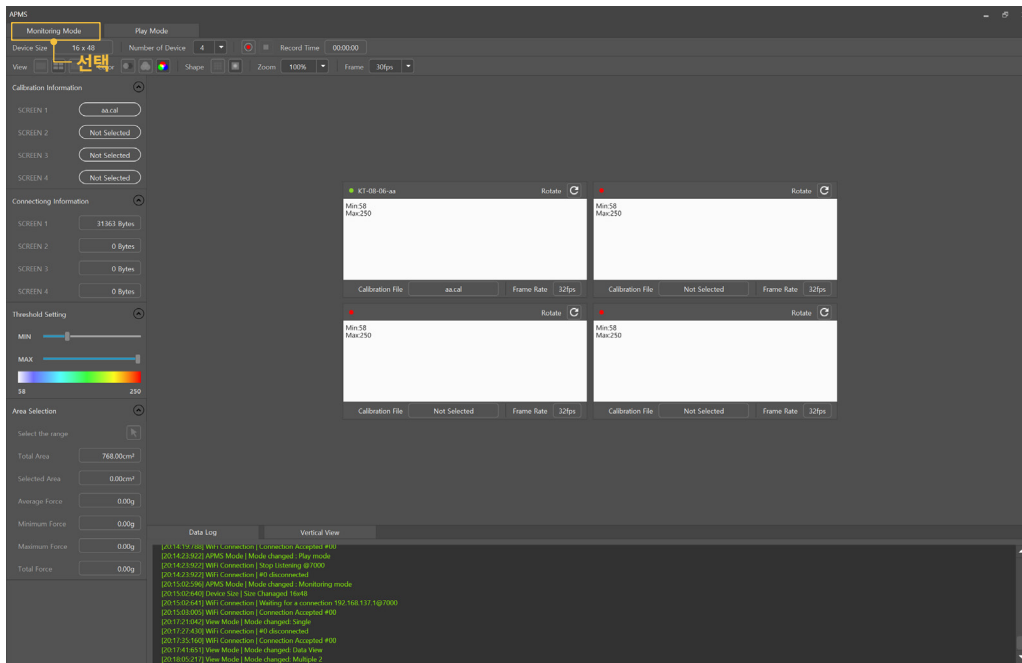
3. 사용하기

3.1 APMS 연결하기

1. APMS.exe 프로그램을 실행시켜주세요.



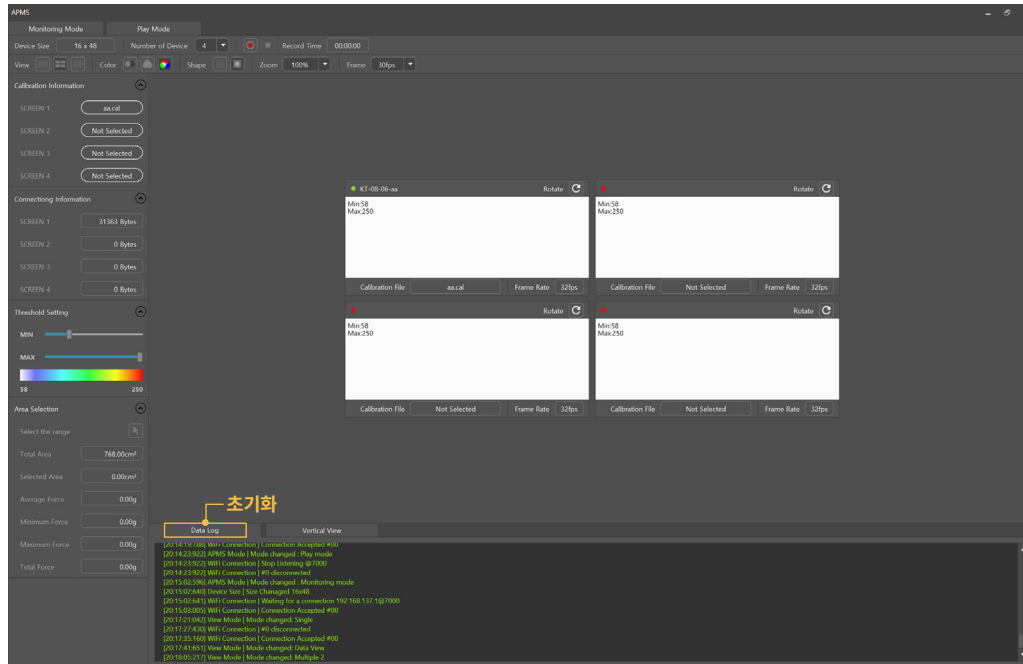
2. 상단의 'Monitoring Mode'를 선택하세요.(프로그램 실행 시 자동으로 선택되어 있습니다.)



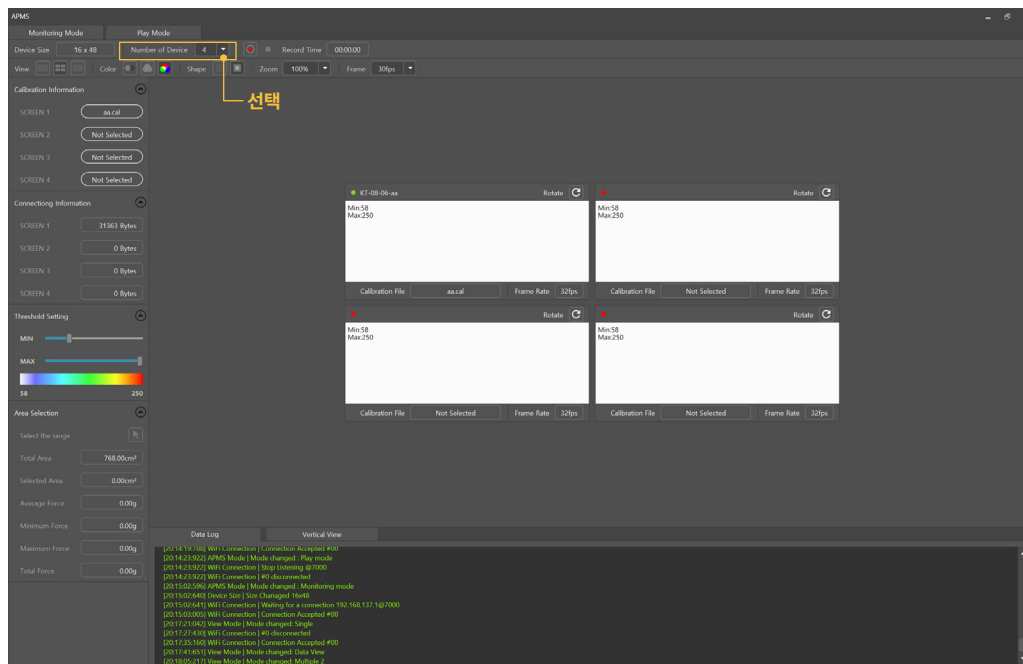
3. 하단의 'Data Log' 탭에서 프로그램 초기화가 완료되었는지 확인하세요.
(아래 항목이 모두 표시되면 초기화가 완료됩니다.)

- Wifi Connection I Hotspot started
- Device Size I Size Changed 16 x 48
- Wifi Connection I Waiting for a connection
- View Mode I Mode Changed: Multiple2

※ 초기화가 안될 시 고객센터(1522-9928)로 문의주세요.

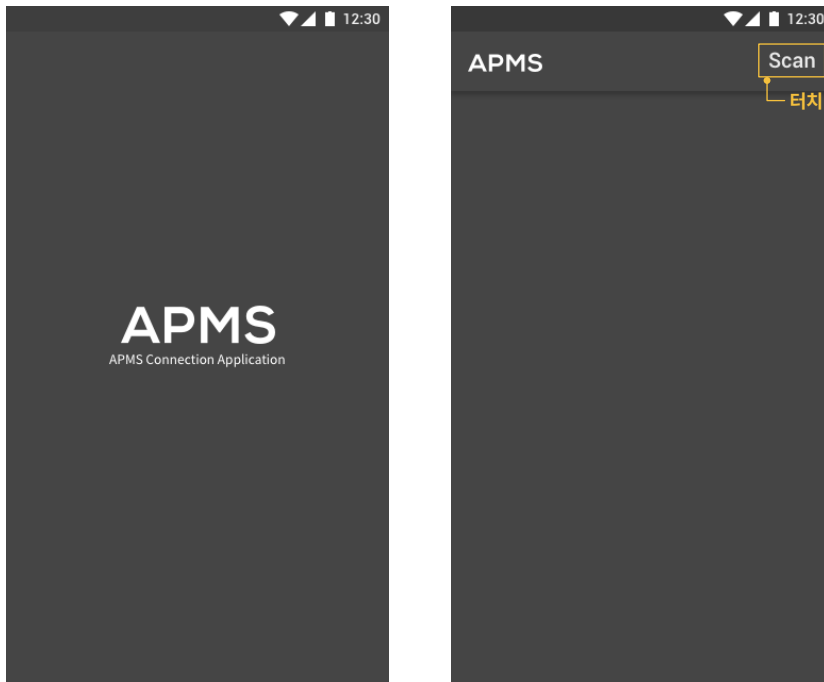


4. 'Number of Device' 탭에서 사용하고자하는 센서의 수량을 선택하세요.

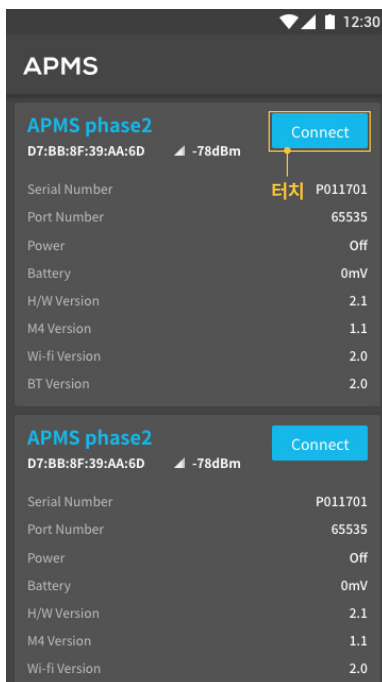


5. APMS 애플리케이션을 실행시킨 후 상단의 'Scan' 버튼을 눌러 주세요.

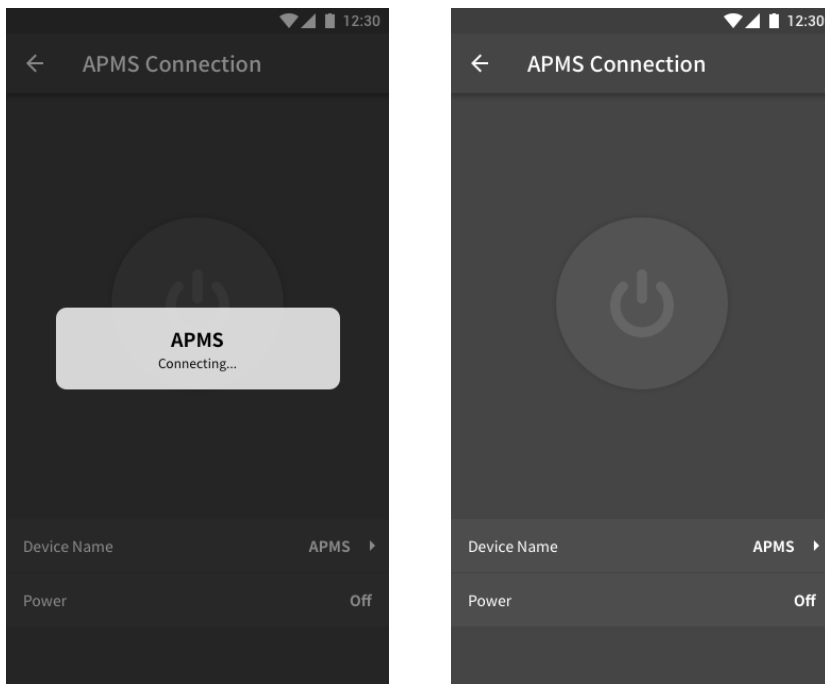
※ 사용하기 전 Playstore, Appstore에서 'APMS' 애플리케이션을 설치해주세요.



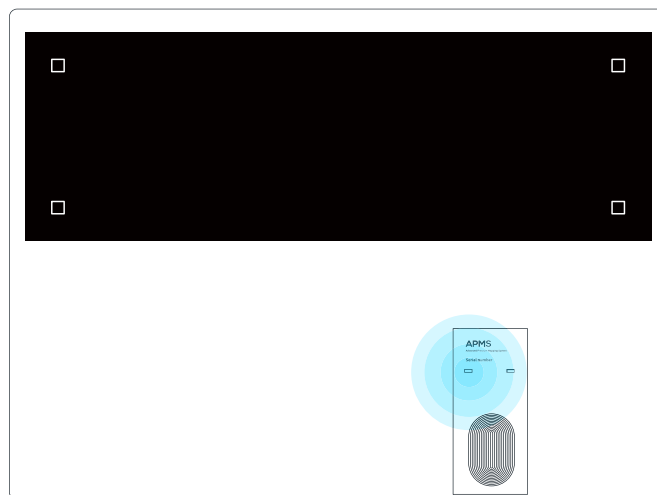
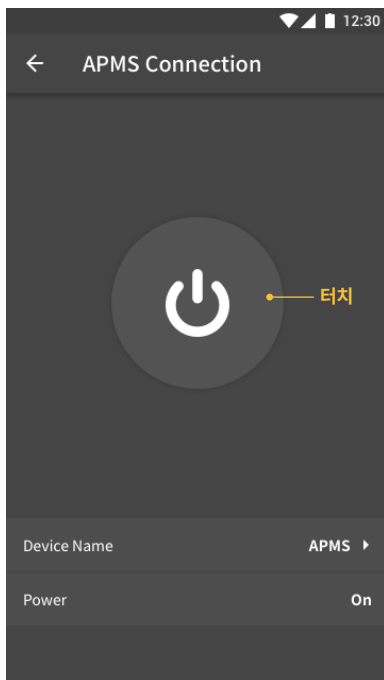
6. 검색되는 센서의 'Connect' 버튼을 눌러 주세요. (검색되는 센서의 정보를 확인할 수 있습니다.)



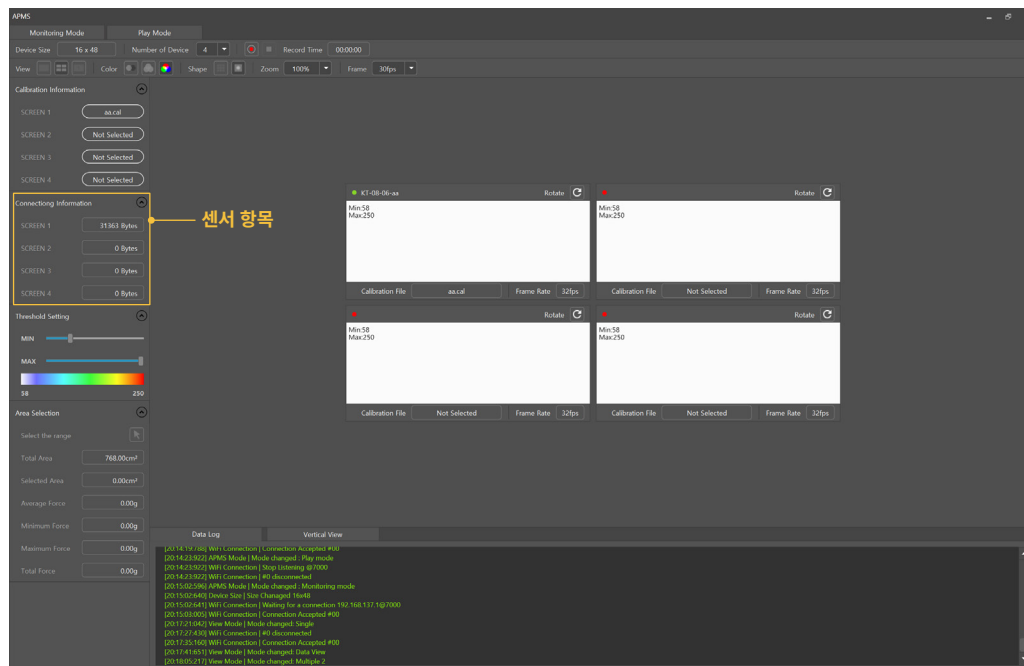
7. 센서와 연결이 완료될 때까지 기다려주세요. (완료가 되면 로딩 화면이 사라집니다.)



8. 가운데 버튼을 누르면 활성화가 되면서 연결된 APMS 센서가 ON상태(LED에 불이 들어옵니다.)가 됩니다.



9. 센서가 ON 상태가 되면 자동으로 'Connecting Information' 탭에 연결된 센서 항목이 설정됩니다.

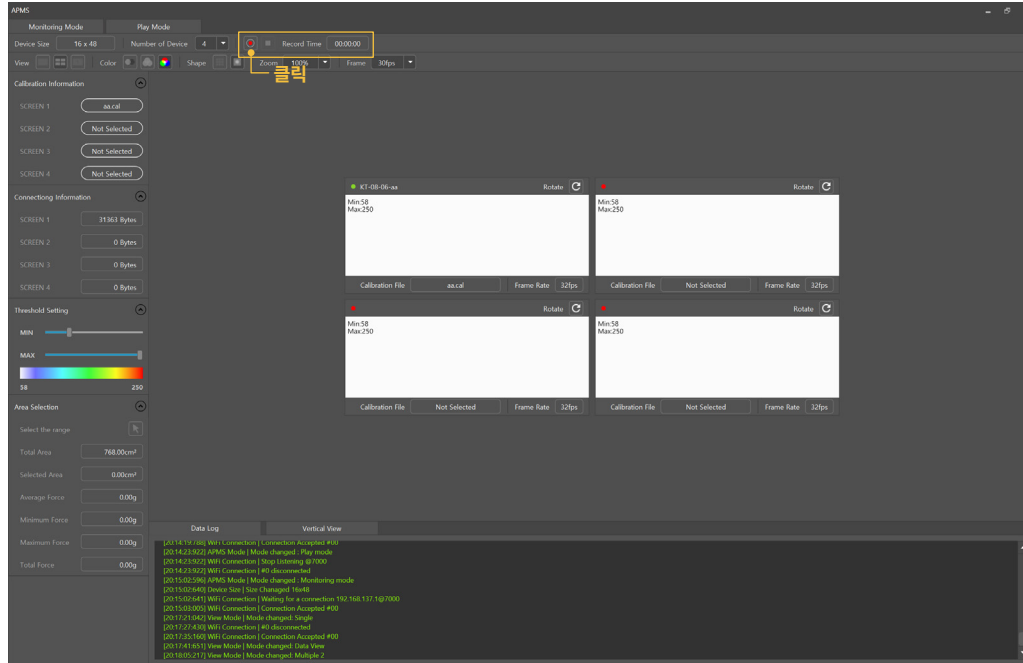


10. 연결이 완료되면 유리 세정 장비에 APMS센서를 배치하여 측정을 시작하세요.

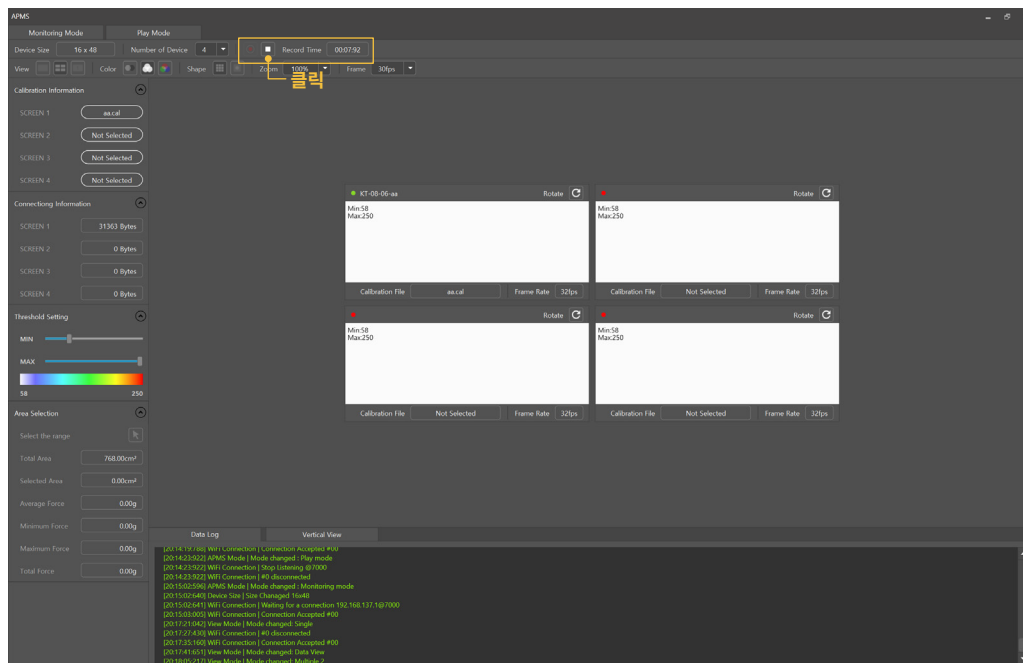
3.2 측정 데이터 저장하기

측정되는 데이터는 녹화하여 저장할 수 있습니다.

1. 상단의 녹화 버튼을 눌러주세요.



2. 녹화가 완료되면 정지 버튼을 눌러주세요.

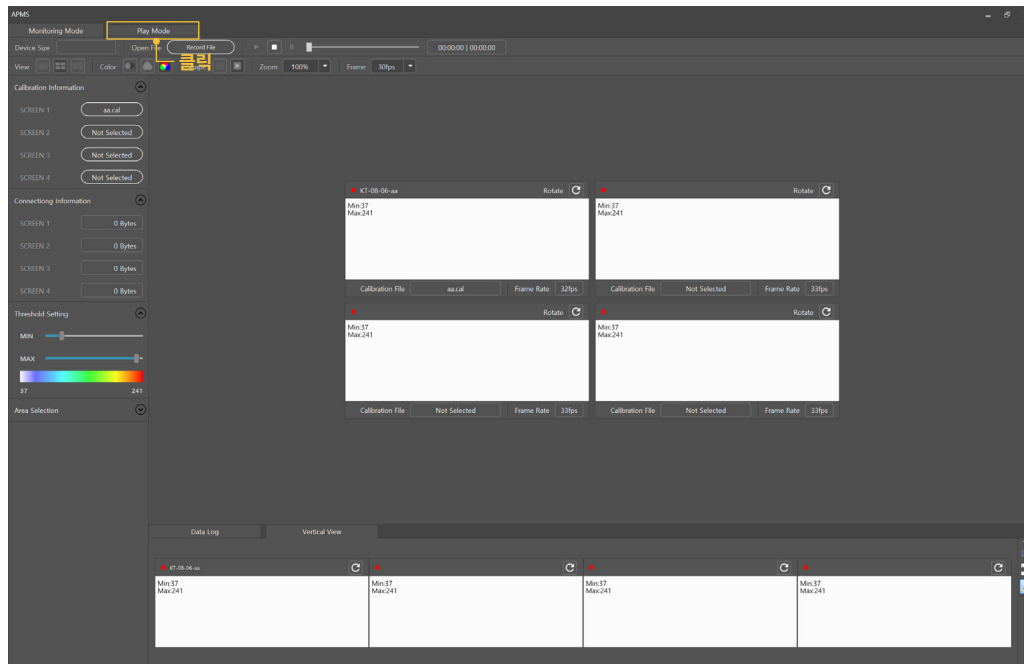


3. 녹화된 파일은 아래 경로에 저장됩니다.

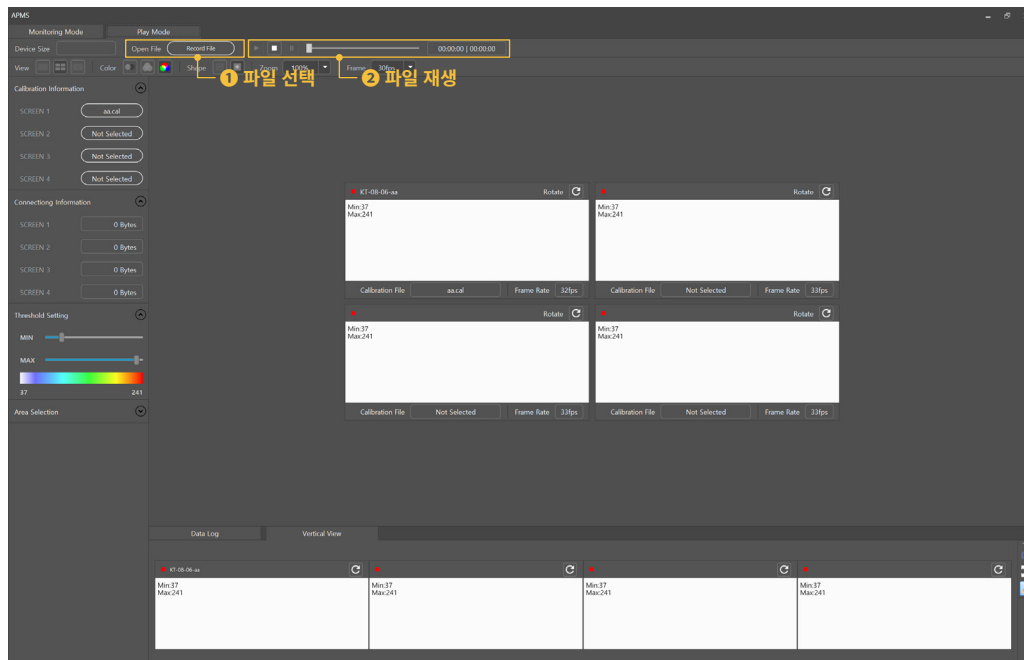
Documents/APMS2/Record

3.3 녹화된 파일 재생하기

1. 상단의 'Play Mode'를 선택하세요.

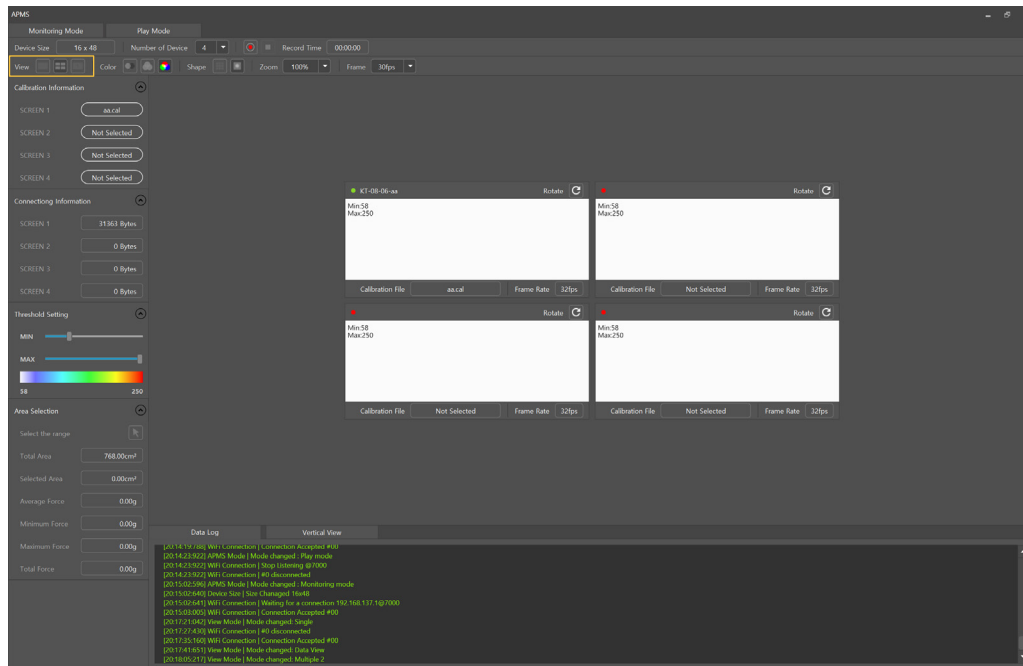


2. 'Open File' 탭에서 'Record File'을 선택하여 원하시는 파일을 선택하세요.
3. 재생, 정지, 일시정지 버튼을 이용하여 파일을 실행시킬 수 있습니다.

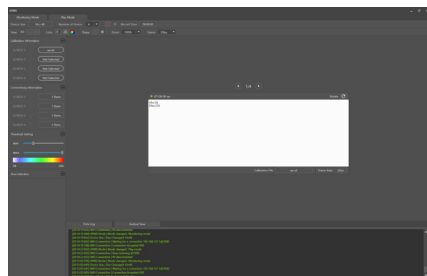


3.4 측정 데이터 보기 모드 변경하기

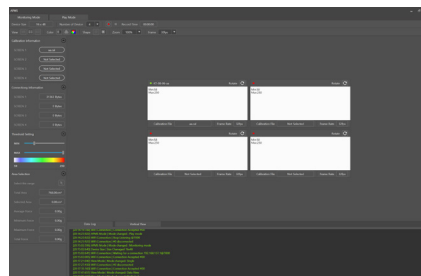
1. 측정 데이터 보기 모드는 ‘Single View’, ‘Multiple View’, ‘Data View’ 이렇게 세가지 모드가 있으며 상단의 ‘View’ 탭에서 선택할 수 있습니다.



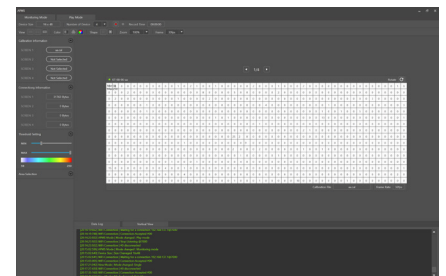
2. ‘Single View’ 모드는 APMS 센서 한 개를 큰 화면에 하나씩 볼 수 있습니다.



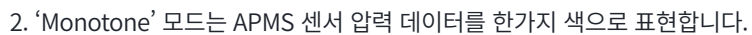
3. ‘Multiple View’ 모드는 APMS 센서 여러 개를 한 화면에 볼 수 있습니다.



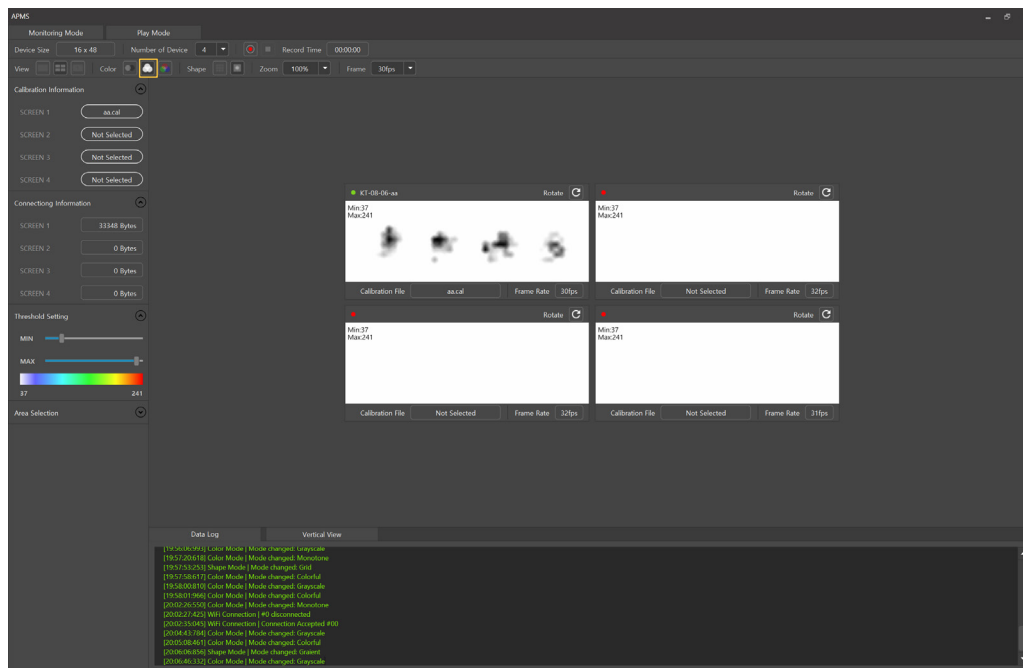
4. ‘Data View’ 모드는 APMS 센서로부터 받은 압력 데이터를 화면에 볼 수 있습니다.



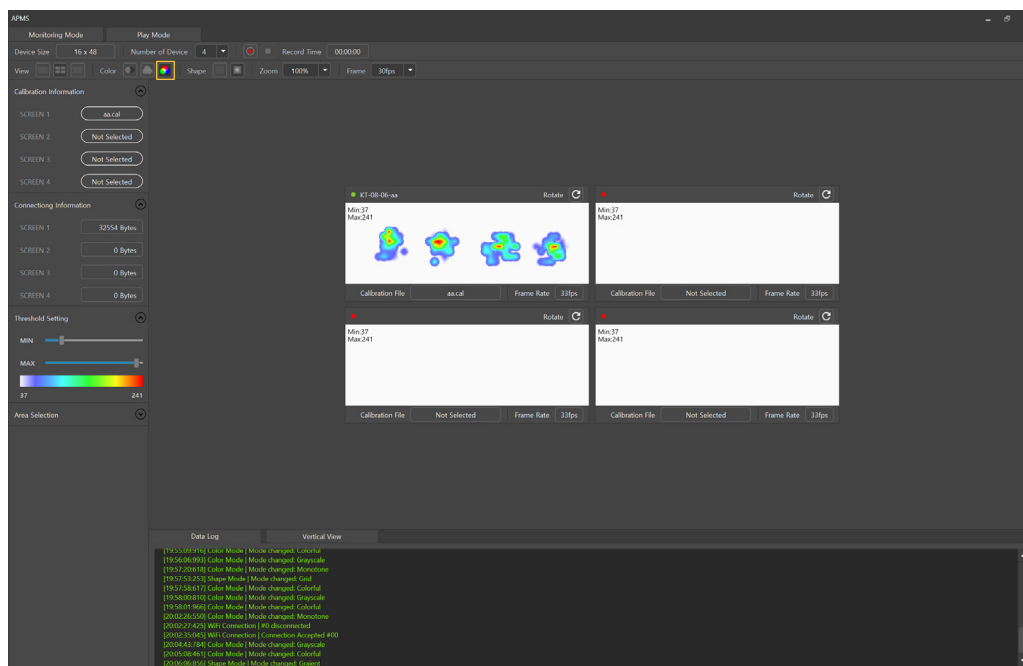
1. 측정 데이터 색상 변경 모드는 ‘Monotone’, ‘Grayscale’, ‘Colorful’ 이렇게 세가지 모드가 있으며 상단의 ‘Color’ 탭에서 선택할 수 있습니다.



3. 'Grayscale' 모드는 APMS 센서 압력 데이터를 흑백 톤으로 표현 합니다.

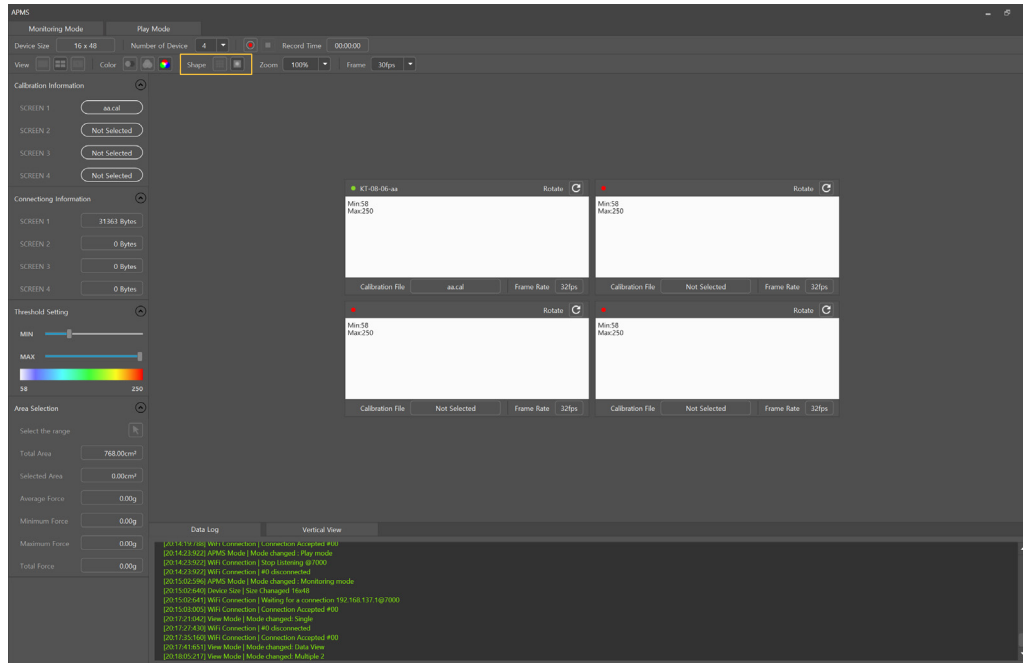


4. 'Colorful' 모드는 APMS 센서 압력 데이터를 다양한 색으로 표현합니다.

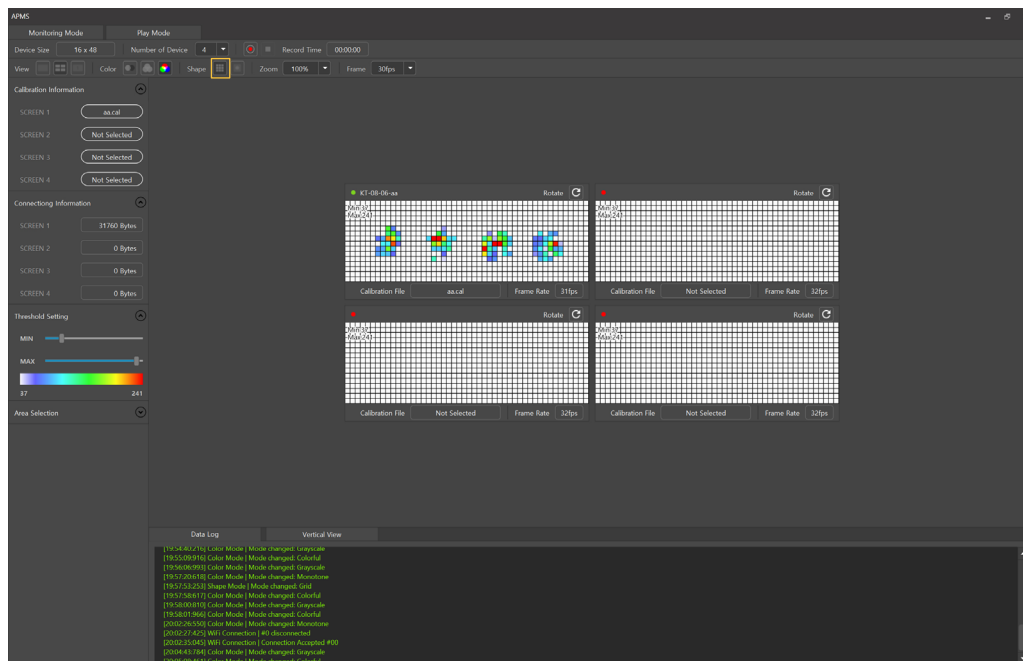


3.6 측정 데이터 모양 변경하기

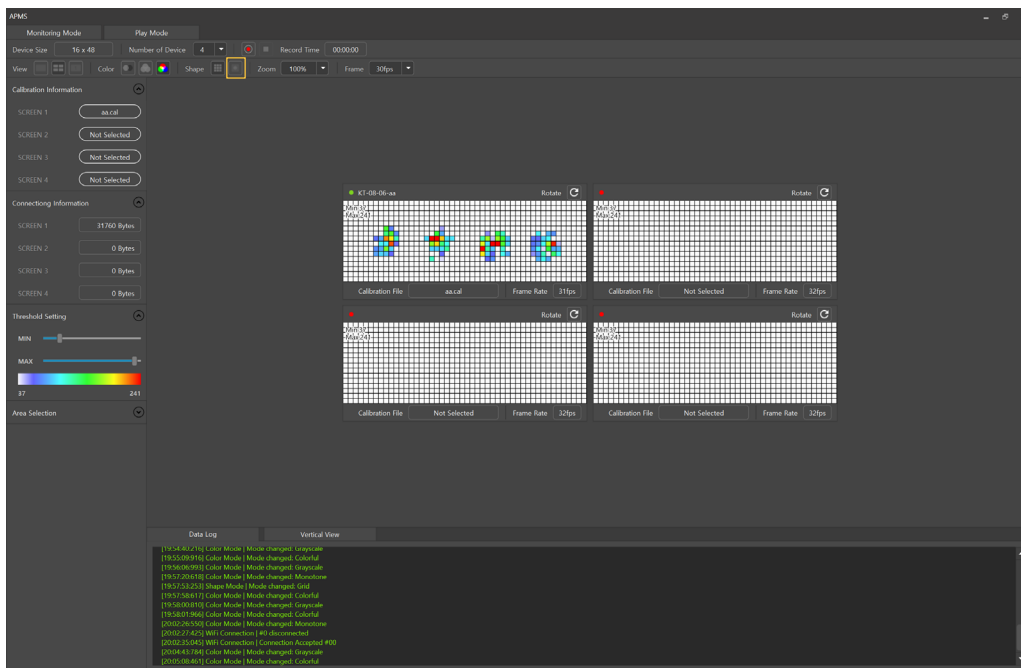
1. 측정 데이터 모양 변경 모드는 'Grid', 'Gradient' 이렇게 두 가지 모드가 있으며 상단의 'Shape' 탭에서 선택할 수 있습니다.



2. 'Grid' 모드는 APMS 센서 압력 데이터를 격자무늬 형식으로 표시합니다.

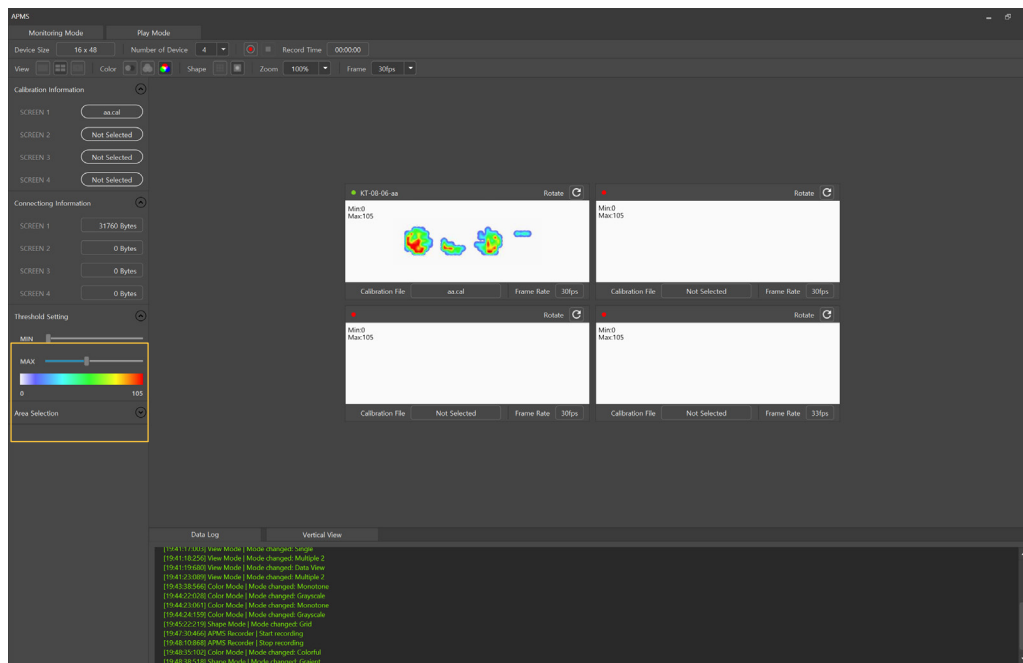
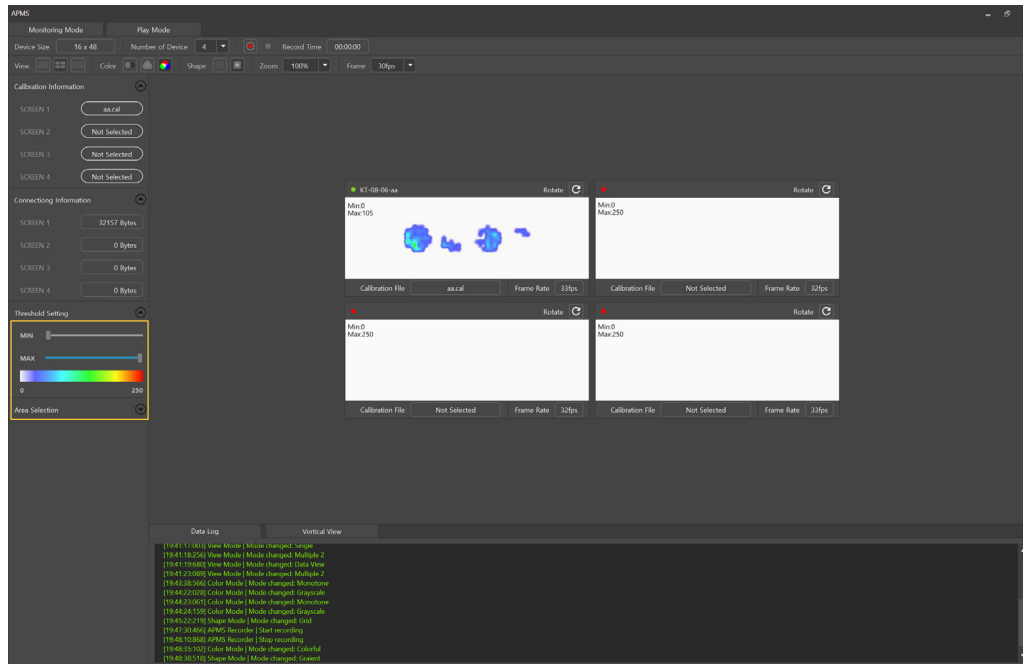


3. 'Gradient' 모드는 APMS 센서 압력 데이터를 보정된 형식으로 표시합니다.



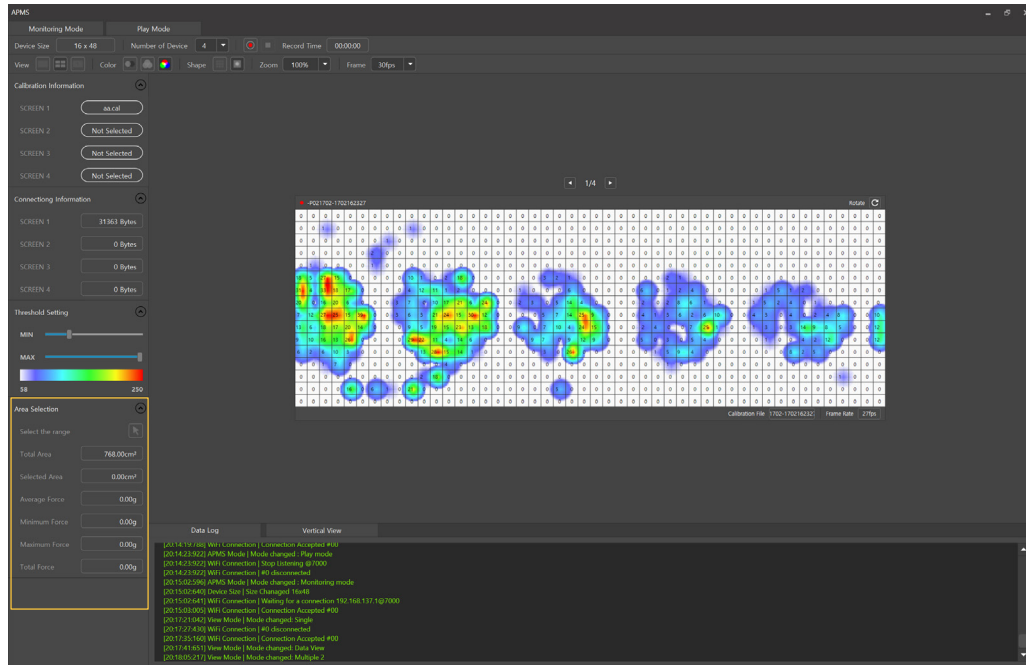
3.7 데이터 측정 범위 변경하기

1. 데이터 측정 범위 변경은 좌측 항목의 'Threshold Setting' 탭에서 변경할 수 있습니다.
2. 가운데 바를 움직이거나 숫자를 입력하여 변경할 수 있으며 초기에는 MIN : 0, MAX : 100으로 설정되어 있습니다.



3.8 설정 범위 데이터 확인하기

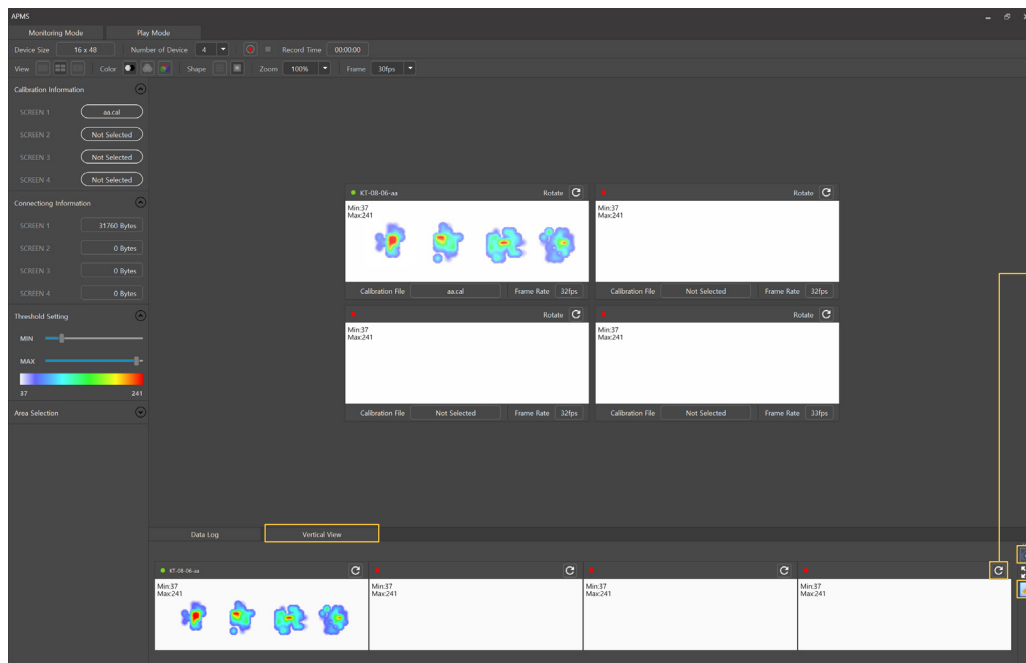
1. 좌측 항목의 'Area Selection' 탭에서 설정한 범위의 데이터를 확인할 수 있습니다.
2. 'Select the range' 버튼을 클릭하여 원하는 범위를 지정하세요.
3. 지정된 범위의 데이터를 확인할 수 있습니다.



3.9 연속 보기 기능

측정하고 있는 APMS 센서 4개를 일렬로 나열하여 확인할 수 있습니다.

1. 하단의 'Vertical View' 탭을 선택하세요.
2. 일렬로 나열된 4개의 센서 데이터를 한번에 확인할 수 있습니다.



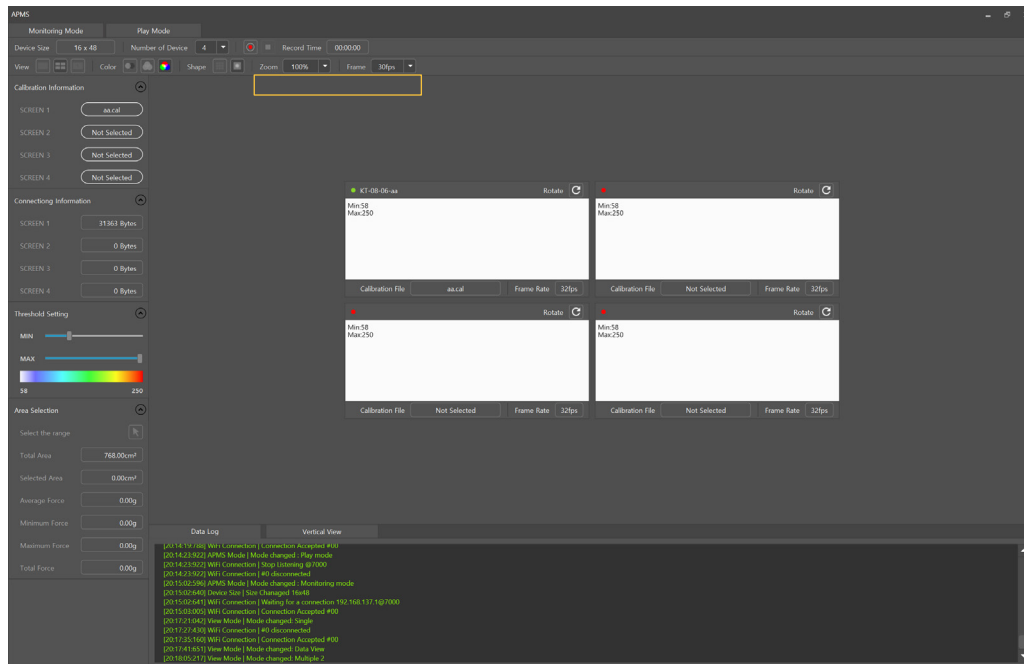
회전 버튼
180도 회전된 이미지로 설정

캡처 버튼
이미지를 한 번에 캡처

제거 버튼
이미지를 제거

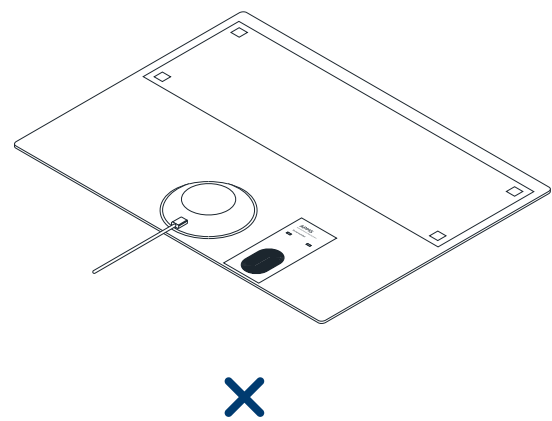
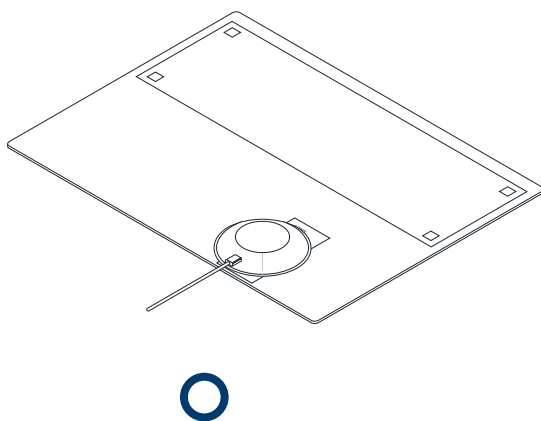
3.10 기타 기능

1. 상단의 'Zoom' 기능은 화면의 크기를 25% ~ 150%로 조절할 수 있습니다.
2. 상단의 'Frame' 기능은 압력 데이터 초당 프레임 속도를 10fps ~ 60fps로 조절할 수 있습니다.



3.11 충전하기

1. 아래 그림과 같이 무선 충전기의 충전 부분을 APMS의 표시된 패드 모양 위에 올려주세요.
2. 정확한 위치에 맞춰서 올려주세요.
3. 충전 Led에 불이 들어오면 충전중입니다.



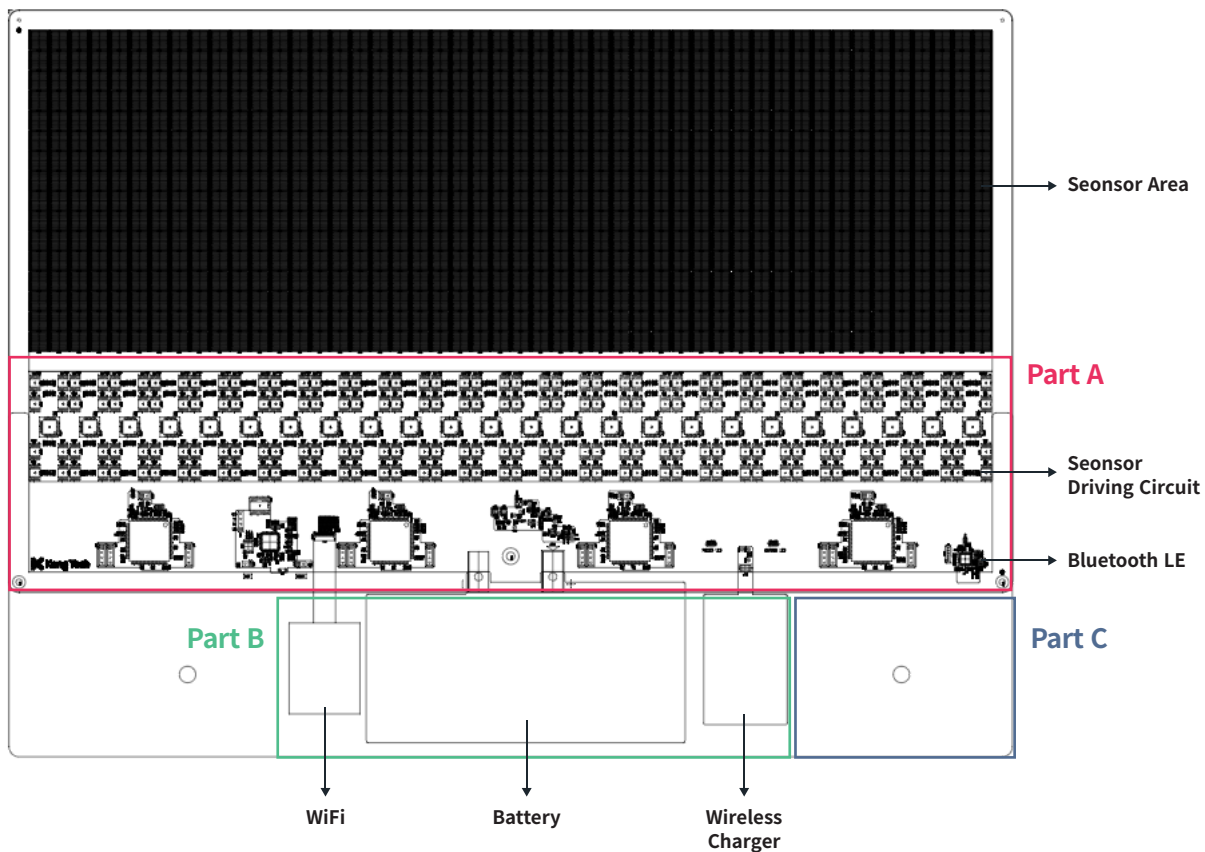
4. 제품 사양

4.1 전체 도면

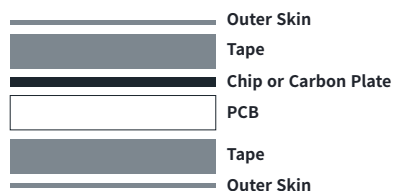
사양

크기: W500 X D372 X H1.6(mm)
 측정 범위: 0~250gf
 충전 방식: 무선 충전
 사용 시간: 3시간

정격 출력: 5V / 700mA
 소비 전류: <800mA
 대기 전류: <1mA
 배터리 용량: 2850mAh

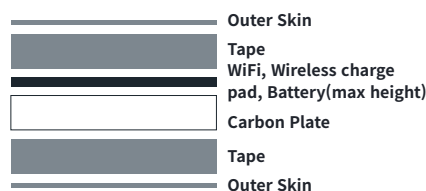


Part A



1. Outer Skin 110μm(nominal)
(Film 90μm and adhesive 20μm)
2. Tape 0.6mm(nominal)
3. Carbon plate 1mm
4. Chip(max 1.6mm)
5. PCB 0.6±0.15mm

Part B



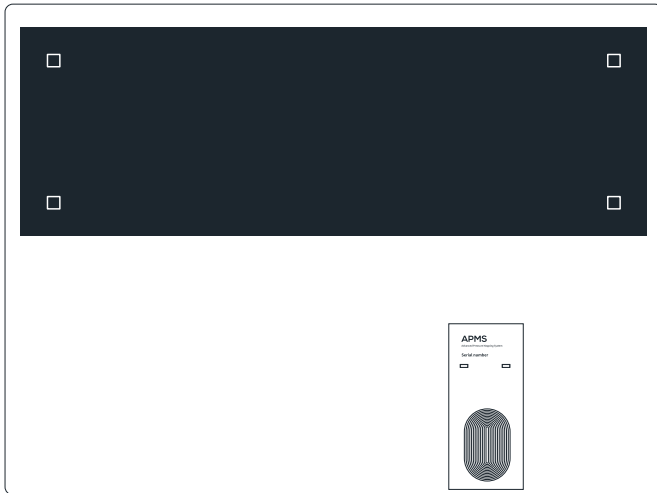
1. Outer Skin 110μm(nominal)
(Film 90μm and adhesive 20μm)
2. Tape 0.6mm(nominal)
3. Battery 1.7mm
4. Carbon plate 0.6mm

Part C

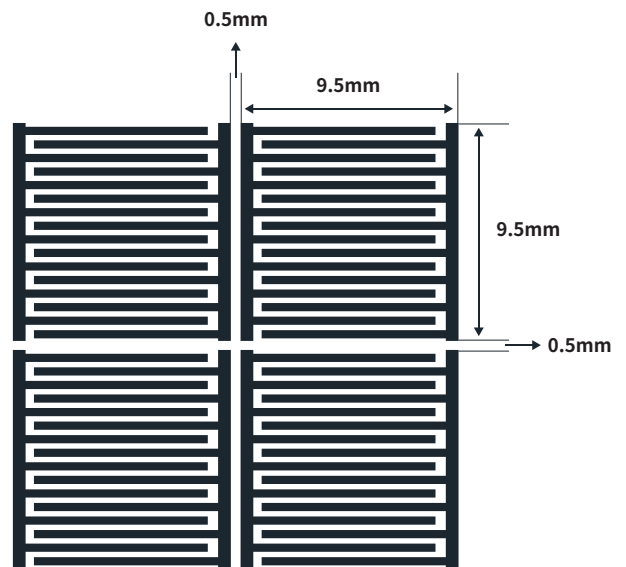
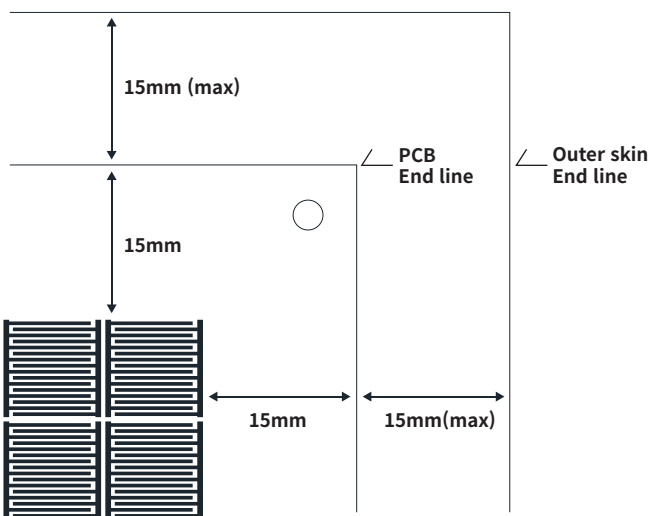


1. Outer Skin 110μm(nominal)
(Film 90μm and adhesive 20μm)
2. Tape 0.6mm(nominal)
3. Carbon plate 1.6mm

4.2 센서 부분



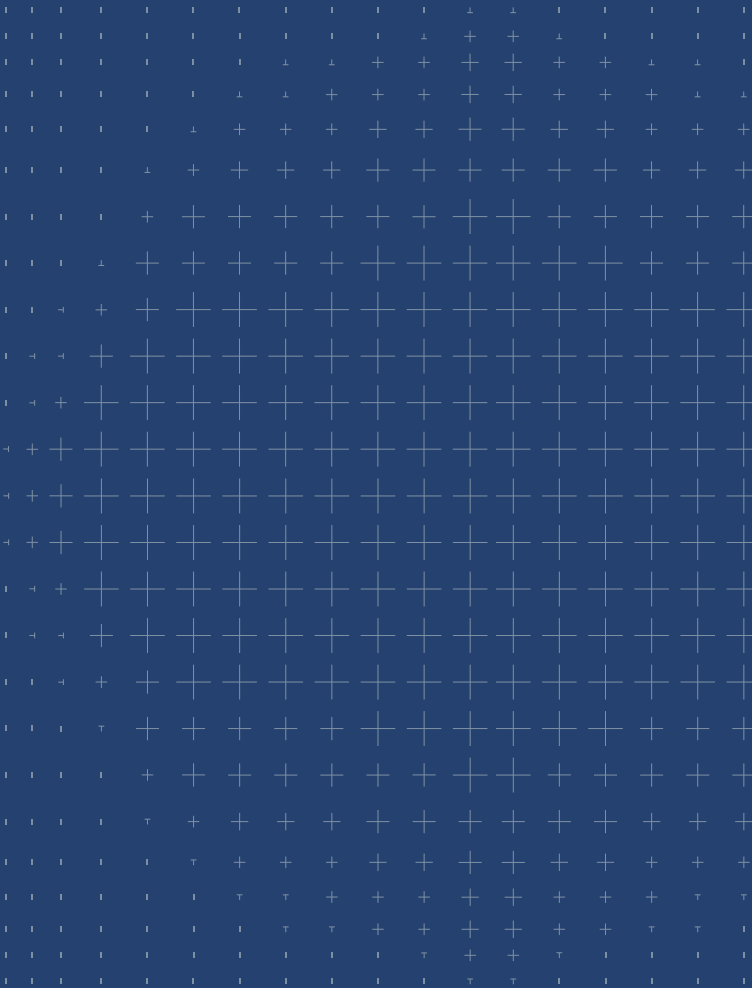
1. 검은색 필름으로 덮여 있는 부분이 압력을 측정하는 부분입니다.
2. 768개의 압력 센서가 내장되어 있습니다.
3. 모서리에 있는 흰색 네모는 보정할 때 영점을 기준으로 하는 지점입니다.



4. 센서와 PCB 그리고 가장자리와의 간격은 15mm입니다.
5. 센서 패턴 크기는 9.5 x 9.5mm입니다.
6. 패턴 간의 간격은 0.5mm입니다.

Advanced Pressure Mapping System

User Manual



Safety Precautions

Before using, read this user manual thoroughly to ensure proper usage.
To prevent personal injury and damage to the product due to incorrect handling, pay attention to safety-related statements and warnings.
Please read all instructions, cautions and warnings displayed in the manual and the product.

KongTech Co., Ltd.

Website : <http://www.kong-tech.com>

E-mail : kongtech@kong-tech.com

Tel : +82 2-1522-9928 Fax : +82 70-5143-6695

If you have problems with the product or
have any questions, please contact us.

Note

1. Under the copyright law, this manual can not be copied, reproduced, translated or converted to any other form of media without the written consent of KONGtech Co., Ltd.
2. This manual may include print defects and the contents are subject to change without notice.
3. KONGtech accepts no liability for any damage, injury or legal responsibility incurred caused by failure to follow the instructions.
4. Appearance and specification of the product are subject to change without prior notice to improve performance.



Warning

Failure to follow the instructions given with this symbol could possibly result in serious injuries or even death to personnel due to incorrect handling.



Caution

Failure to follow the instructions given with this symbol could possibly result in minor injuries to personnel or damage to the device due to incorrect handling.

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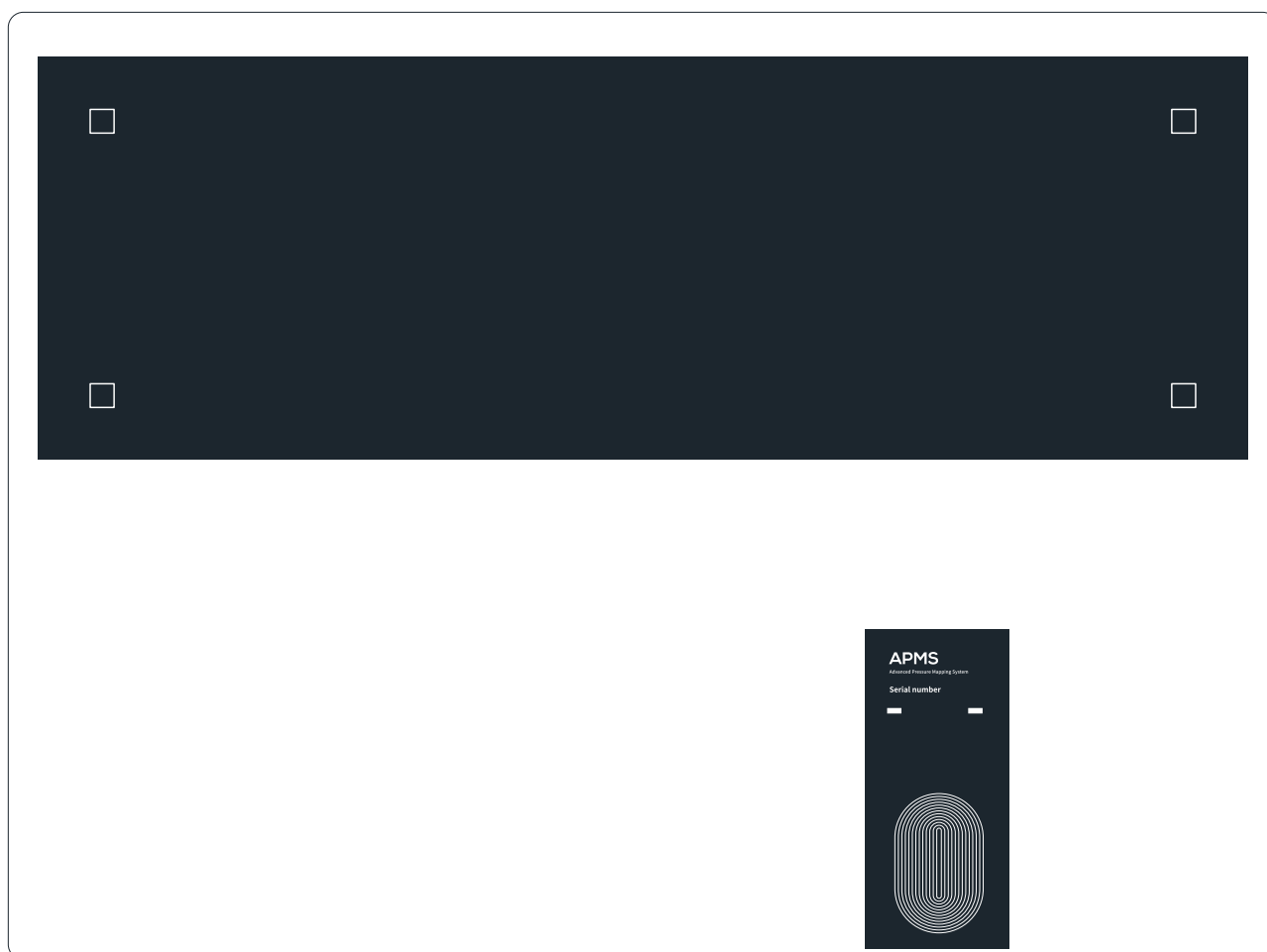
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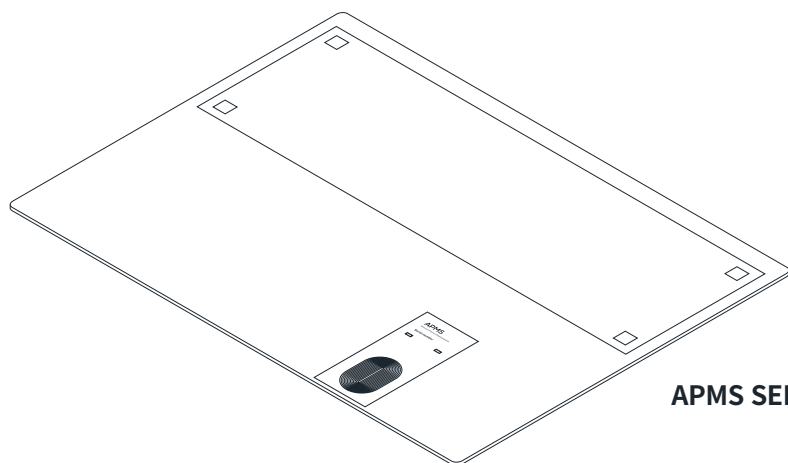
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1. Introduction

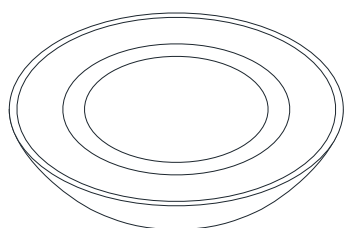
Advanced Pressure Mapping System (APMS) is a wireless pressure measuring device. Optimized for measuring the pressure of glass cleaning equipment, APMS helps to keep the equipment in its best condition. The sensor is very thin and completely waterproof, which allows it to measure the pressure on top of the glass. It also uses exclusive calibration device to provide precise and reliable data.



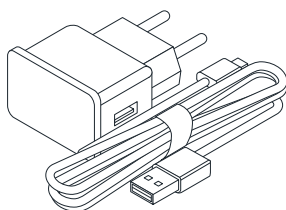
2. Package contents



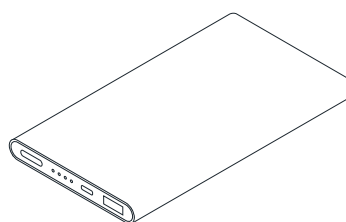
APMS SENSOR



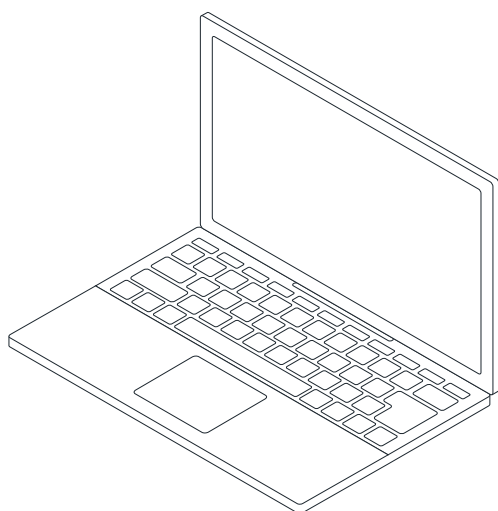
Wireless Charger



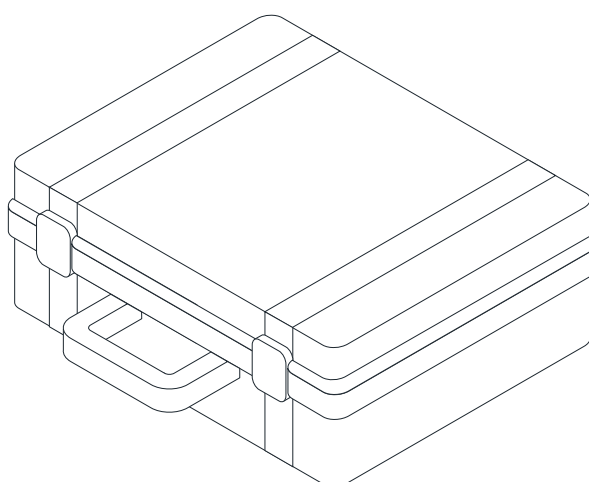
**Charging Adapter
& Micro USB Cable**



**Power Bank 10,000mAh
(Optional)**



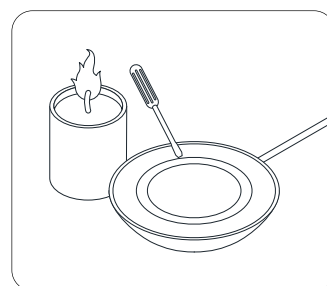
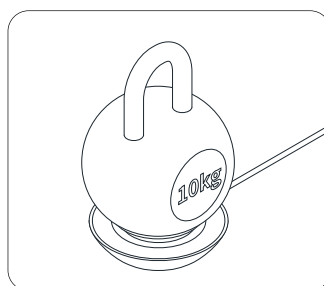
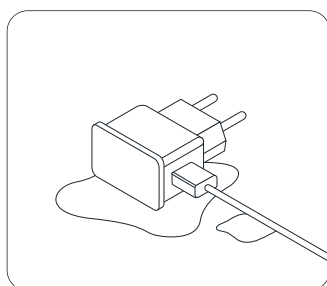
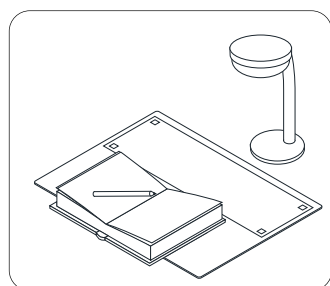
**Laptop
(Optional)**



Case

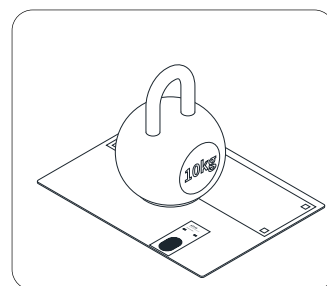
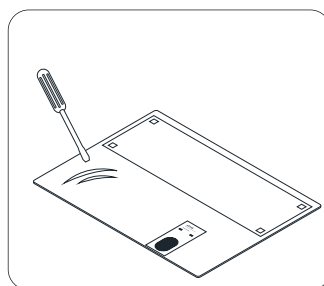
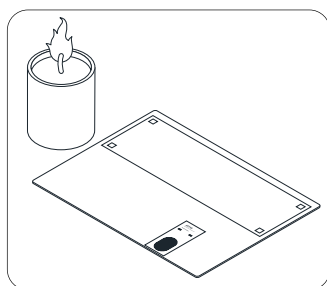
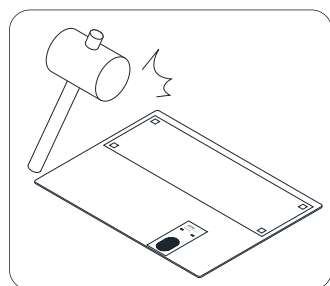
Warning

1. Do not use the device for any purpose other than described in this manual.
2. Do not let persons who can not understand this manual to use the device.
3. To avoid the risk of electric shock, do not expose the charging adapter or cable to water, liquid or any wet conditions.
4. Do not excessively bend, damage, alter, pull, tie, press or twist the charging cable.
5. Do not place heavy objects on the charging cable.
6. Do not place the charging cable near heat sources or sharp corners of table.
7. Use the general power socket for AC adaptor. Using the wrong socket can result in damage to the device.
8. Remove dust from the plug and the socket regularly.
9. Do not use damaged charging adapter, cable or power socket.



Caution

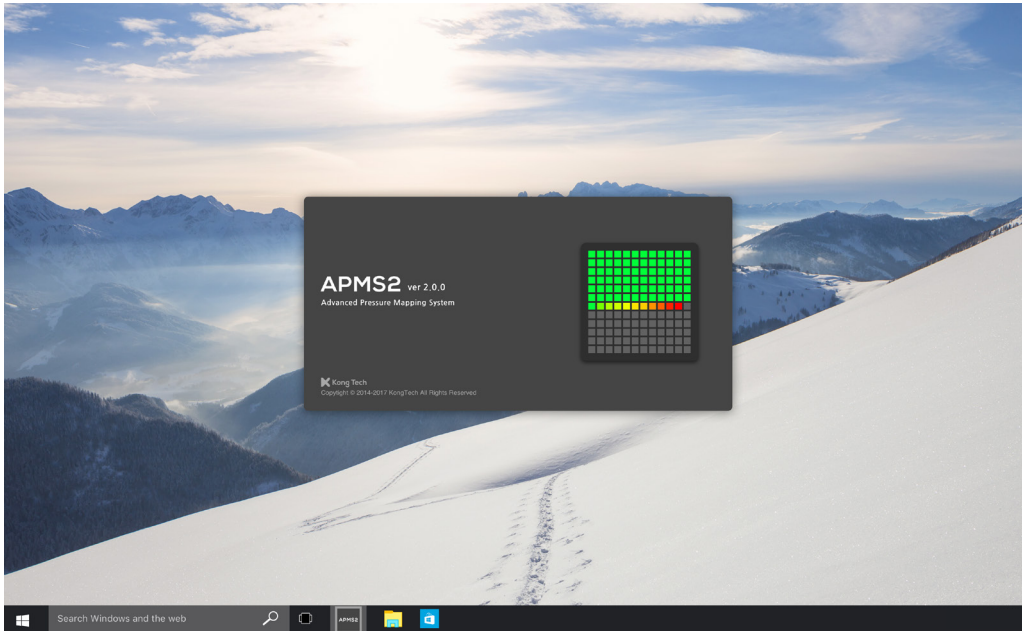
1. Do not knock over the device.
2. Do not drop, throw or kick the device. An impact may cause damage to the device.
3. When carrying the device, stop the operation and hold it with both hands to prevent it from bending.
4. Do not place the device near pointed or sharp object. It may tear the device and cause malfunction of waterproof.
5. Do not step on the device nor place heavy objects on it.
6. Do not place flammable object, turn on cigarette lights nor burn incense near the device.
7. Do not let children and persons with reduced physical, sensory or mental capabilities or lack of experience and knowledge to use this device. They must have given supervision or instruction for the operation by a person who is well-experienced and responsible for their safety.
8. Persons with reduced physical, sensory or mental capabilities or lack of experience and knowledge can use this device only if they have given supervision and instruction to use it correctly and safely and understand the risks and hazards involved.



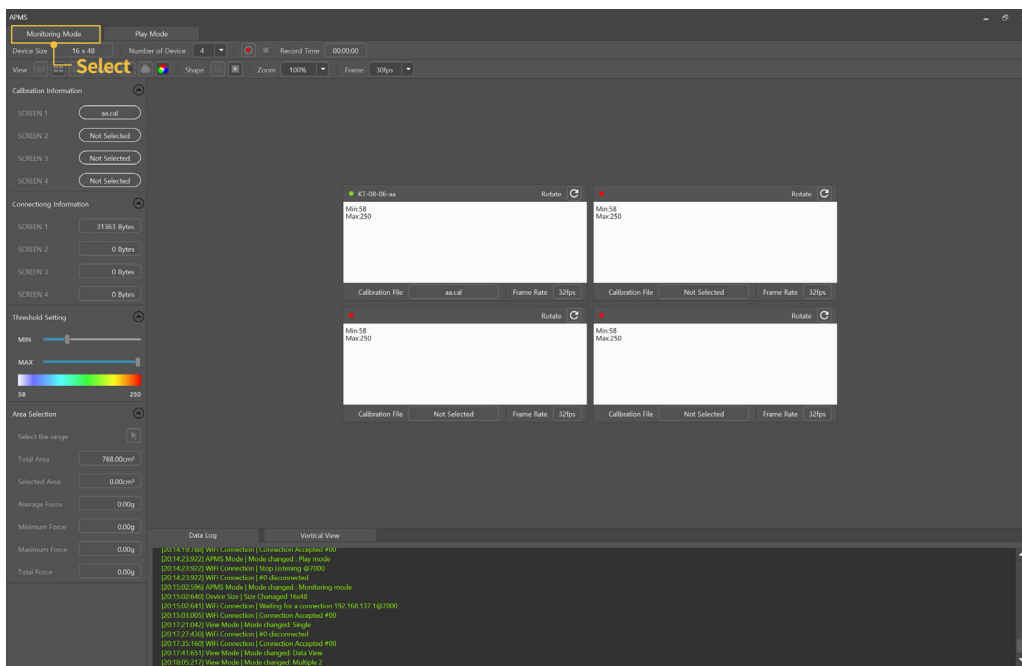
3. Using APMS

3.1 Connecting APMS

1. Run APMS.exe program.



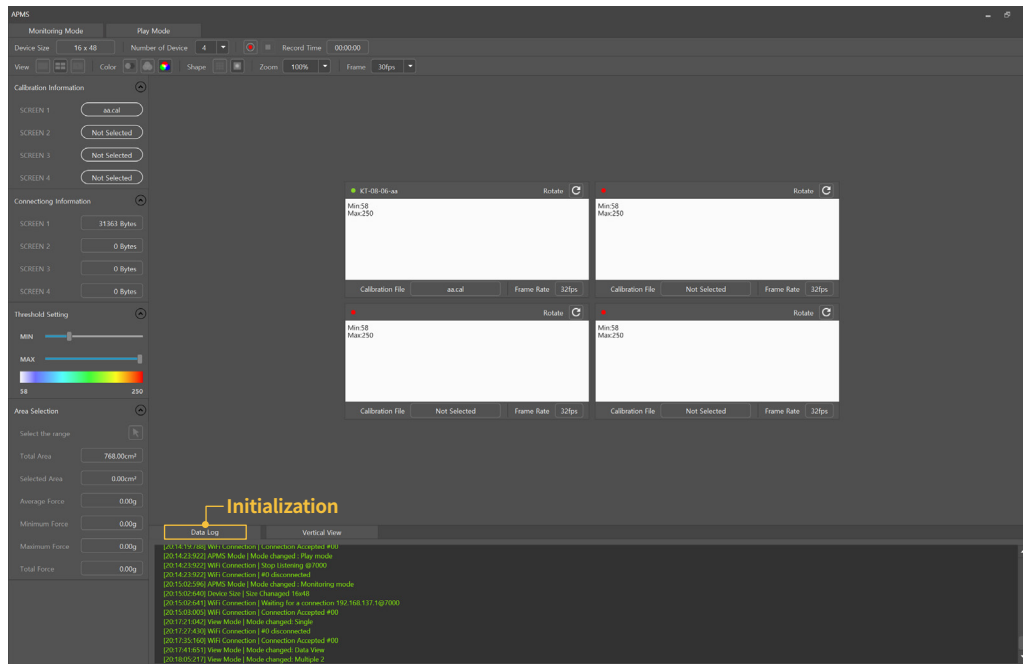
2. Select 'Monitoring Mode' at the top. (Automatically selected when running the program).



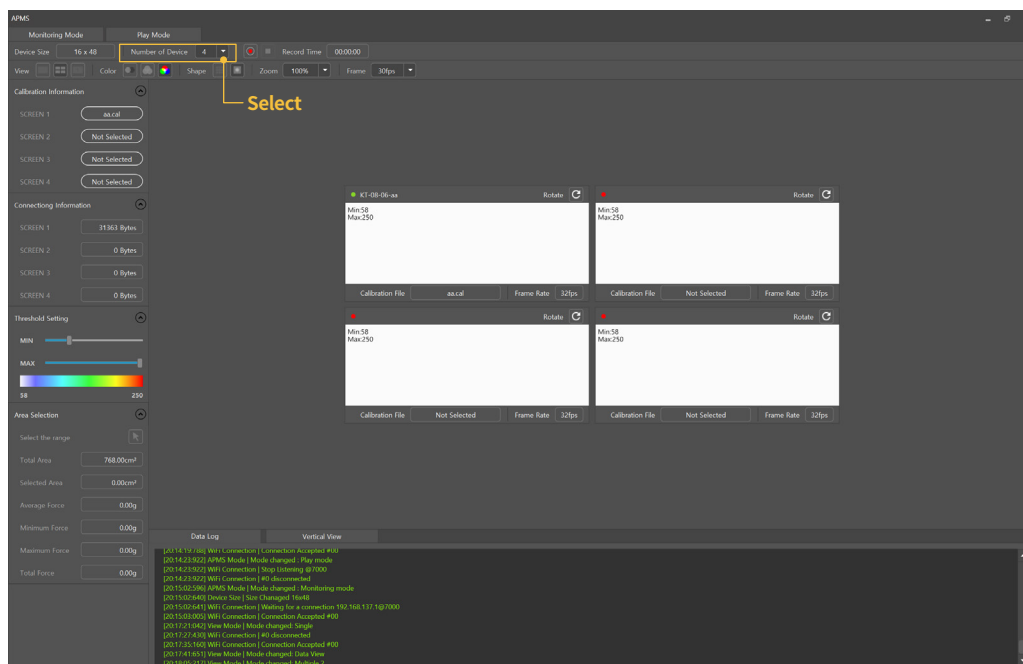
3. Check the 'Data Log' tab at the bottom to see if the program has completed initialization.
(The initialization will be completed when all of the items below are displayed.)

- Wifi Connection I Hotspot started
- Device Size I Size Changed 16 x 48
- Wifi Connection I Waiting for a connection
- View Mode I Mode Changed: Multiple2

※ If initialization doesn't work, please contact our customer service (+82 2-1522-9928).

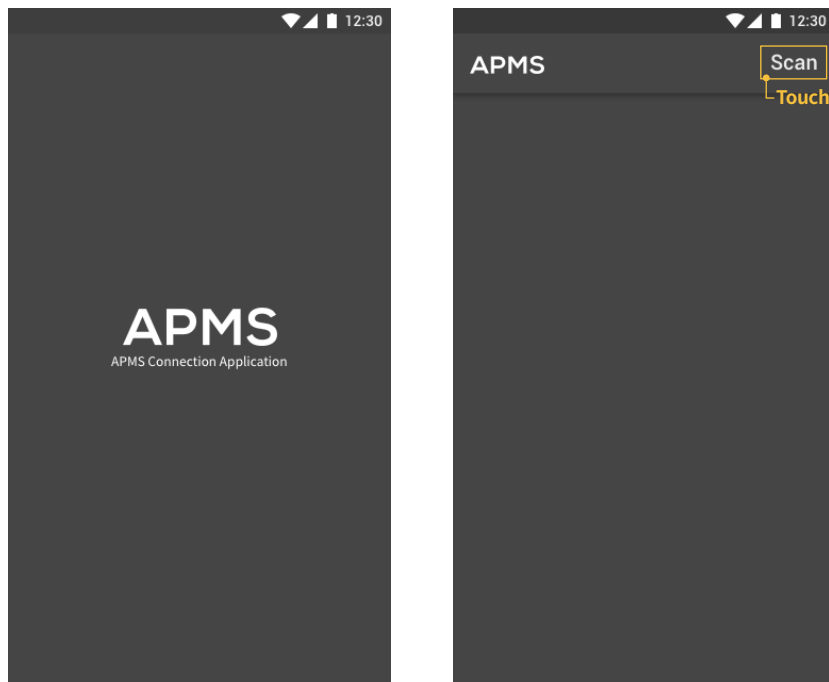


4. Select the 'Number of Devices' to set the number of sensors to use.

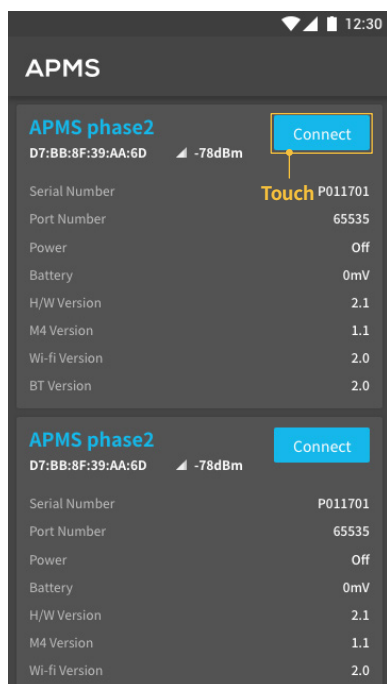


5. After launching the APMS application, touch the 'Scan' button at the top.

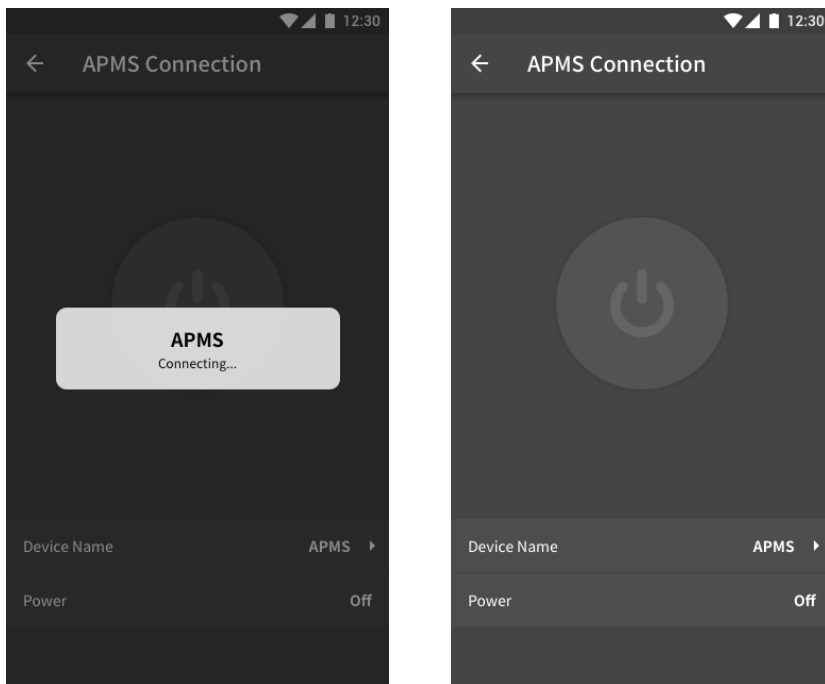
※ Please install the 'APMS' application from the Playstore or Appstore before starting.



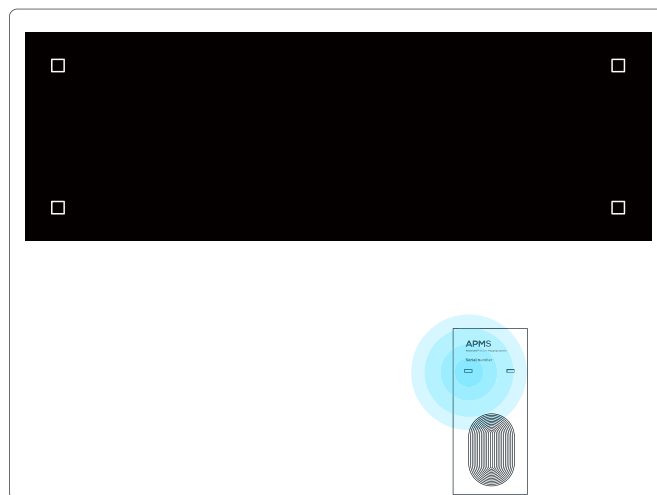
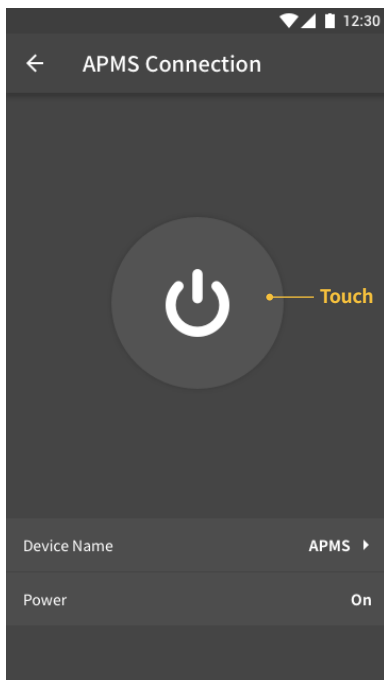
6. Touch the 'Connect' button of scanned sensor. (Information of scanned sensors are displayed.)



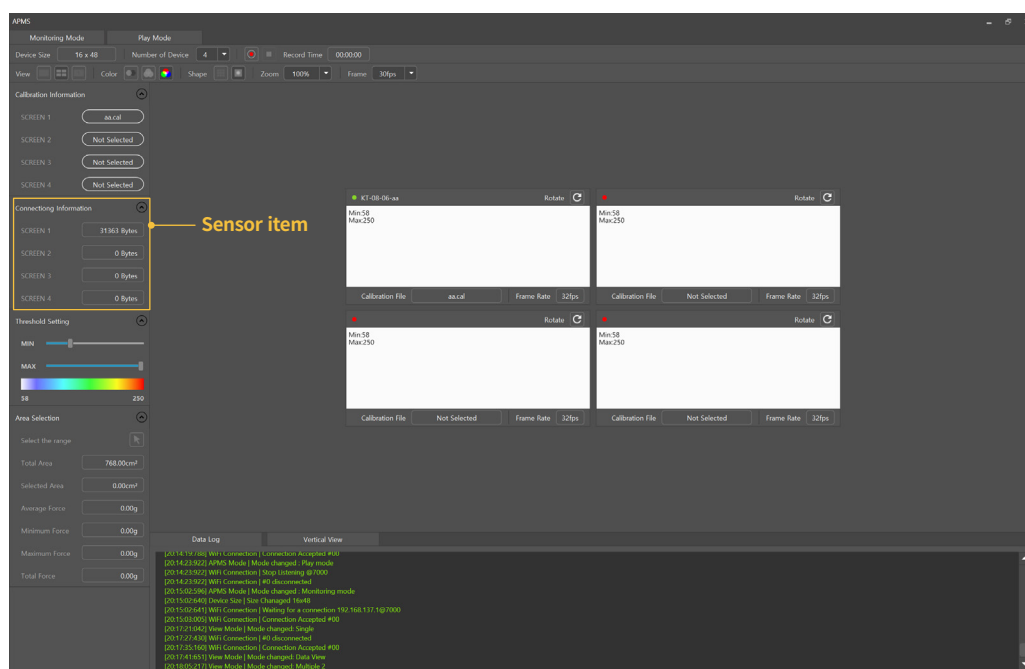
7. Wait until the sensor is connected. (The loading screen will disappear when connection is completed.)



8. Touch the button in the center to activate and the connected APMS sensor will be turned on. (LED light on)



9. When the status of the sensor is on, the sensor items connected to the 'Calibration Information' will be automatically set.

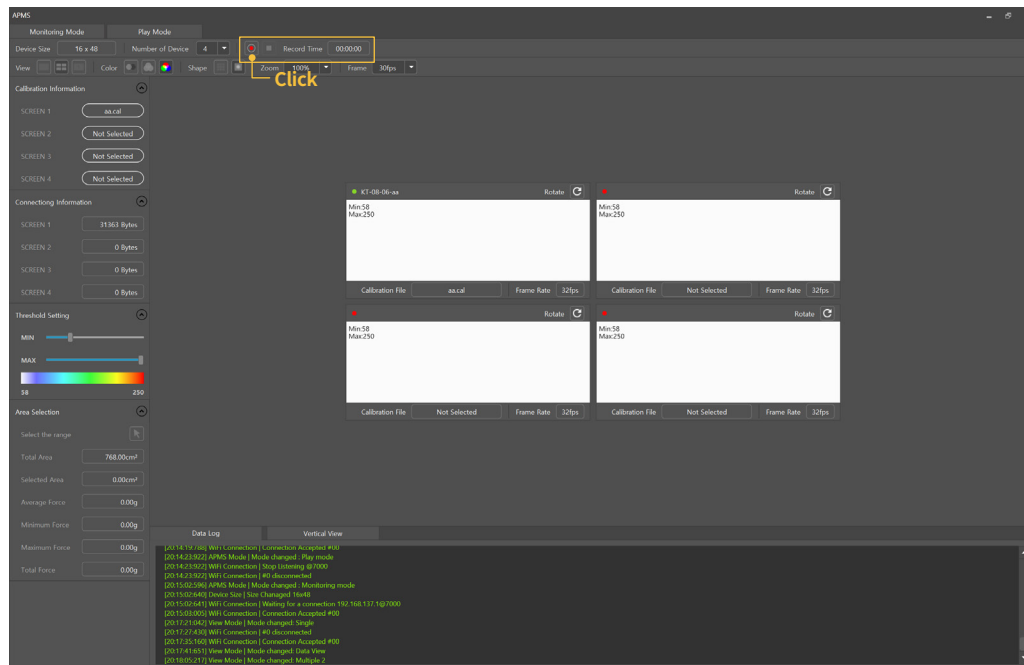


10. Once the connection is completed, place the APMS sensor on the glass cleaning equipment to start measuring pressure.

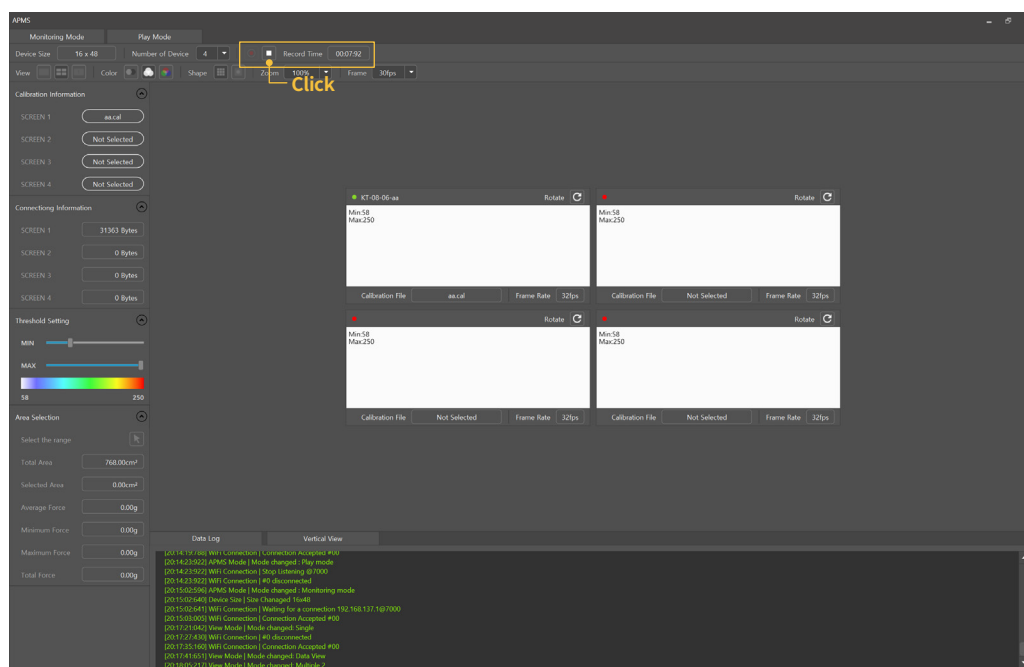
3.2 Saving measurement data

The measured data can be recorded and stored.

1. Click the 'Record' button at the top.



2. When recording is done, click the 'Stop' button.

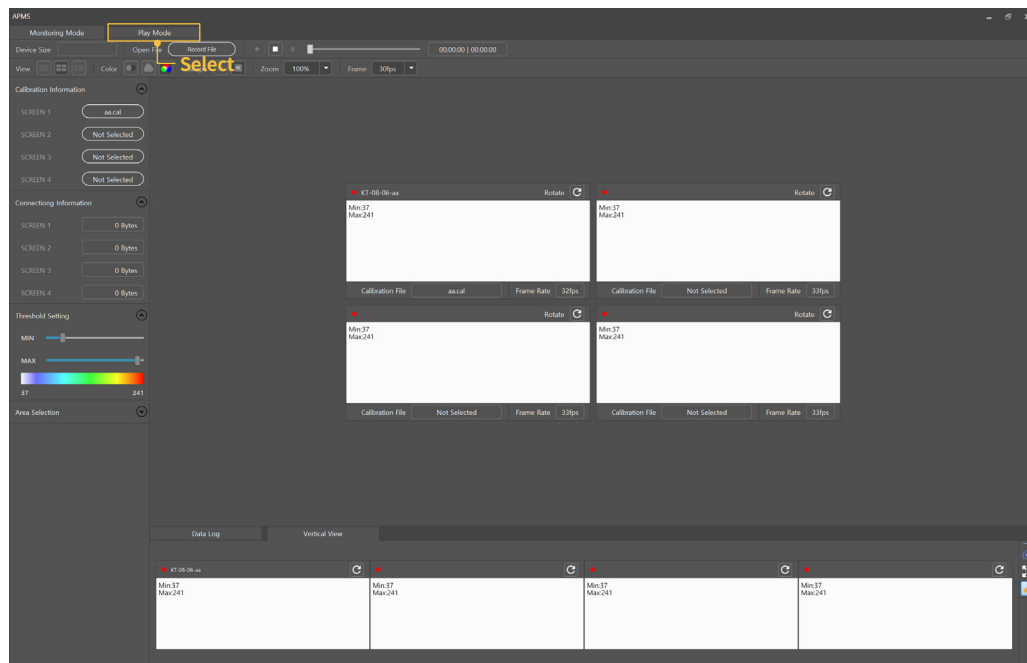


3. Recorded files will be saved in the path below.

Documents/APMS2/Record

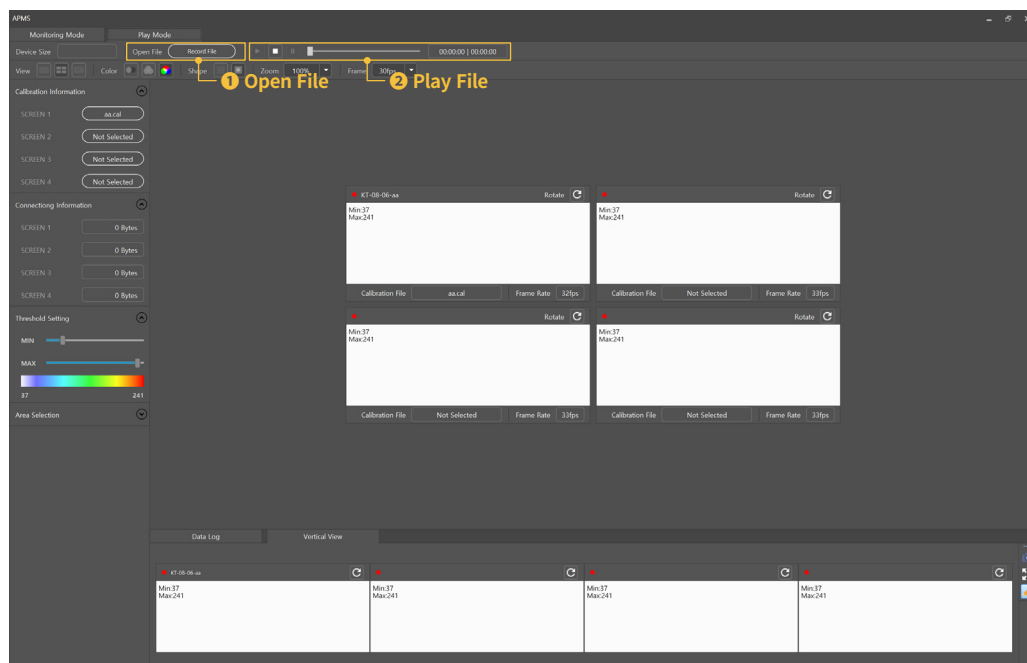
3.3 Playing recorded files

1. Select 'Play Mode' at the top.



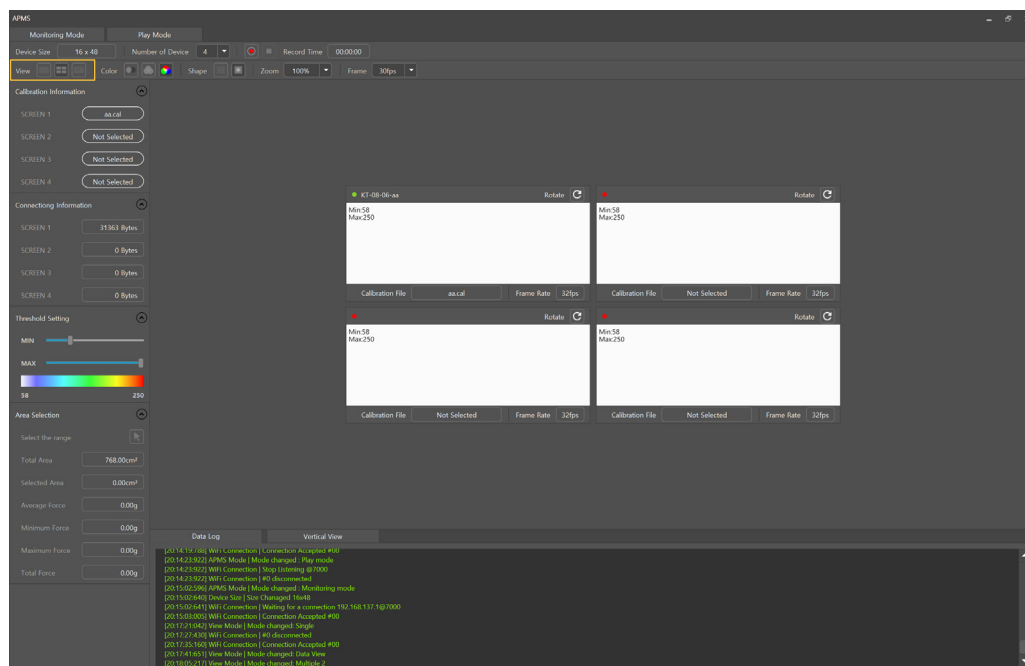
2. Select 'Record File' from the 'Open File' tab to select a file to open.

3. The file can be executed with the play, stop, or pause buttons.

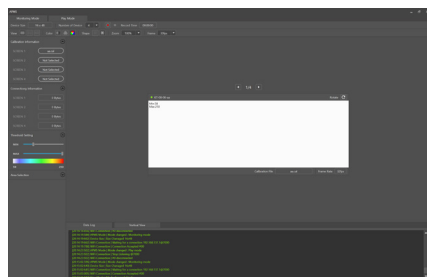


3.4 Changing measurement data viewing mode

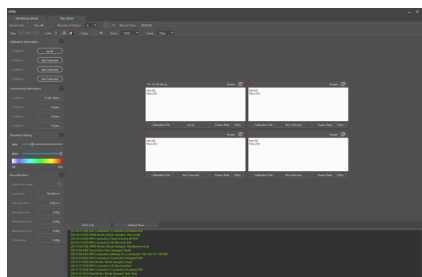
1. The measurement data viewing mode has three modes: 'Single View', 'Multiple View' and 'Data View', which can be selected from the 'View' tab at the top.



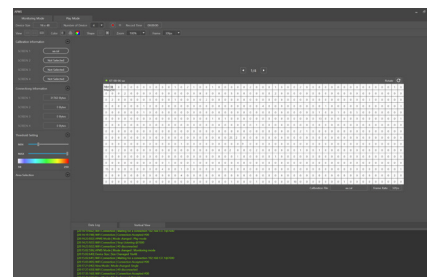
2. The 'Single View' mode displays one APMS sensor on the screen.



3. The 'Multiple View' mode displays multiple APMS sensors at once on the same screen.

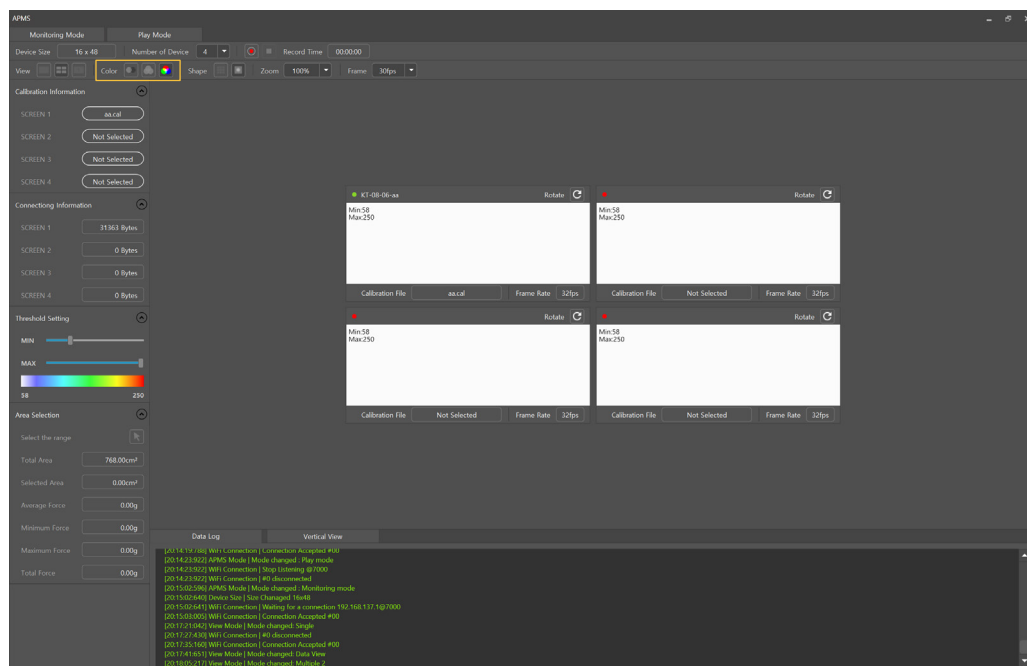


4. The 'Data View' mode displays pressure data received from the APMS sensor on the screen.

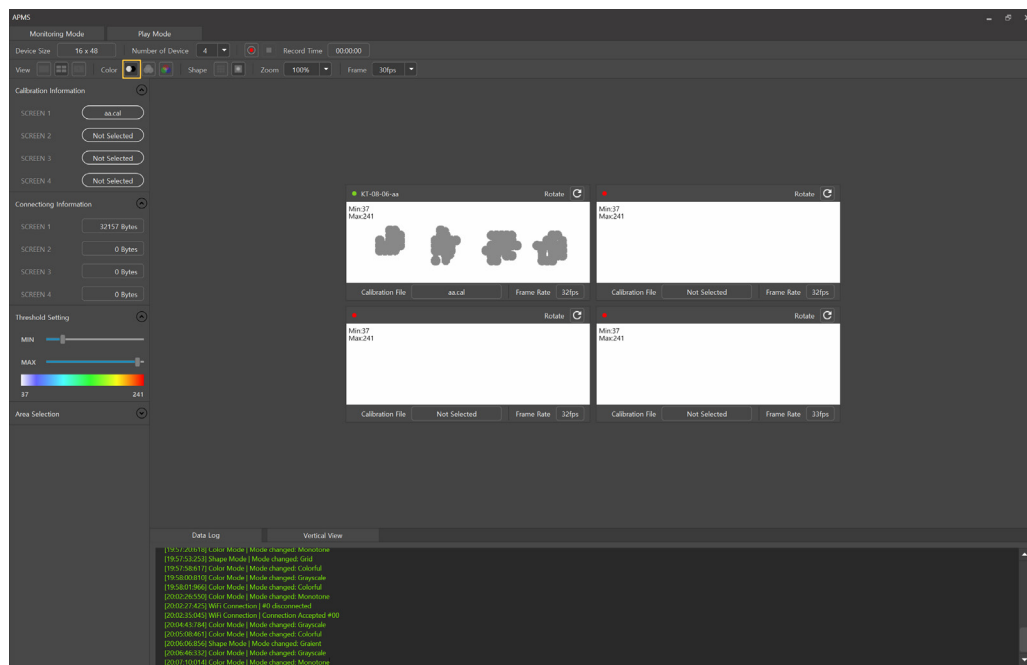


3.5 Changing the color of measurement data

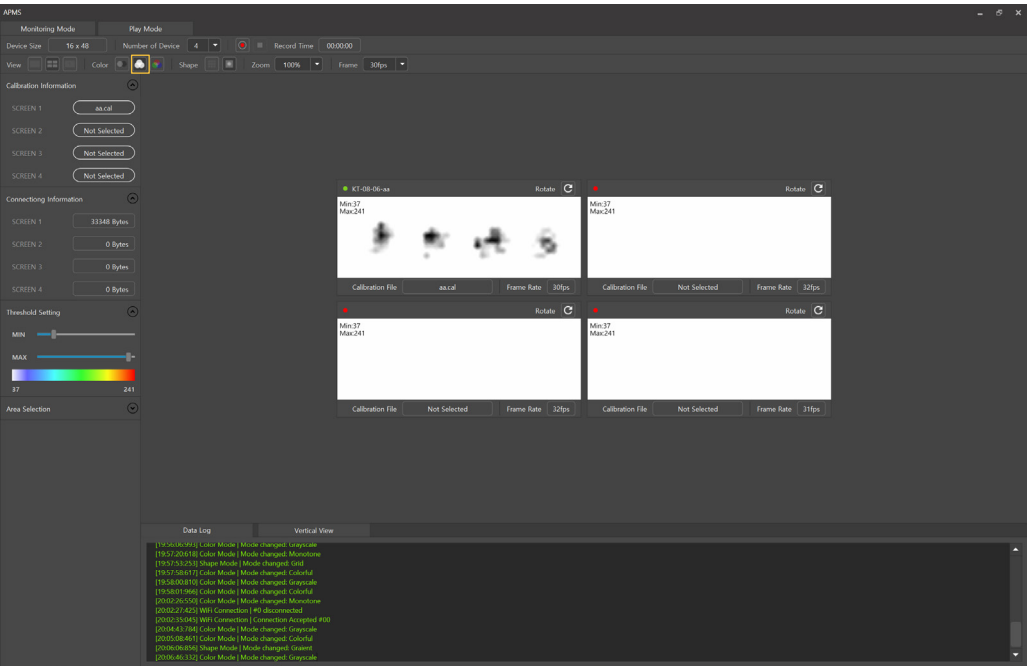
1. Changing the color of measurement data mode has three modes: 'Monotone', 'Grayscale' and 'Color', which can be selected from the 'Color' tab at the top.



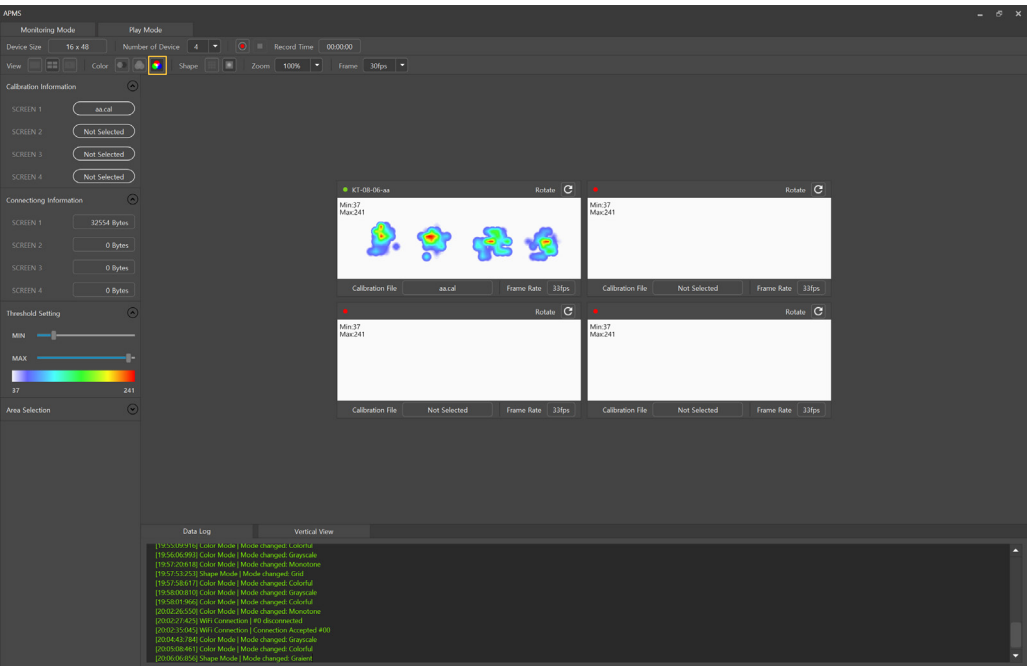
2. The 'Monotone' mode displays pressure data of APMS sensor in one color.



3. The 'Grayscale' mode displays pressure data of APMS sensor in black and white.

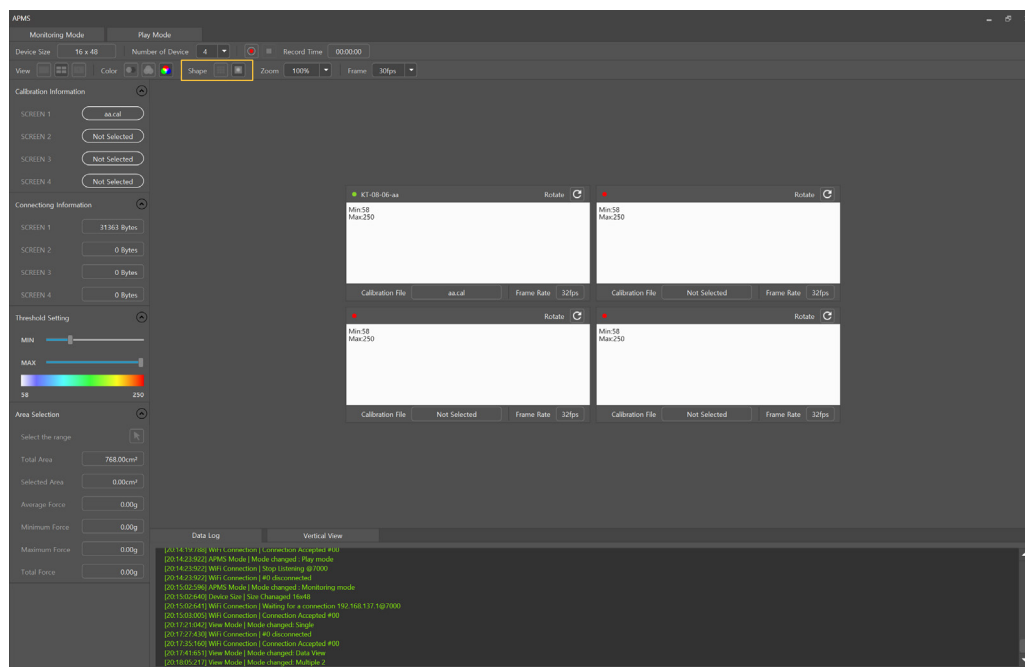


4. The 'Colorful' mode displays pressure data of APMS sensor in multiple colors.

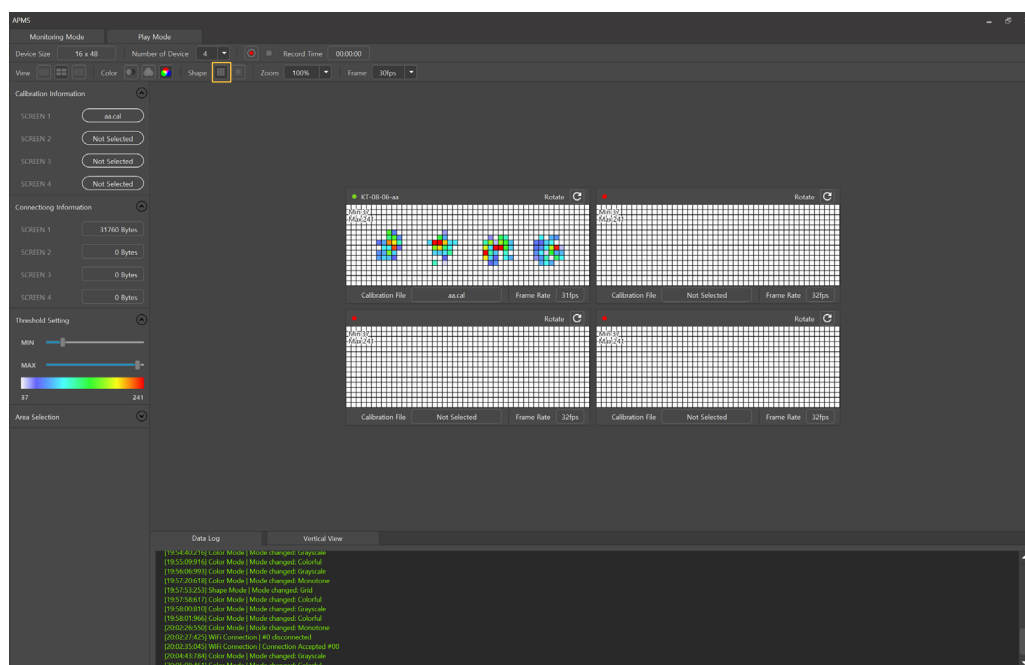


3.6 Changing the appearance of measurement data

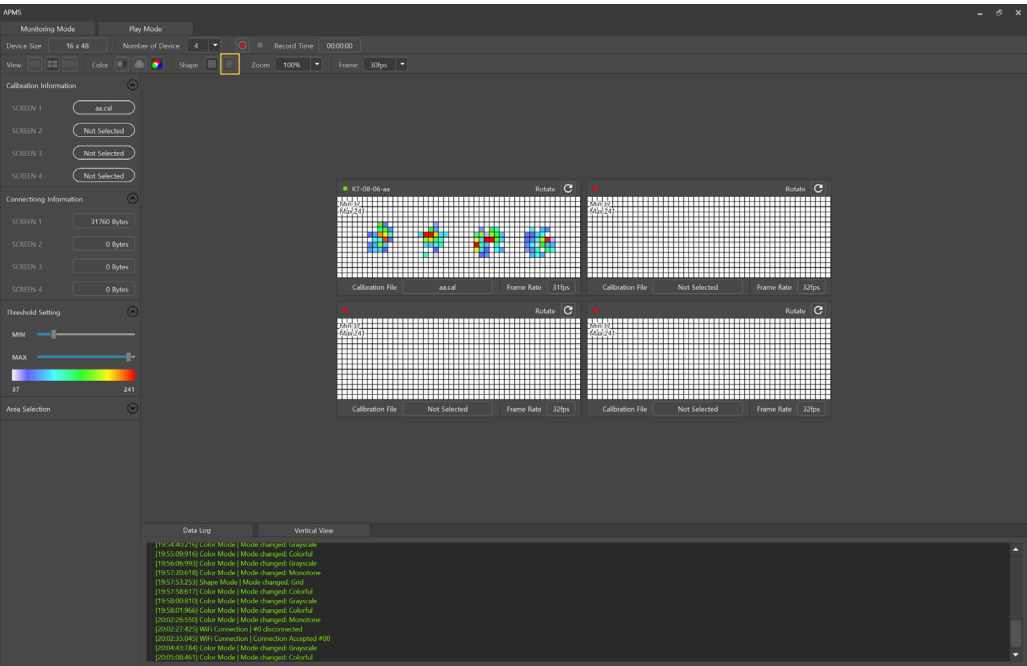
1. Changing the appearance of measurement data mode has two modes: 'Grid' and 'Gradient', which can be selected from the 'Shape' tab at the top.



2. The 'Grid' mode displays pressure data of APMS sensor in a grid format.

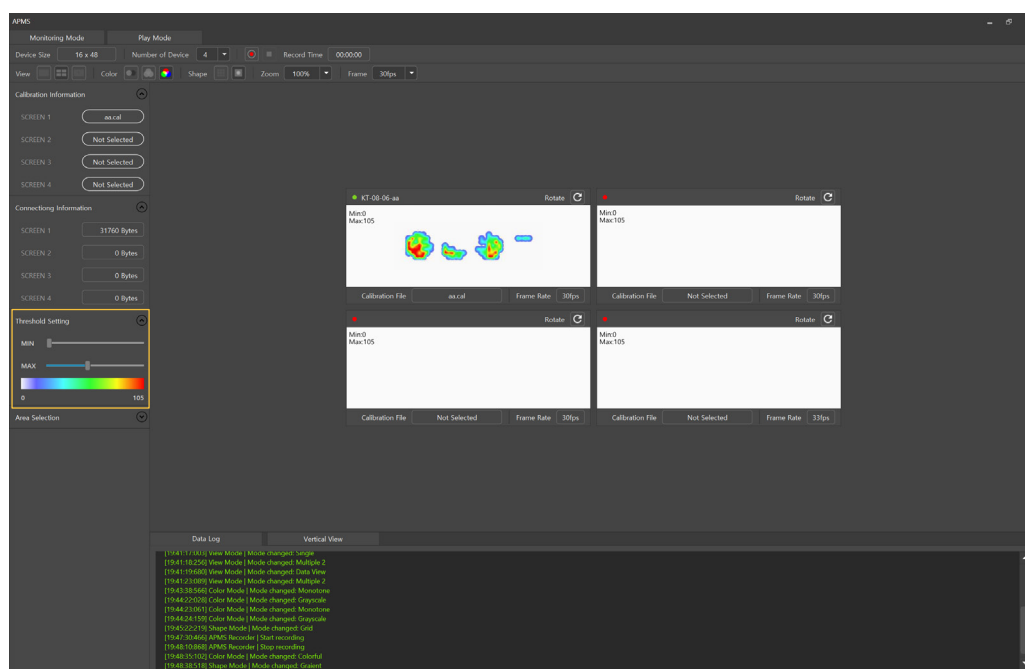
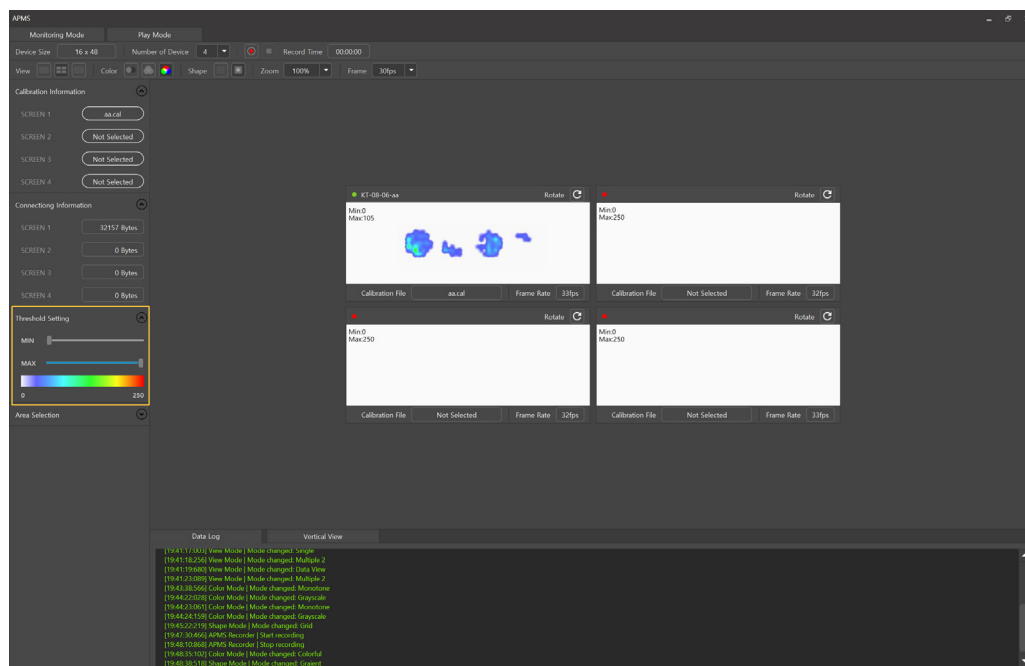


3. The 'Gradient' mode displays pressure data of APMS sensor in a calibrated format.



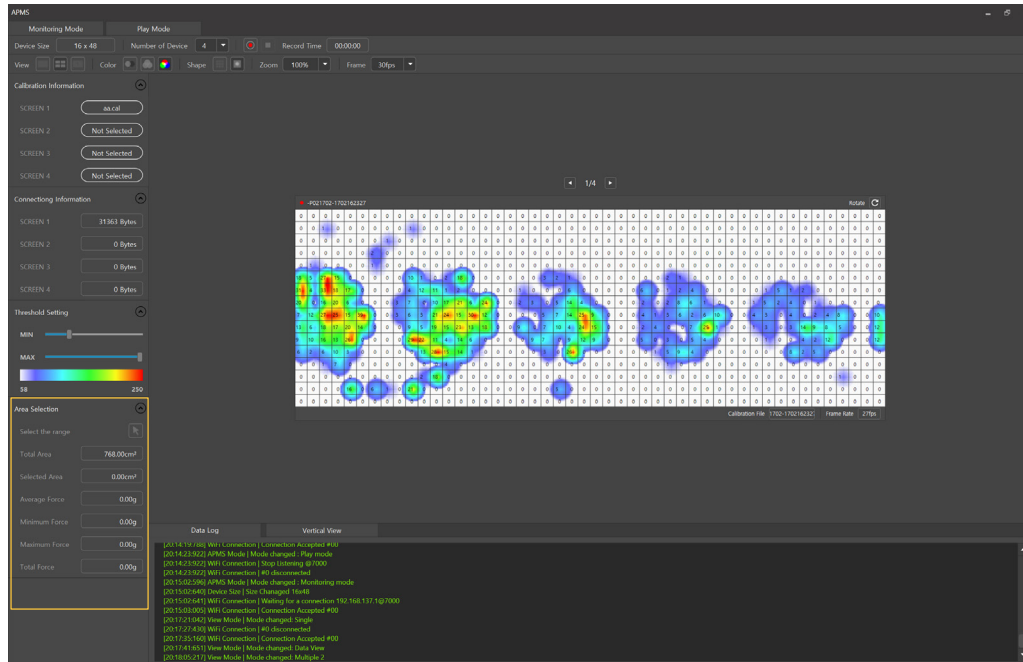
3.7 Changing the measurement range of data

1. The measurement range of data can be changed from the 'Threshold Setting' tab on the left.
2. Values can be adjusted by moving the bar in the middle or entering a number. The initial setting is MIN : 0, MAX : 100.



3.8 Viewing data in a selected range

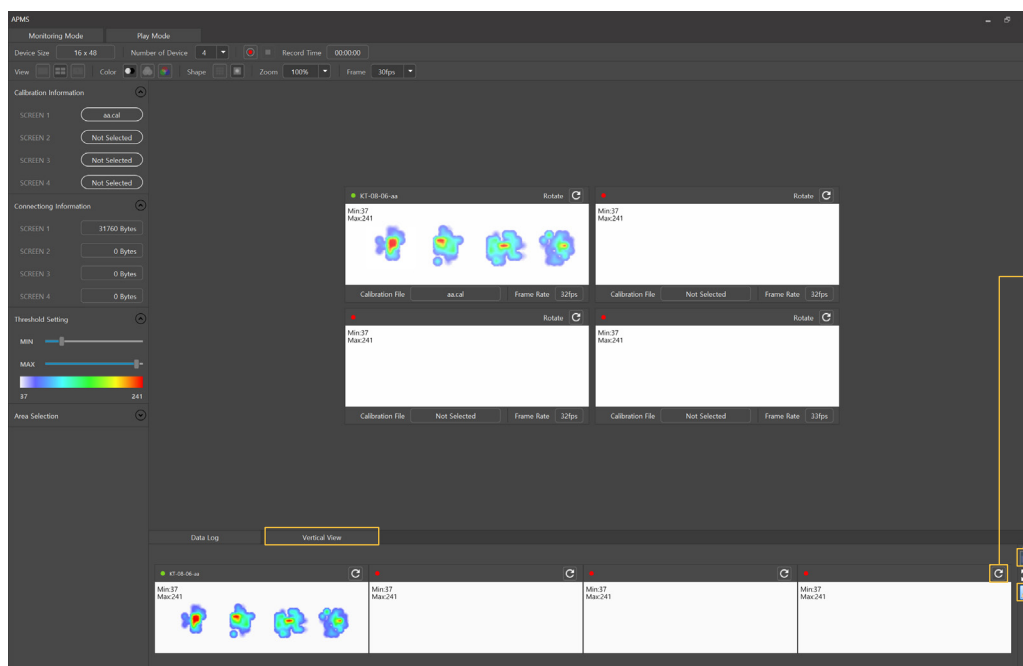
1. The data in a selected range can be viewed in the 'Area Selection' tab on the left.
2. Click the 'Select the range' button to set the range.
3. Data in a selected range will be displayed.



3.9 Continuous viewing

Four APMS sensors being measured can be displayed in a row.

1. Select the 'Vertical View' tab at the bottom.
2. Four sensor data listed in a row can be viewed at once.



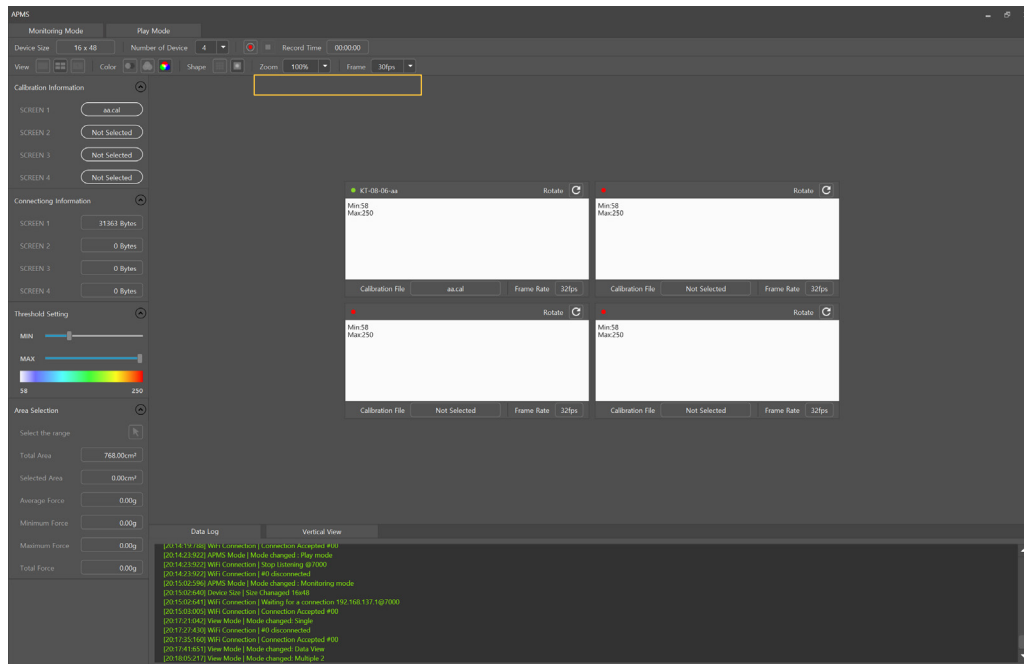
Invert button
Sets as 180 degree rotated image.

Capture button
Screen-captures image at once.

Remove button
Removes the images.

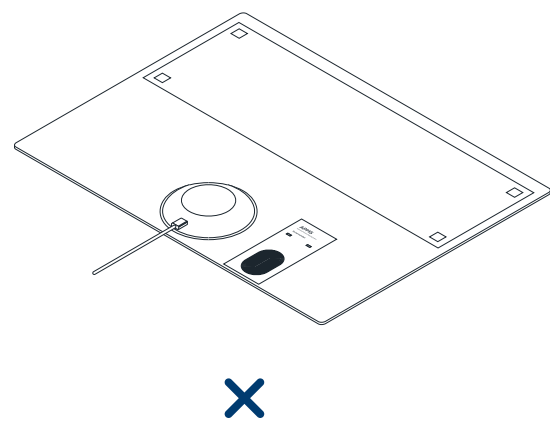
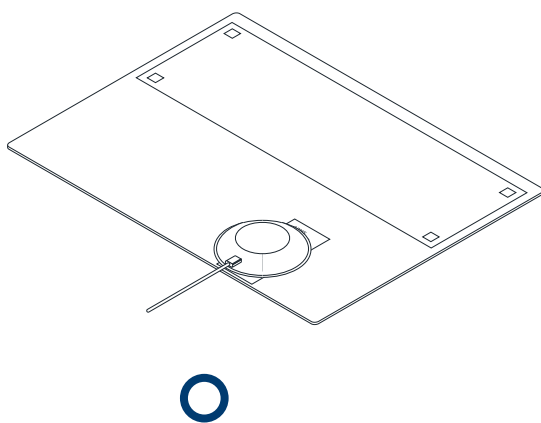
3.10 Other features

1. Select 'Zoom' to adjust the screen size from 25% to 150%.
2. Select 'Frame' to adjust the frame rate of pressure data per second from 10 fps to 60fps.



3.11 Charging

1. Place the wireless charging pad in the center of the charging area. Make sure it touches the center.
2. The status indicator (CHARGER LED) will be turned on when it's in charging status.



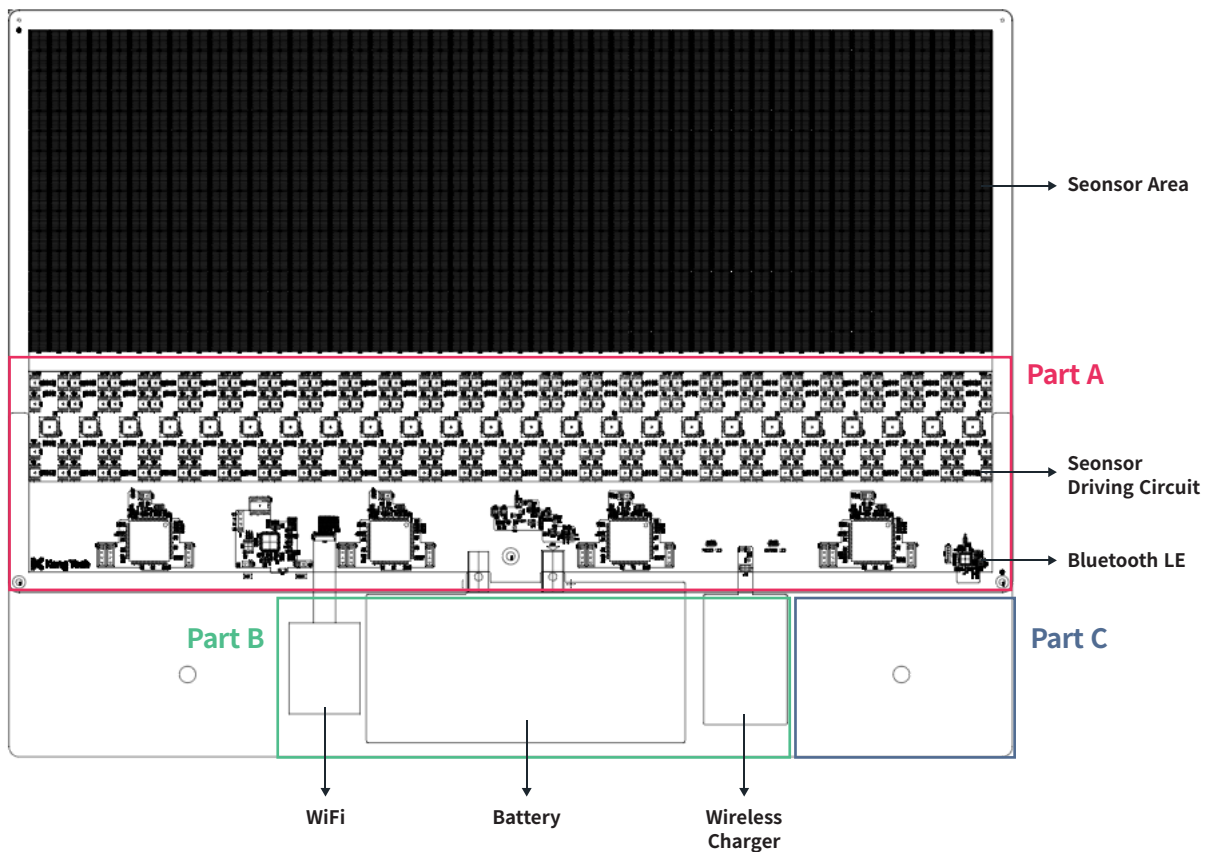
4. Specifications

4.1 Whole device

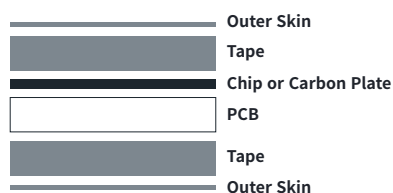
Specifications

Dimensions: W500 X D372 X H1.6(mm)
 Measuring range: 0~250gf
 Charging method: Wireless charging
 Hours of battery use: 3 hours

Rated output: 5V / 700mA
 Current consumption: <800mA
 Stand by current: <1mA
 Battery capacity: 2850mAh

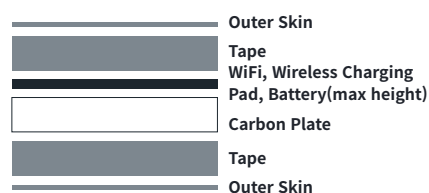


Part A



1. Outer Skin 110 μ m(nominal)
(Film 90 μ m and adhesive 20 μ m)
2. Tape 0.6mm(nominal)
3. Carbon plate 1mm
4. Chip(max 1.6mm)
5. PCB 0.6 \pm 0.15mm

Part B



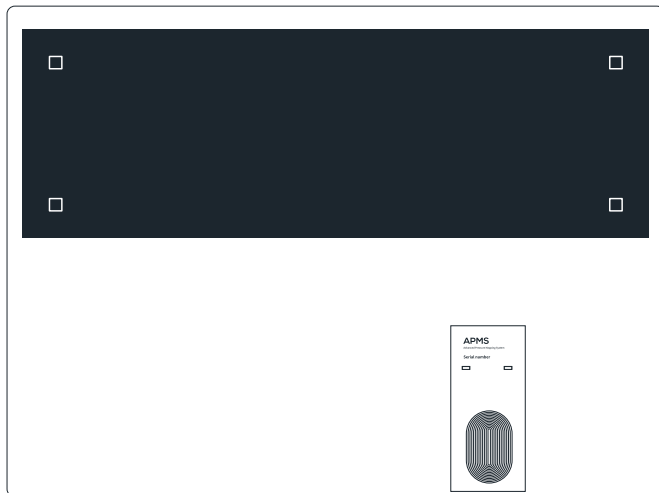
1. Outer Skin 110 μ m(nominal)
(Film 90 μ m and adhesive 20 μ m)
2. Tape 0.6mm(nominal)
3. Battery 1.7mm
4. Carbon plate 0.6mm

Part C

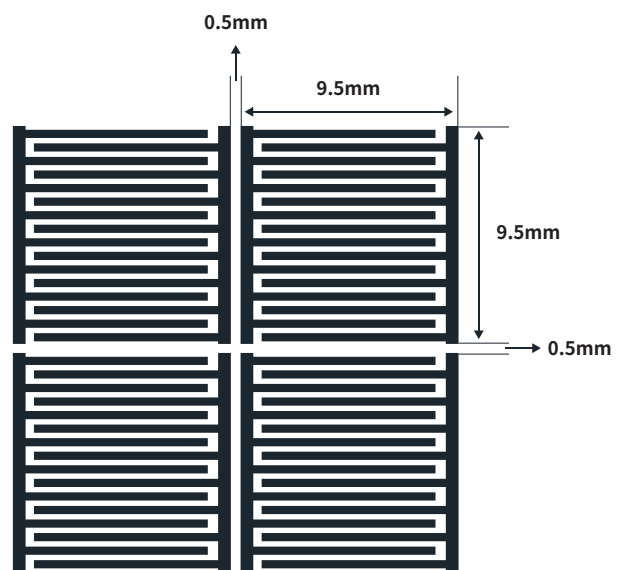
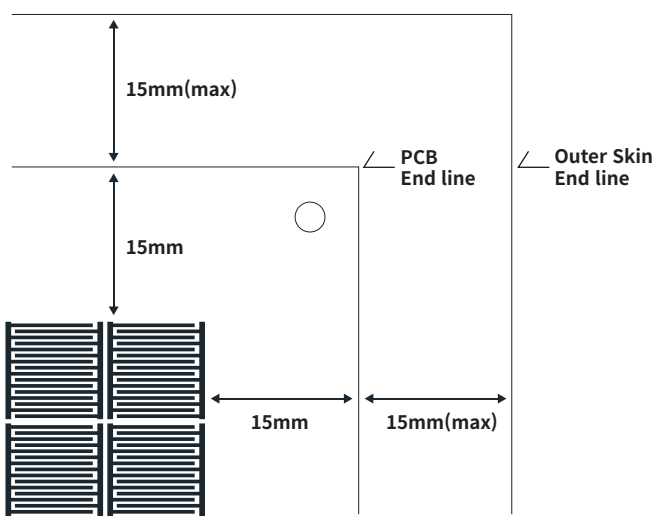


1. Outer Skin 110 μ m(nominal)
(Film 90 μ m and adhesive 20 μ m)
2. Tape 0.6mm(nominal)
3. Carbon plate 1.6mm

4.2 Sensor



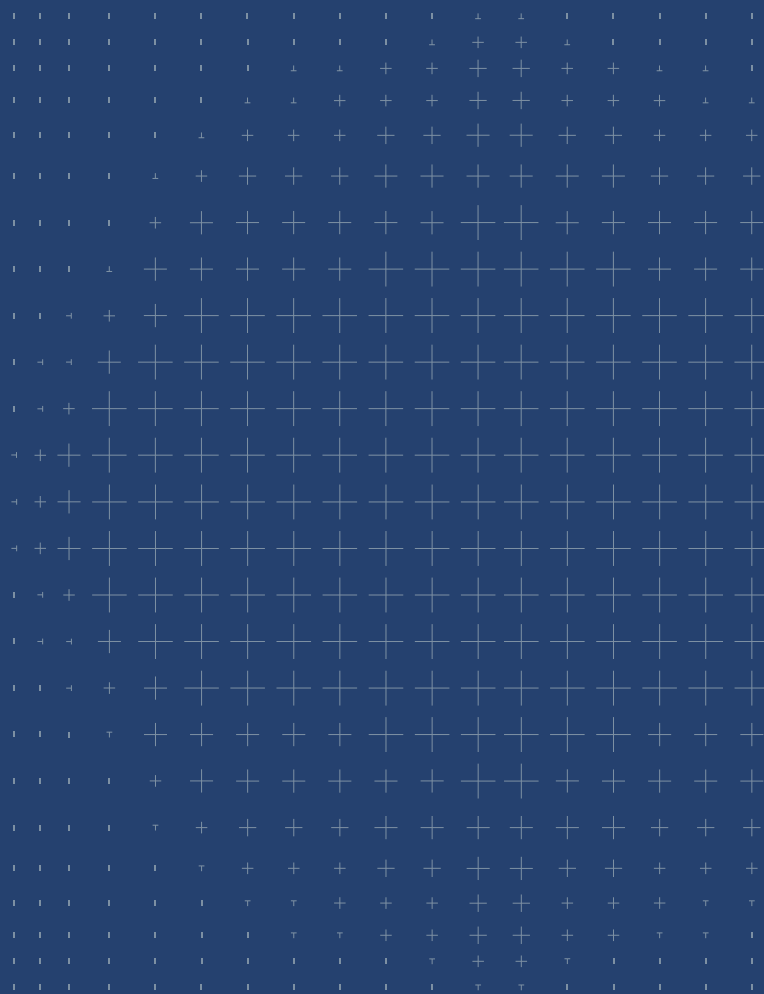
1. The area covered with black film is the part that measures the pressure.
2. There are 768 built-in pressure sensors.
3. The white squares in the corners are zero-point reference points for calibrating.



4. The spacing between the sensor, the PCB and the edge is 15mm.
5. The size of sensor patterns is 9.5 x 9.5 mm.
6. The spacing between patterns is 0.5mm.

Advanced Pressure Mapping System

用户手册



安全注意事项

请您仔细阅读该说明书，熟知对产品的功能。为了防止身体以及产品的受伤，请您注意阅读安全有关说明以及警惕内容。
请您阅读在说明书以及产品所示的所有安全事项。

KongTech Co., Ltd.

网站：<http://www.kong-tech.com>

邮箱：kongtech@kong-tech.com

热线：+82 2-1522-9928 传真：+82 70-5143-6695

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违反该标志时，有可能会造成严重伤害或者死亡。



违反该标志时，有可能会造成轻度伤害或者产品损害。

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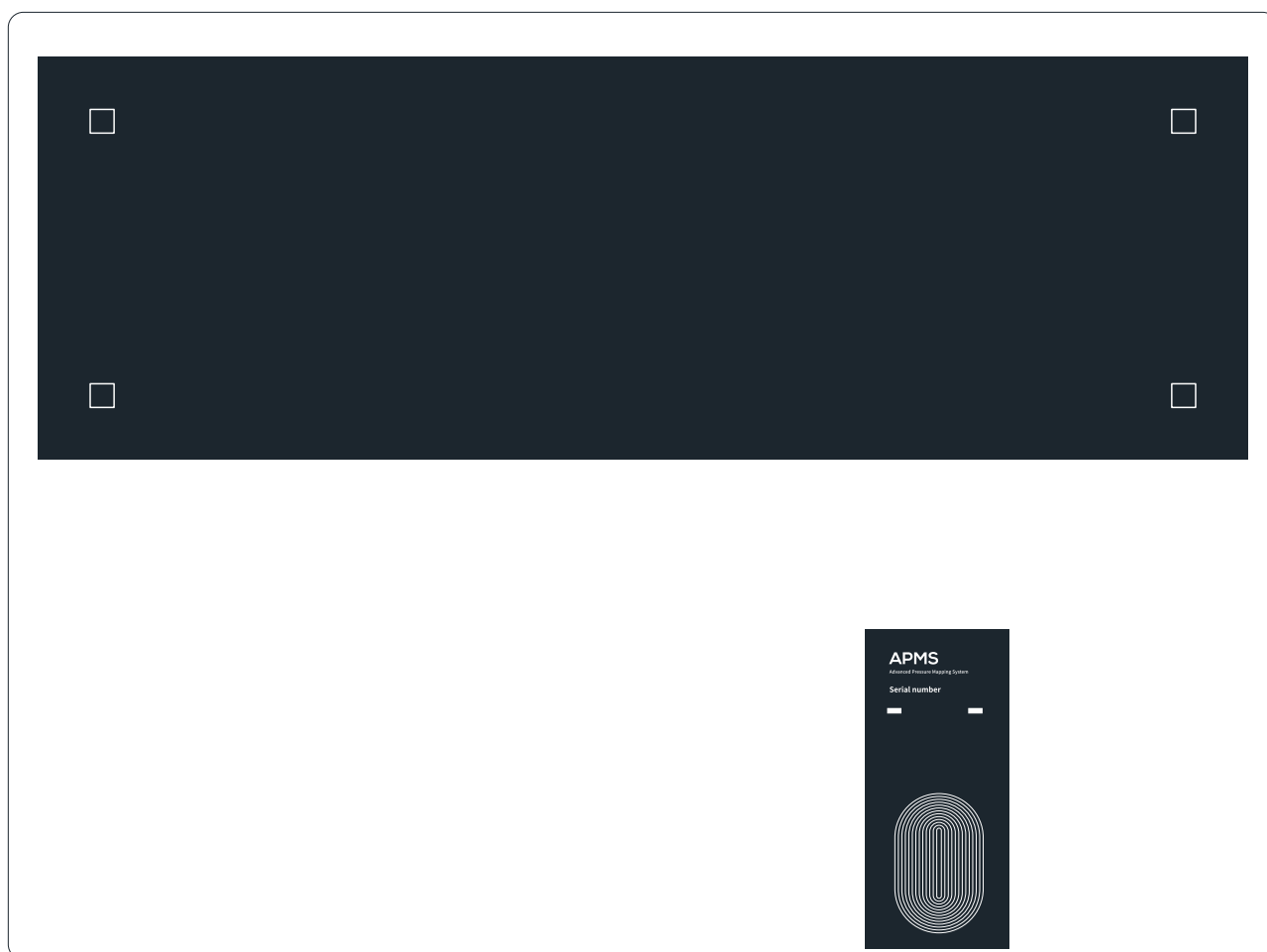
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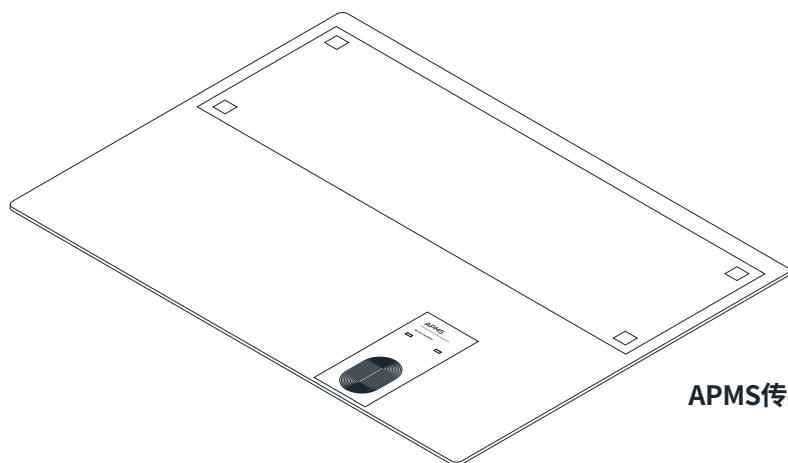
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1. 产品介绍

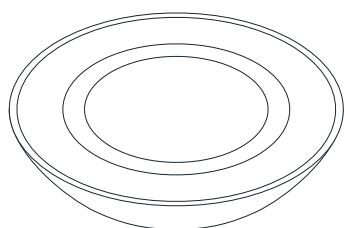
APMS(Advanced Pressure Mapping System)是无线测定压力装备。最适合用于玻璃洗涤装备的压力测定，有助于装备能够保持最佳状态。由于传感器非常薄，同时是防水器件，因此可以直接放置在玻璃上进行测定。并且使用专用修改装置，因此能够提供可信赖的数据。



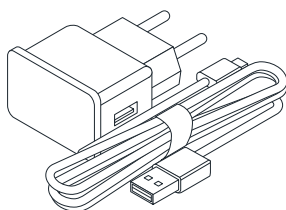
2. 产品构成



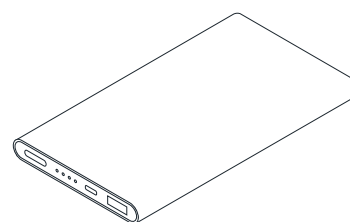
APMS传感器



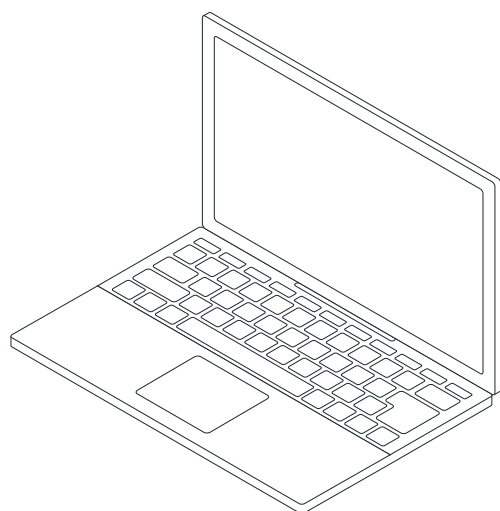
无线充电器



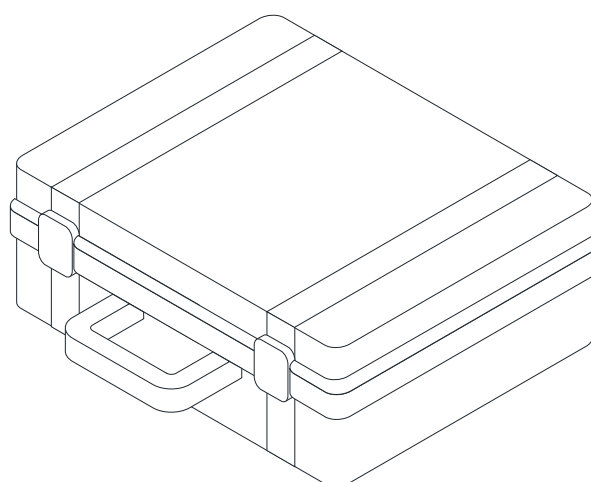
充电插头&充电线



电池 10,000毫安
(可选)



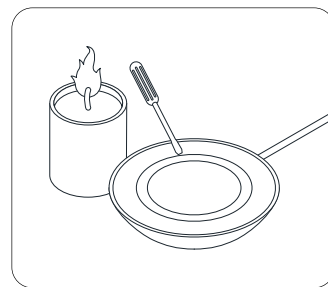
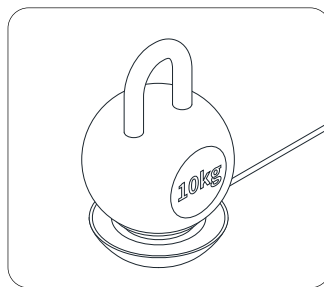
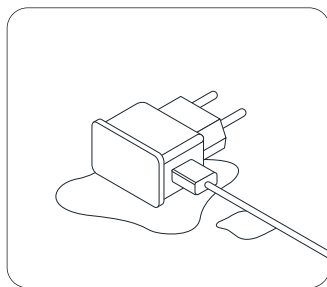
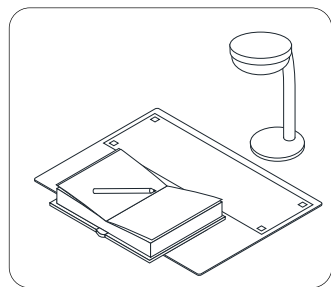
笔记本电脑
(可选)



保护套

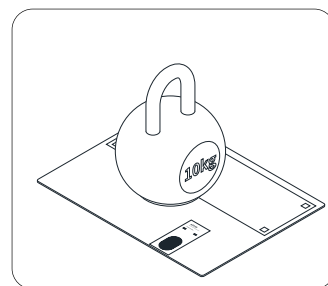
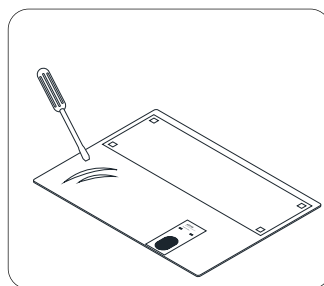
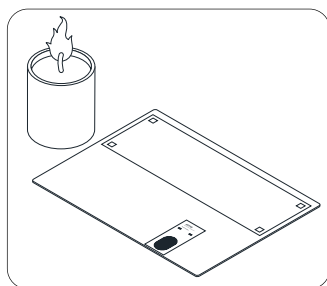
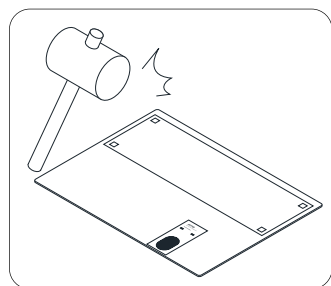
⚠ 警告

1. 请您不要把该产品用于在说明书中提到以外的用途。
2. 请对该说明书没有了解的用户不要使用。
3. 为了避免触电危险，充电插口或者插座不要接触水或者其他液体中。
4. 请您不要损伤，改造，弯曲，拉伸或者捆绑充电线。请不要用重物品放在充电线上或者压制。
5. 请您将充电线远离桌面的尖锐的部分和高温表面。
6. 请您使用AC充电用电源插座。
7. 请您定期擦干电源插座上的灰尘。
8. 即使发现充电线或者电源插座的微小损伤，请您停止使用。



⚠ 注意

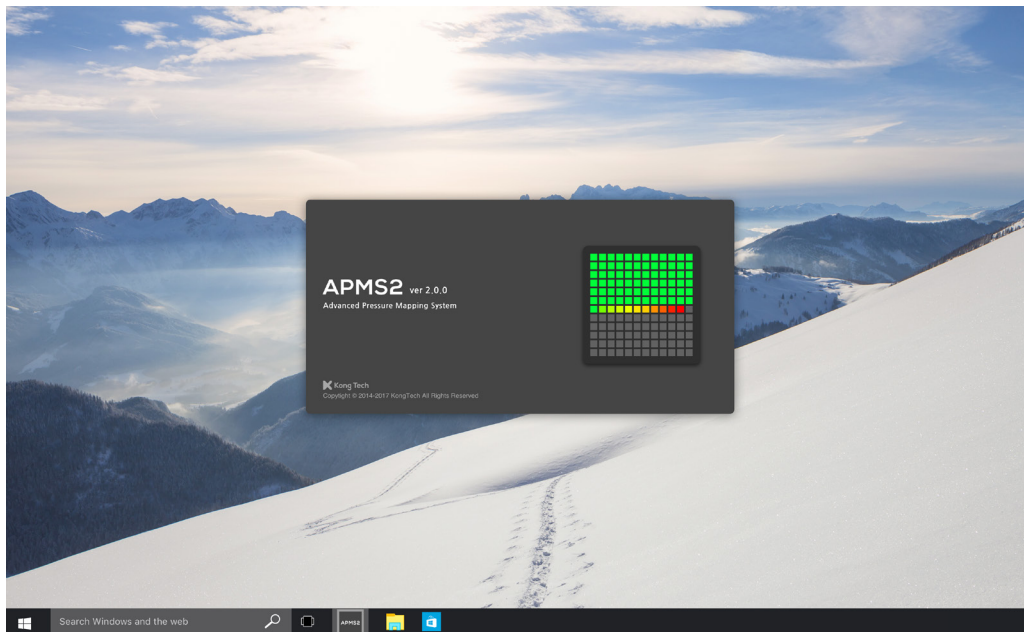
1. 请您不要推到产品。
2. 请您避免产品的掉落或者冲击。
3. 当您移动产品时，先停止使用，为了保证产品不要被弯曲用双手拿好。
4. 请您将产品远离尖锐的物品。产品有可能受到损伤，导致失去防水功能。
5. 请您不要站在产品上，或者把重物品放在产品上。
6. 请您将产品远离可燃性物质，在产品周围禁止吸烟或者点蜡烛。
7. 在身体，感知和精神方面能力缺乏的用户（包括儿童），或者缺少相关经验和知识的用户请不要使用该产品。该类用户需要通过指导或者教育。
8. 如果在身体，感知和精神方面能力缺乏的用户，或者缺少相关经验和知识的用户受到有关使用安全装置的指导或教育以后，对相关的危险情况有所了解之后可以使用该产品。



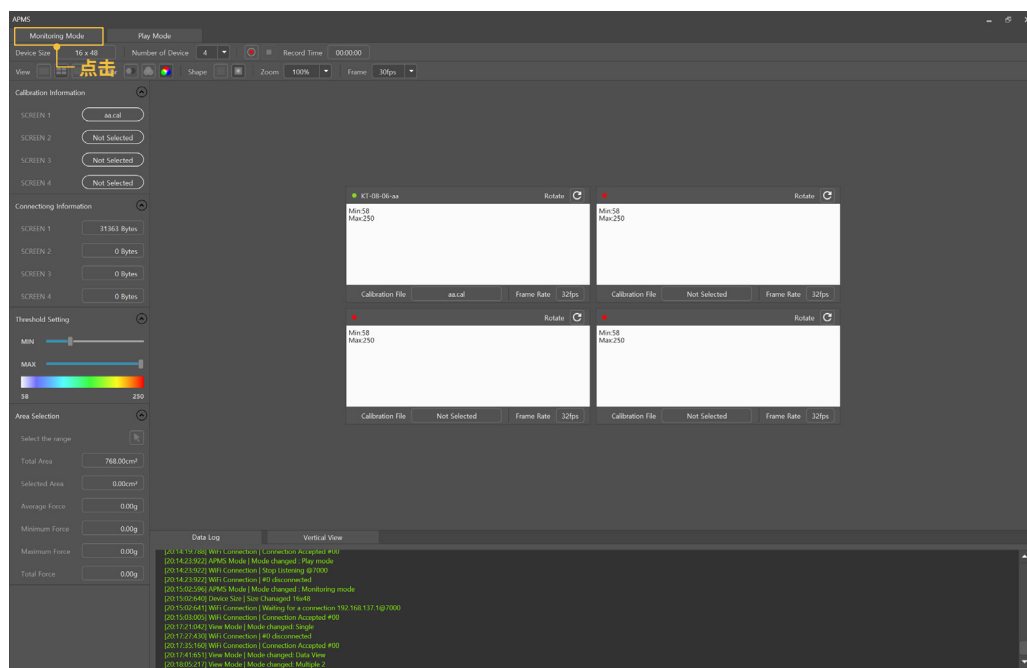
3. 如何使用

3.1 链接APMS

1. 运行APMS.exe 文件。



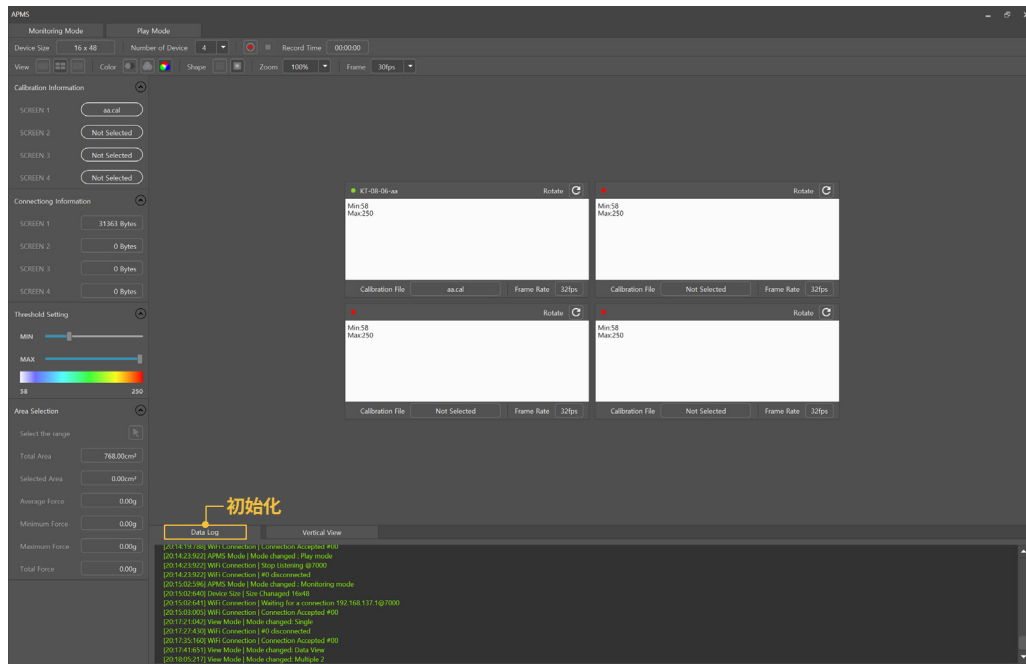
2. 选择上图所示的‘Monitoring Mode’（运行程序时，默认为自动选择）。



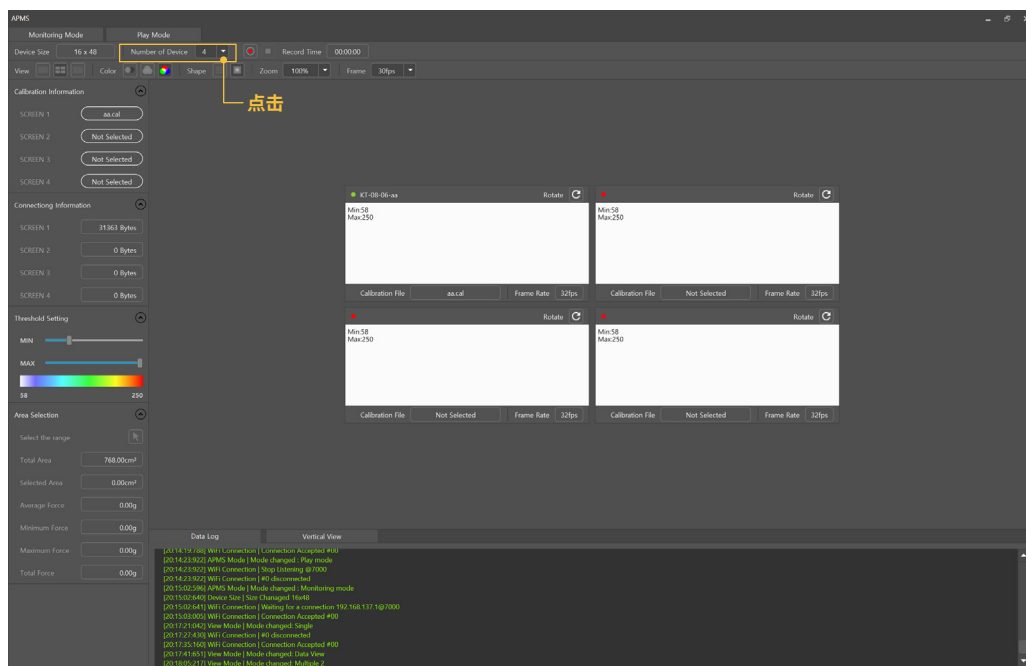
3. 点击下方的‘Data Log’栏，确认程序是否完成初始化。
(如果显示出下图所示的项目，即初始化完成)

- Wifi Connection I Hotspot started
- Device Size I Size Changed 16 x 48
- Wifi Connection I Waiting for a connection
- View Mode I Mode Changed: Multiple2

※ 如果不能进行初始化，请您联系客服(+82 2+1522-9928)。

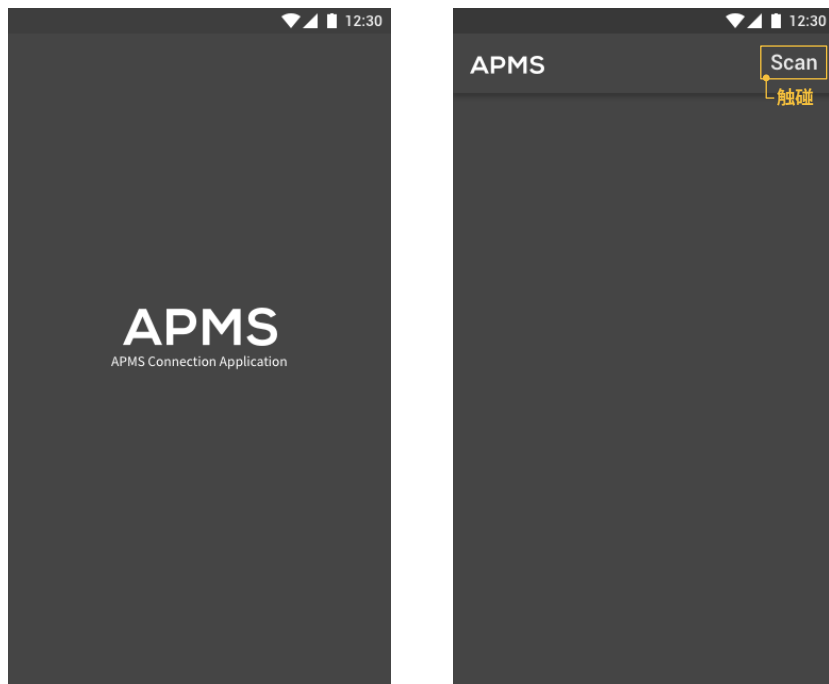


4. 在‘Number of Devices’栏选择要使用的传感器数量。

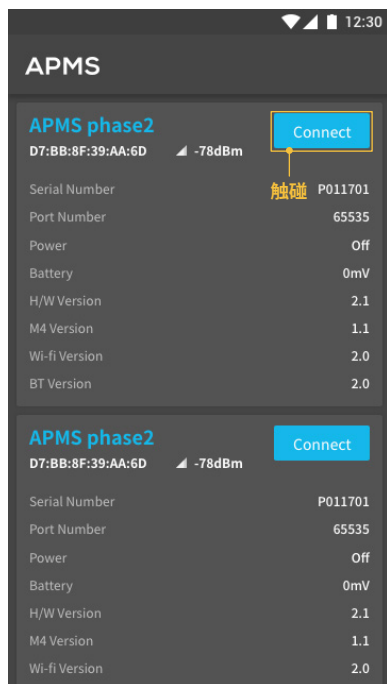


5. 运行APMS APP后，点击上图所示的‘Scan’。

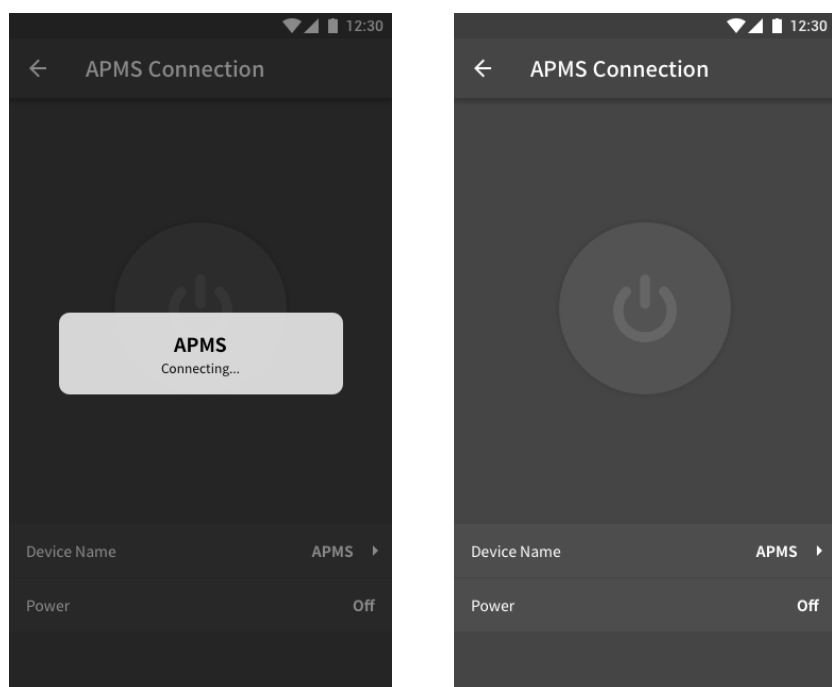
※ 使用之前在Playstore, Appstore下载 ‘APMS’APP。



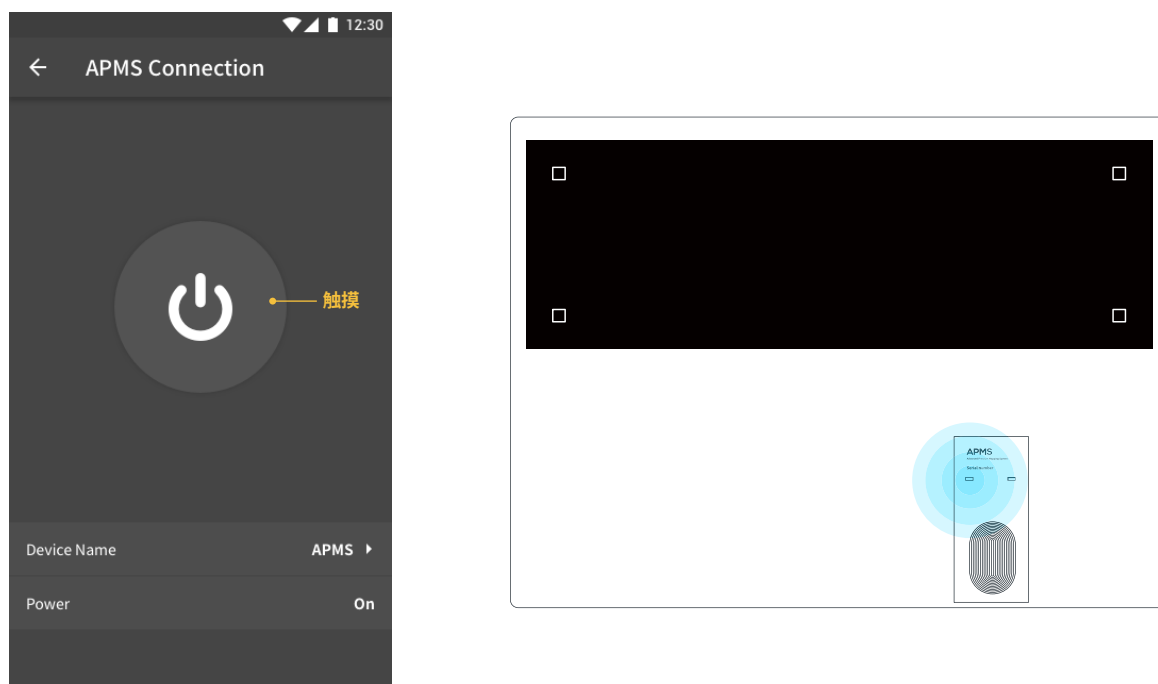
6. 请您点击搜到传感器的‘Connect’。(可以查看搜到传感器信息)



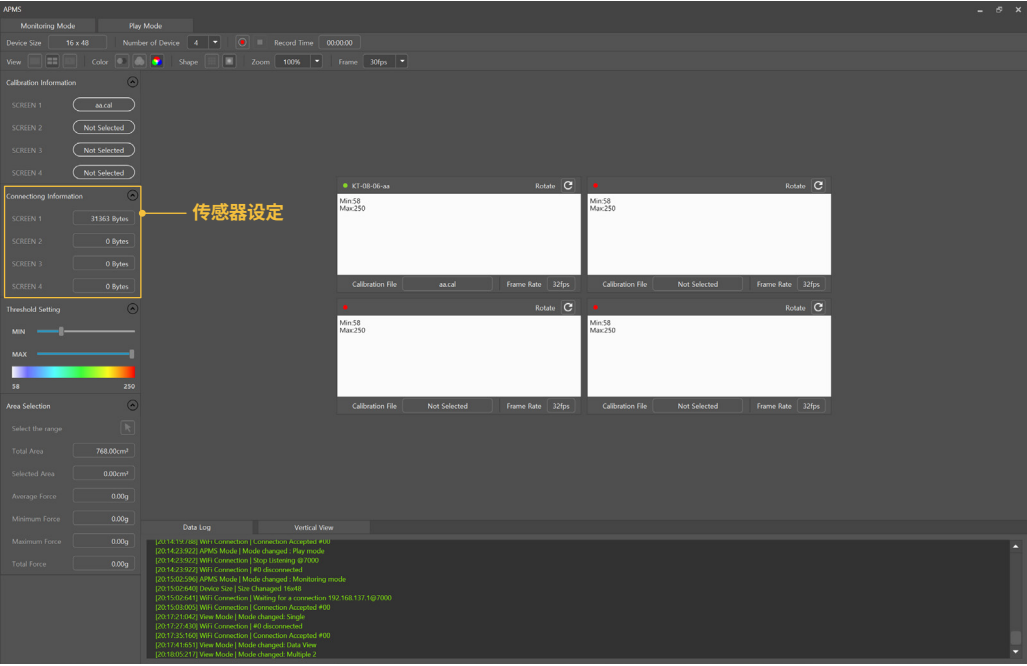
7. 请您等待传感器连接。(连接完成后等待画面自动消失)



8. 当点击中间画面后，激活完成。所连接的APMS传感器显示出On状态。(LED灯会闪亮)



9. 传感器变为‘On’状态后，在‘Calibration Information’栏所连接的传感器自动被设定。

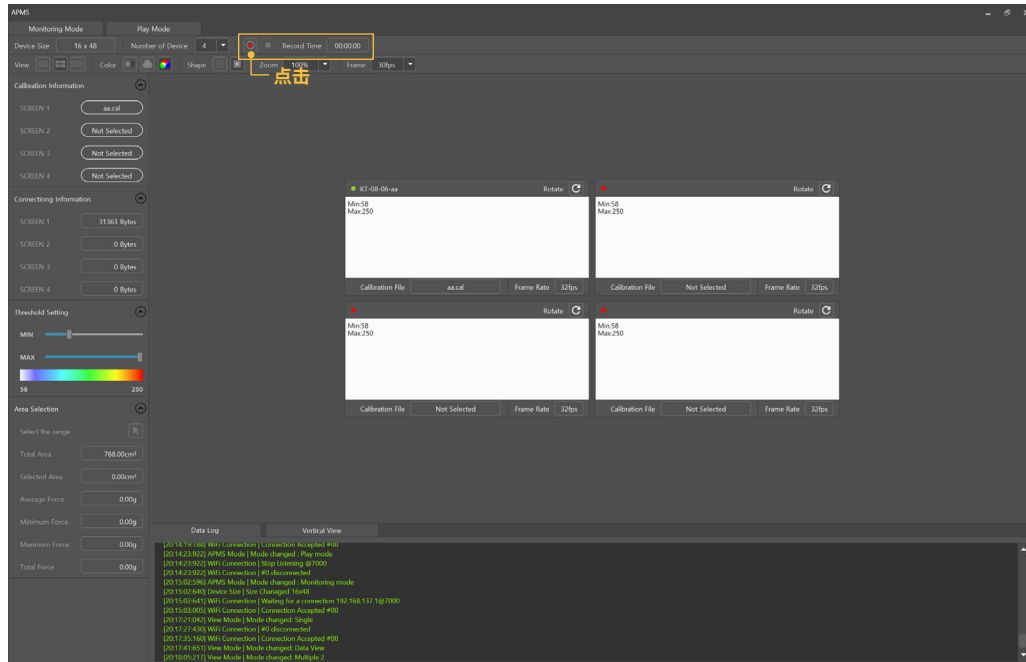


10. 连接完成后，在玻璃洗涤装备上设置APMS传感器并开始测定。

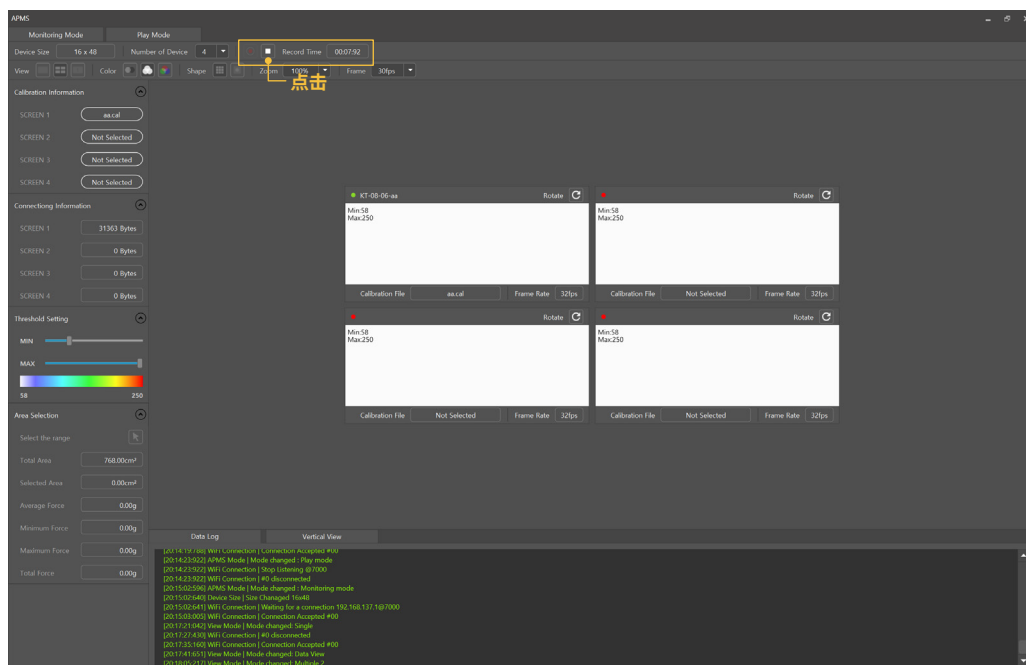
3.2 储存卡测试数据

所测试的数据可以通过录像方法储存。

1. 请点击如图所示的录像按钮。



2. 当录像完成后点击停止按钮。

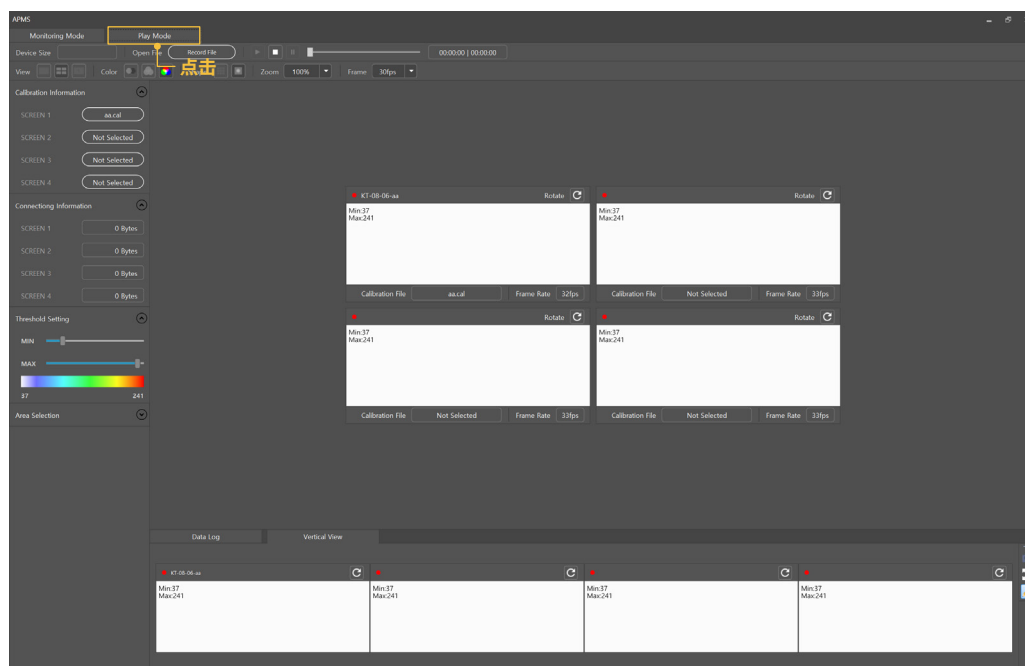


3. 录像文件将一下路径保存。

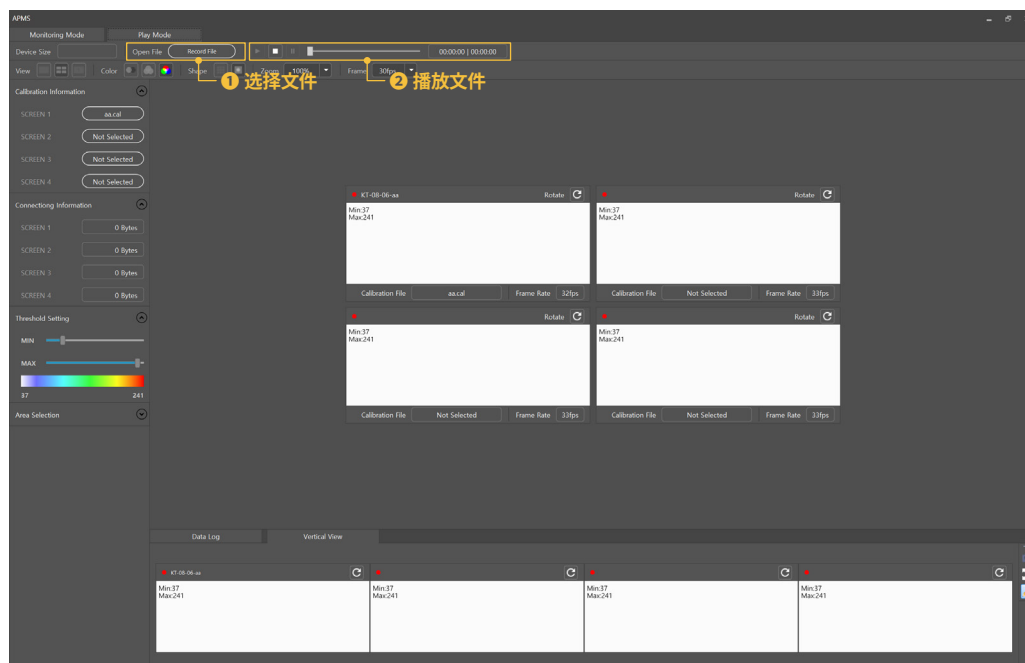
Documents/APMS2/Record

3.3 播放录像文件

1. 点击上述'Play Mode'。

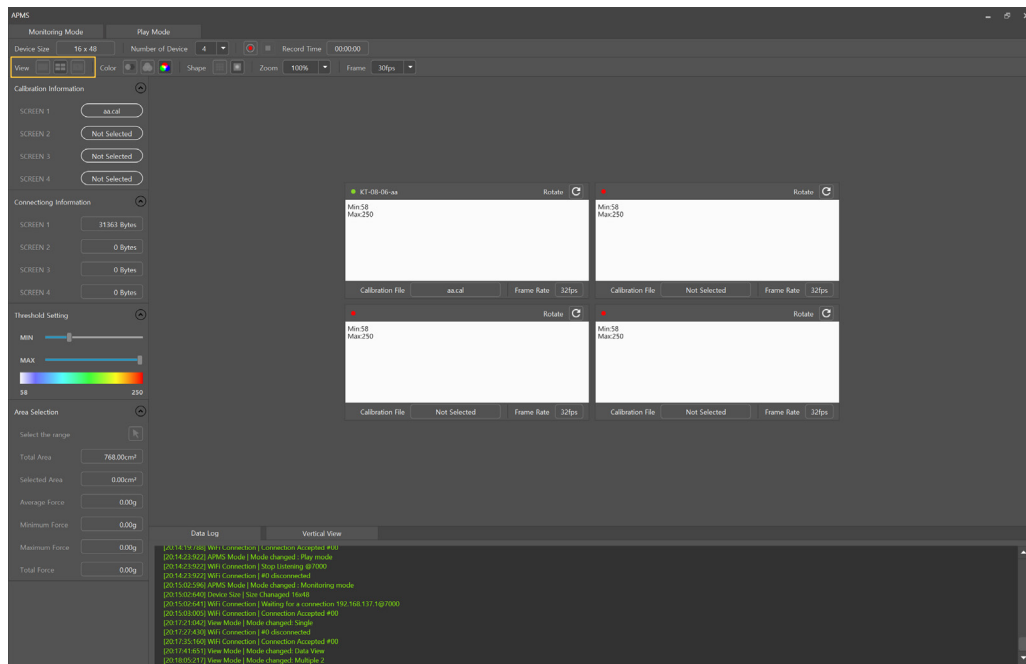


2. 在'Open File'栏中，点击'Record File'并选择向播放的文件。
3. 通过播放，停止和暂停按钮进行文件的播放。

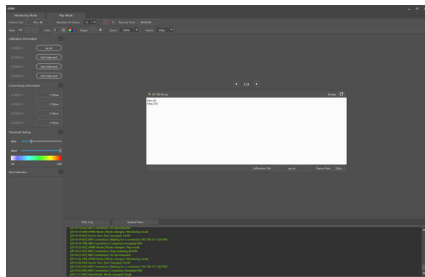


3.4 更改测试数据查看模式

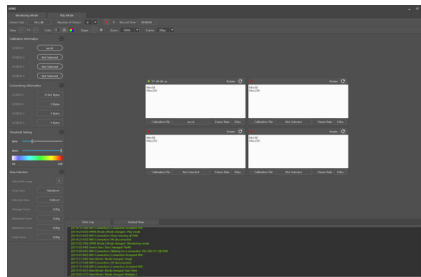
1. 在测试数据查看模式中有‘Single View’，‘Multiple View’，‘Data View’三种模式，在菜单的‘View’栏中可以选择。



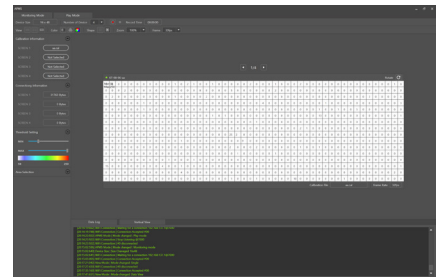
2. ‘Single View’模式可以放大查看APMS传感器之一。



3. ‘Multiple View’模式可以同时查看多个APMS传感器。

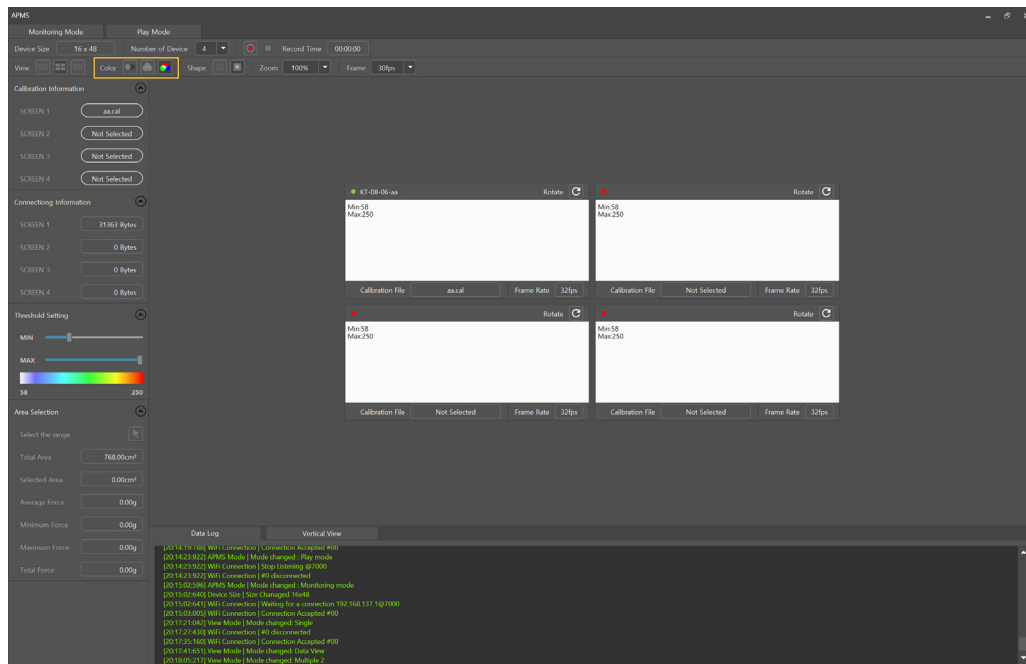


4. ‘Data View’模式可以查看从APMS传感器收集到的数据。

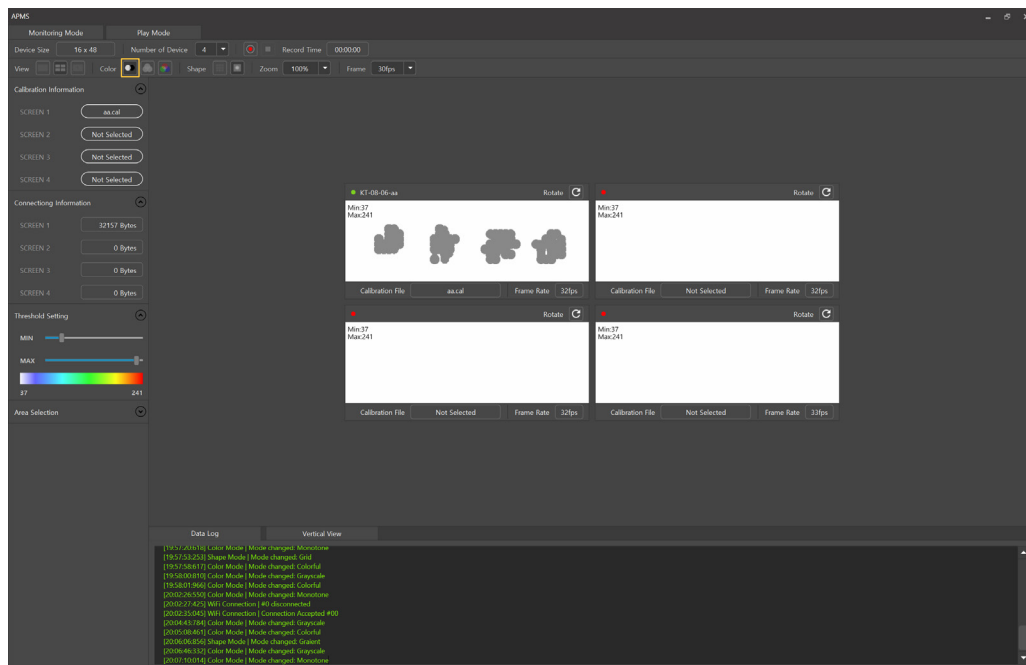


3.5 更改测试数据颜色

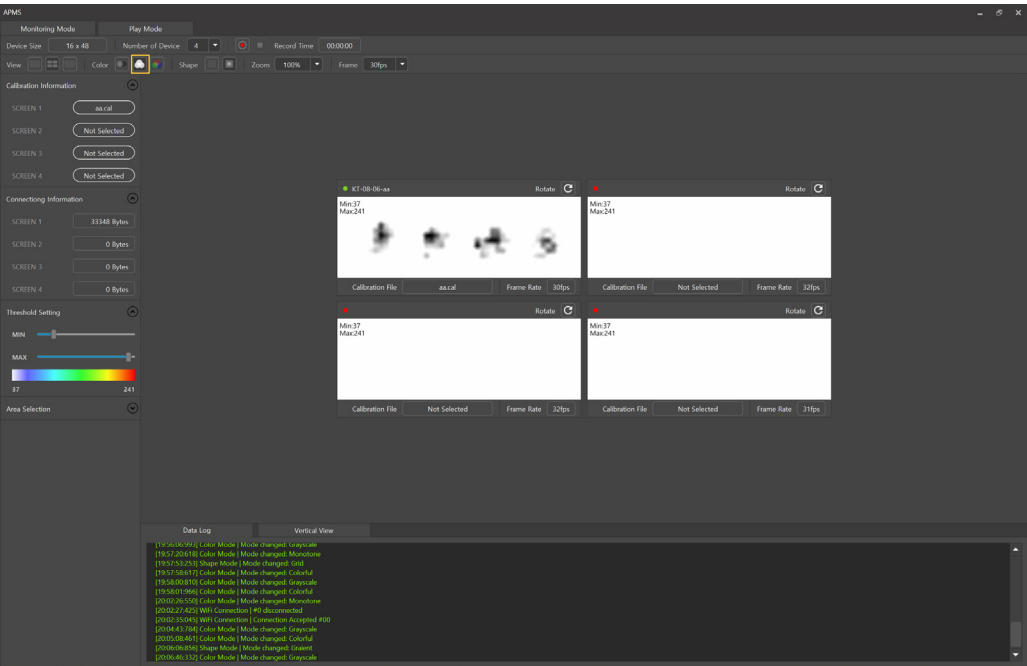
1. 在更改测试数据颜色模式有‘Monotone’，‘Grayscale’，‘Colorful’三种模式，在菜单‘Color’栏中可以选择。



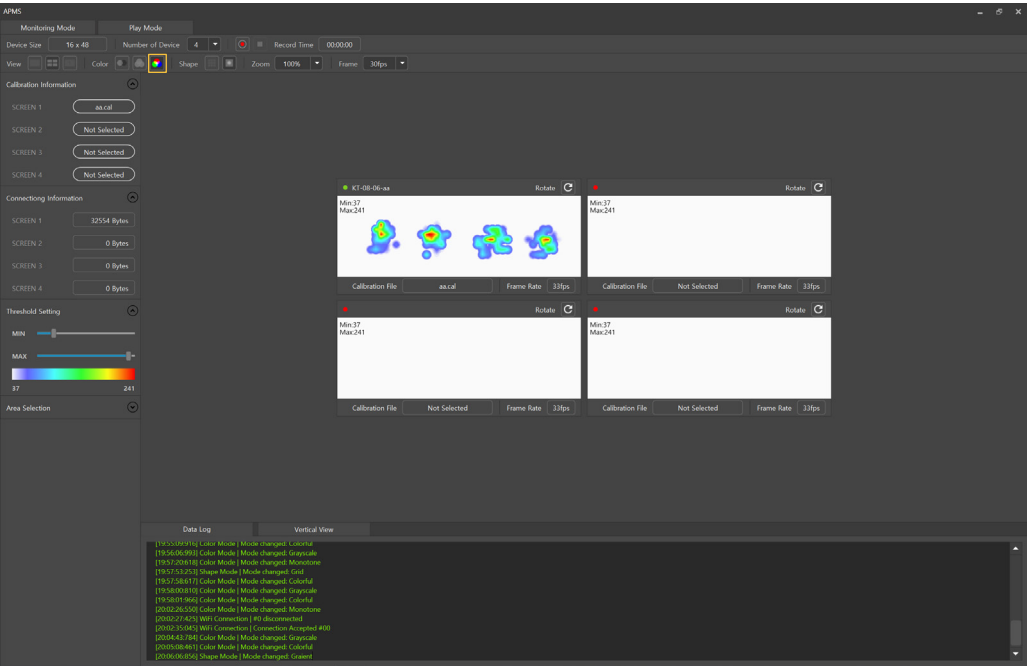
2. ‘Monotone’模式将APMS传感器的压力数据表现为单个颜色。



3. ‘Grayscale’模式将APMS传感器压力数据变现为黑白颜色。

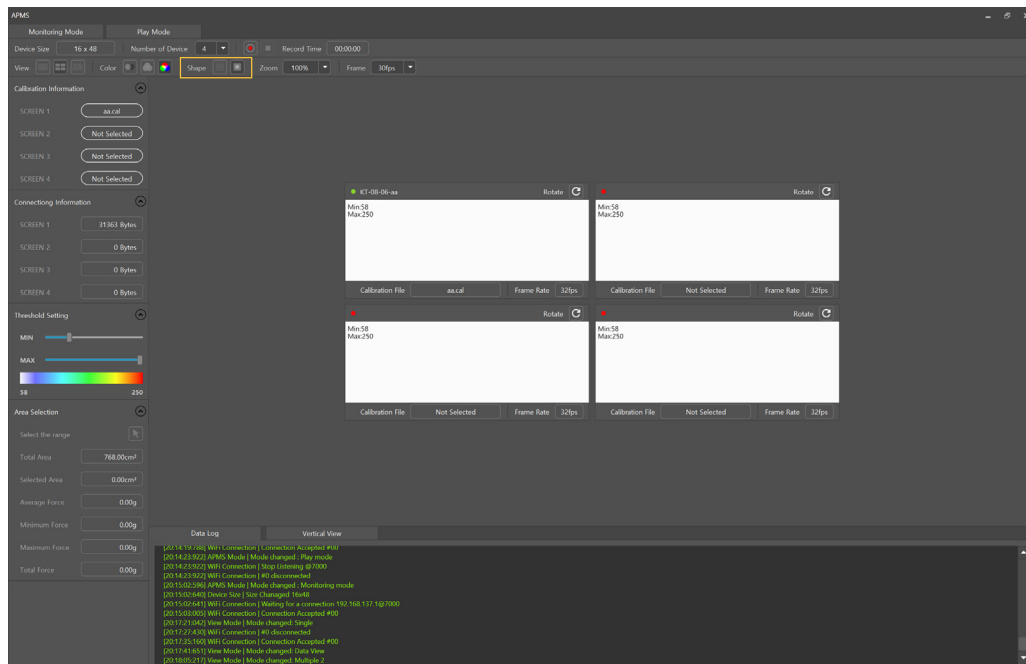


4. ‘Colorful’模式将APMS传感器压力数据表现为多种颜色。

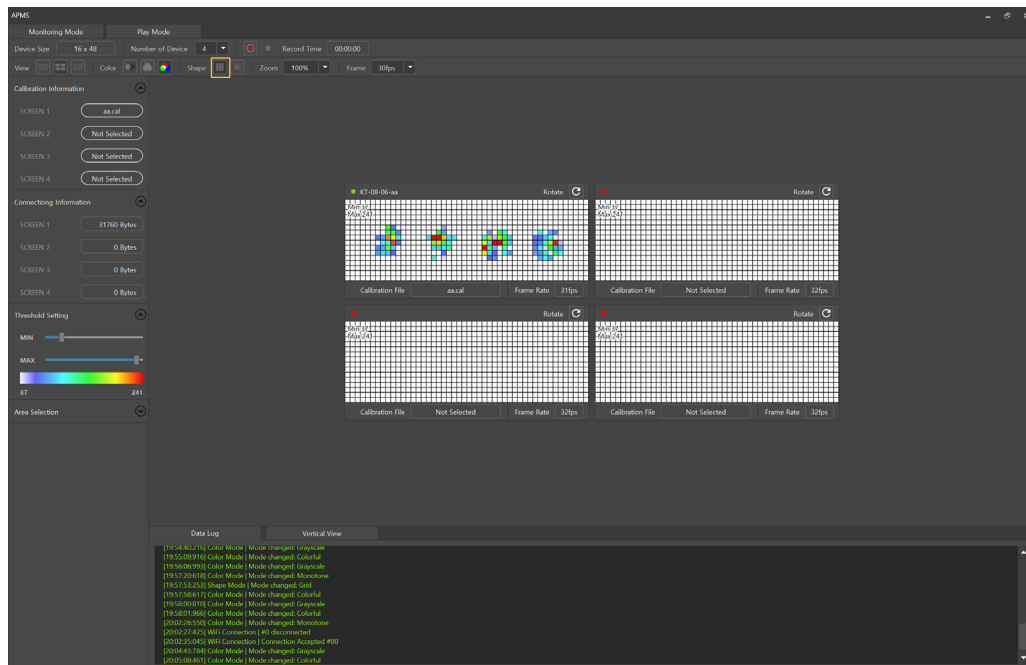


3.6 更改测试数据形貌

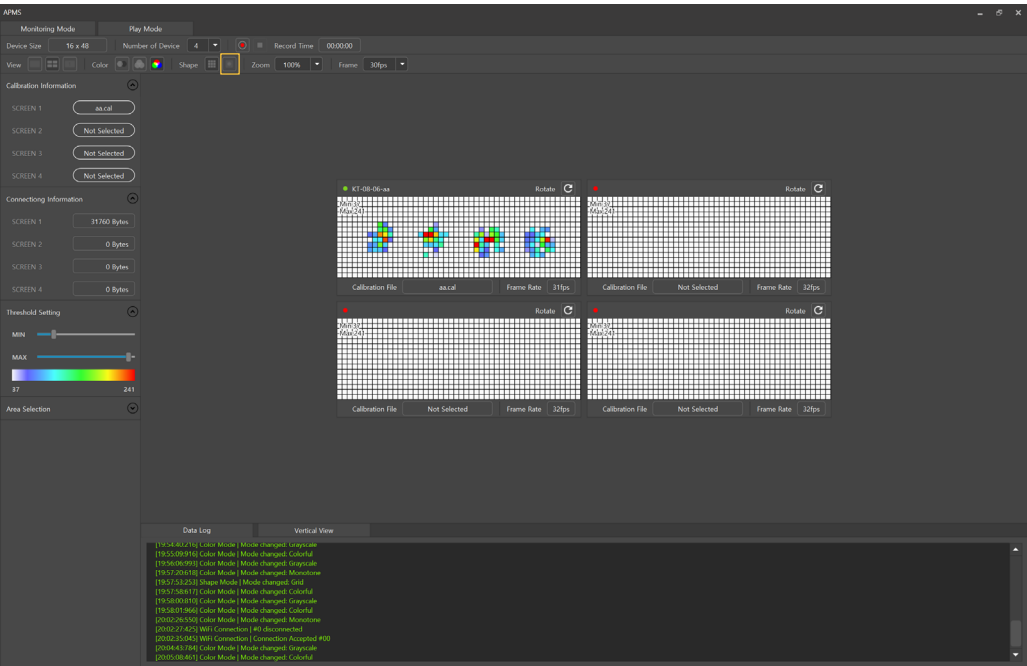
1. 在更改测试数据形貌模式中有‘Grid’，‘Gradient’两种模式，在菜单中‘Shape’栏可以选择。



2. ‘Grid’模式将APMS传感器压力数据表现为格子形式。

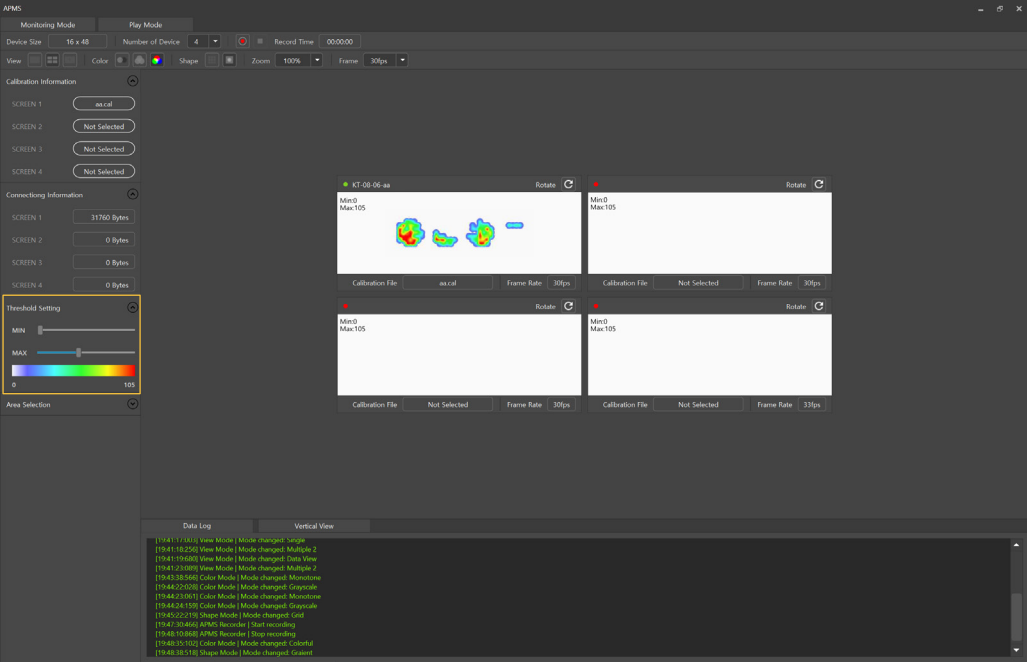
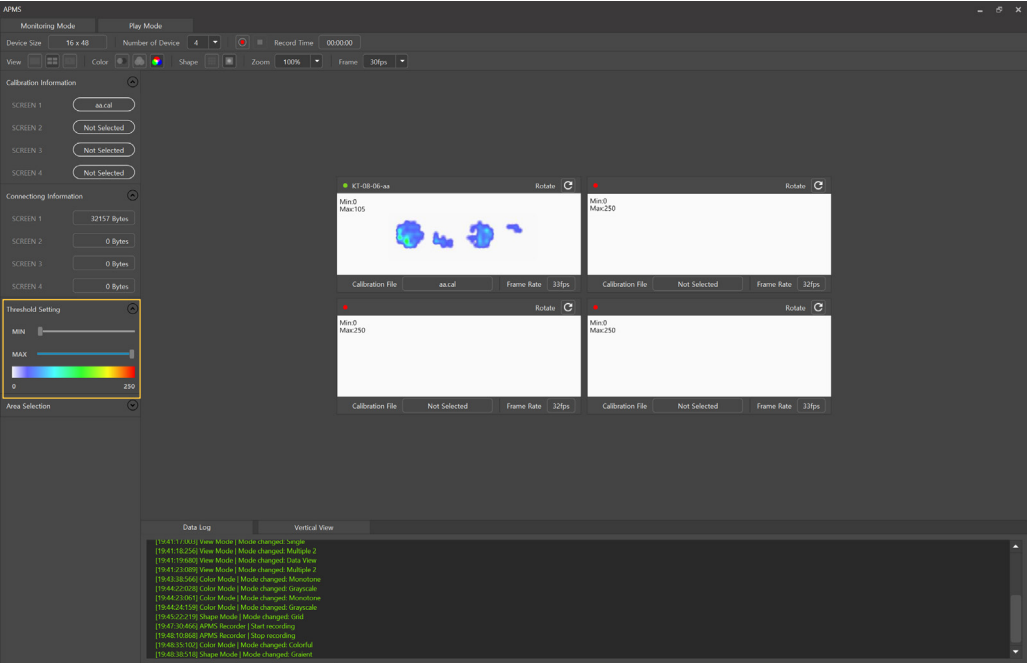


3. ‘Gradient’模式将APMS传感器压力数据表现为修改后模型。



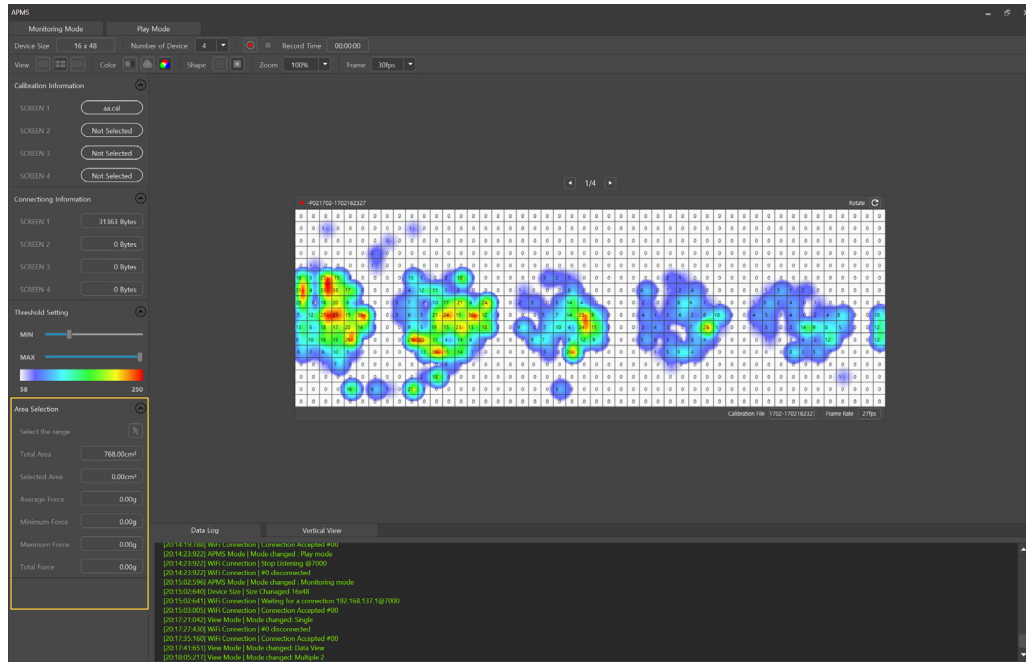
3.7 更改数据测试范围

- 1. 数据测试范围更改在左侧‘Threshold Setting’栏中可以进行更改。
- 2. 可以滑动尺子或者输入数字进行更改，在初始条件默认为MIN：0, MAX：100。



3.8 确认设定范围数据

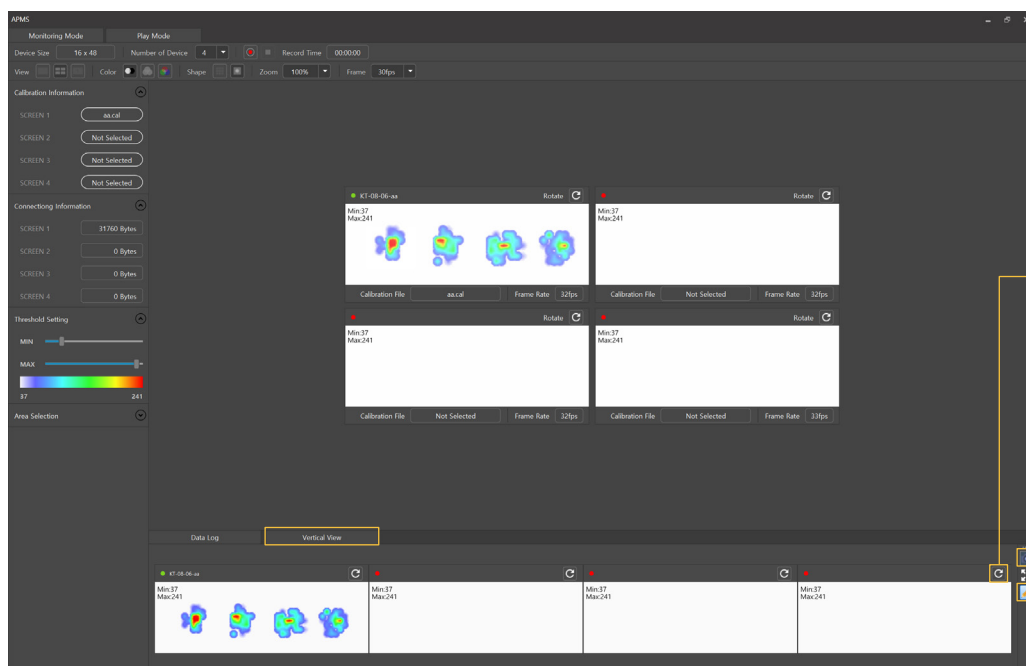
1. 在左侧项目‘Area Selection’栏中，可以确认设定范围数据。
2. 点击‘Select the range’按钮，指定想要范围。
3. 可以查看指定范围数据。



3.9 连续查看

将所测定的四个APMS传感器排成一列进行查看。

1. 请选择下方‘Vertical View’。
2. 可以查看排成一列的四个传感器数据。



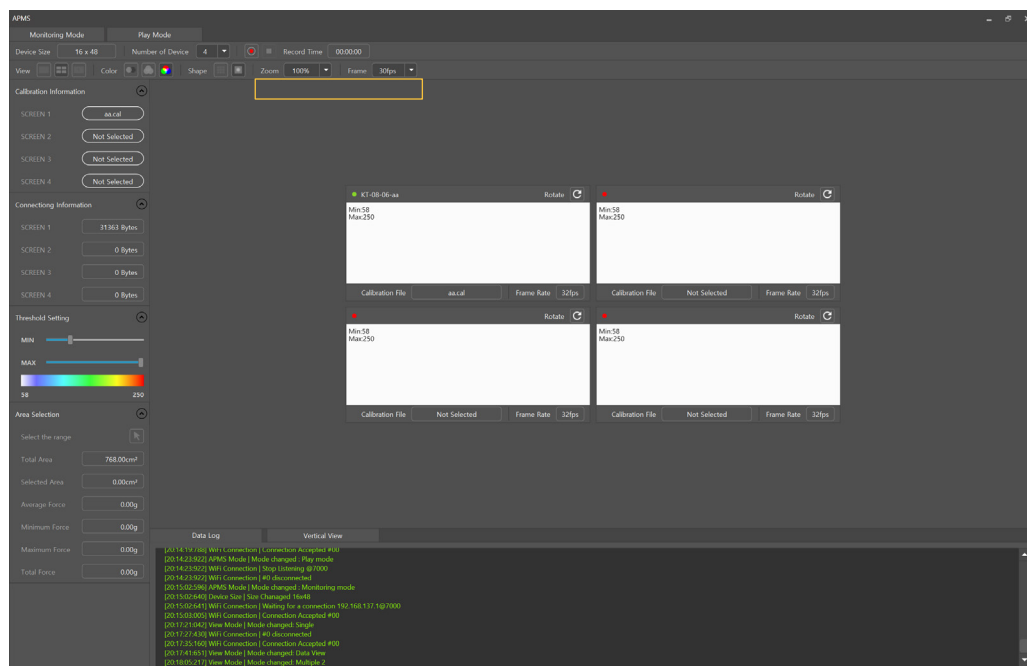
点击在传感器的数据上方反转按钮，可以设定为旋转180度的图像。

所测定的数据可以通过右下方的截图按钮，进行统一截图。

显示传感器信息的栏可以点击删除按钮进行删除。

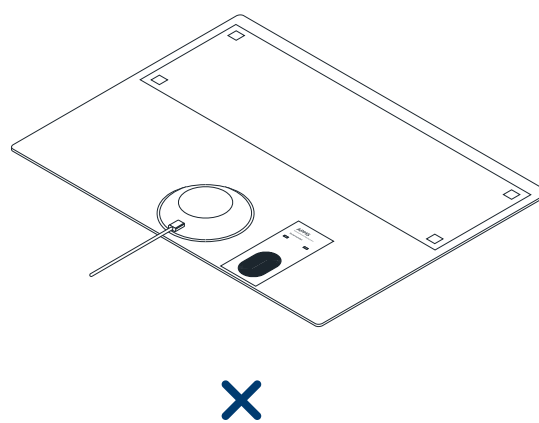
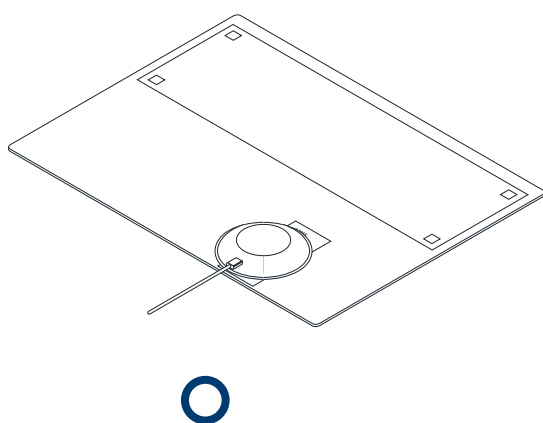
3.10 其他功能

1. ‘Zoom’技能可以将画面的尺寸调节为原来的25% ~ 150%。
2. ‘Frame’技能可以将压力数据的每秒速度调节为10fps ~ 60fps。



3.11 充电

1. 将无线充电板放在充电区域中央。
2. 标志灯(CHARGER LED)开亮表明进入充电模式。



4. 产品规格

4.1 全硬件

产品规格

大小: W500 X D372 X H1.6(mm)

测定范围: 0~250gf

充电方式: 无线充电

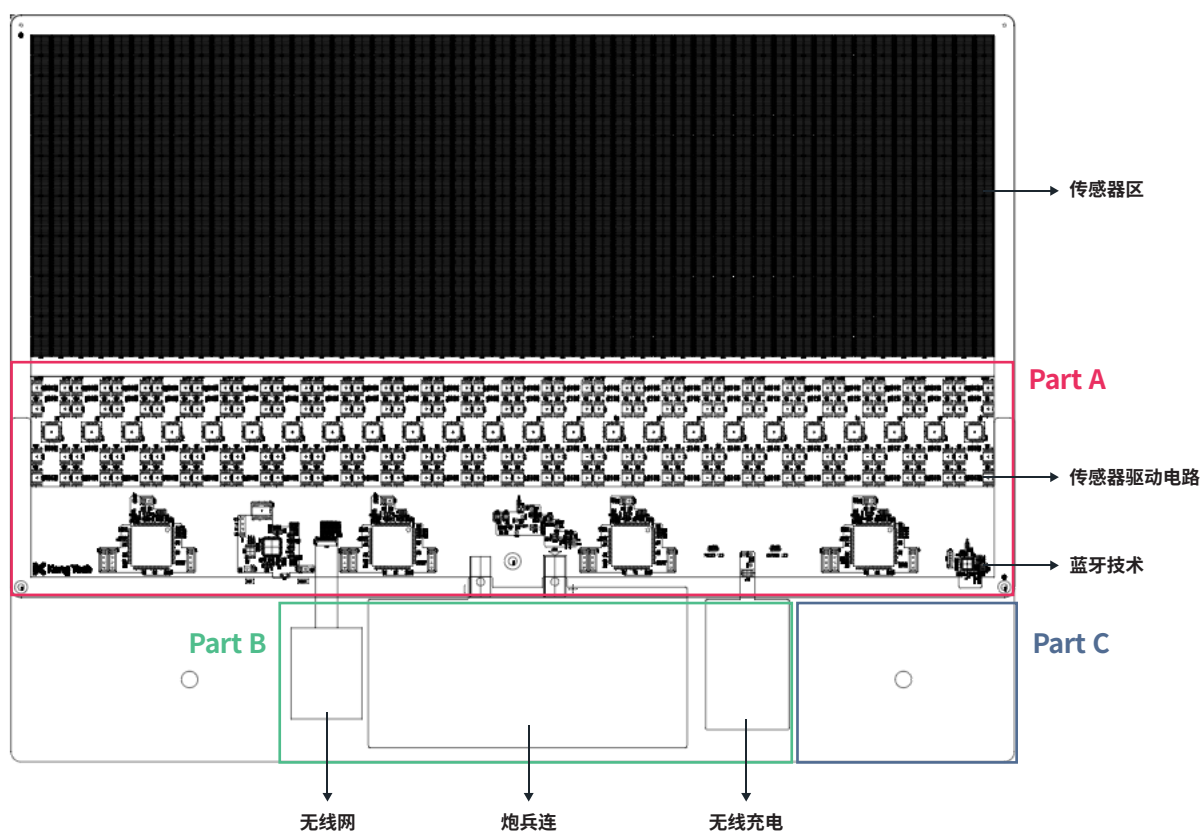
使用时间: 3小时

正常输出: 5V / 700mA

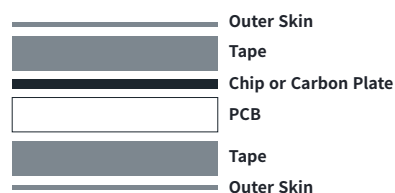
消耗电流: <800mA

等待电流: <1mA

电池容量: 2850mAh

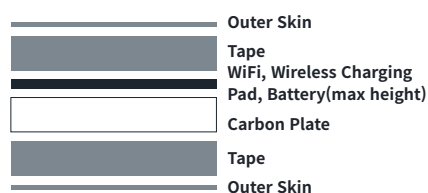


Part A



1. Outer Skin 110 μ m(nominal)
(Film 90 μ m and adhesive 20 μ m)
2. Tape 0.6mm(nominal)
3. Carbon plate 1mm
4. Chip(max 1.6mm)
5. PCB 0.6 \pm 0.15mm

Part B



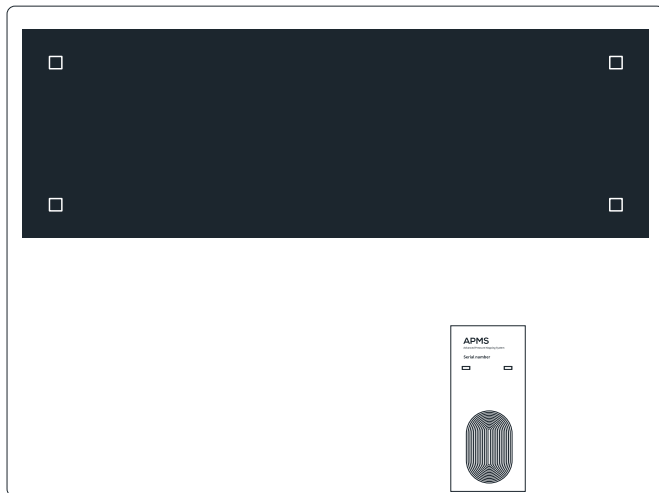
1. Outer Skin 110 μ m(nominal)
(Film 90 μ m and adhesive 20 μ m)
2. Tape 0.6mm(nominal)
3. Battery 1.7mm
4. Carbon plate 0.6mm

Part C

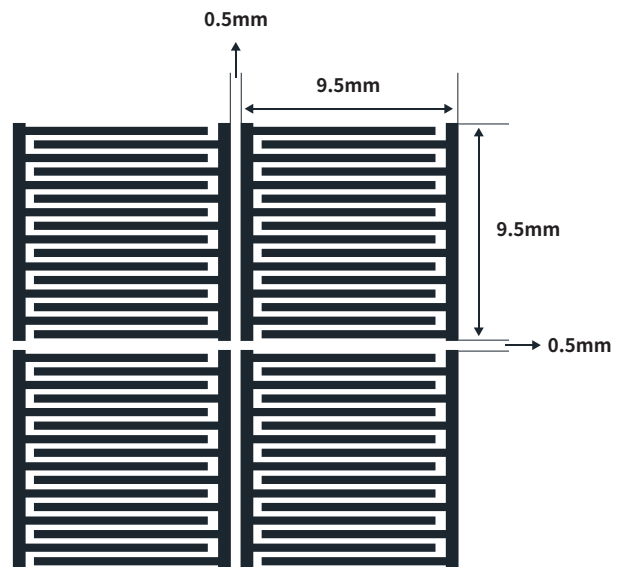
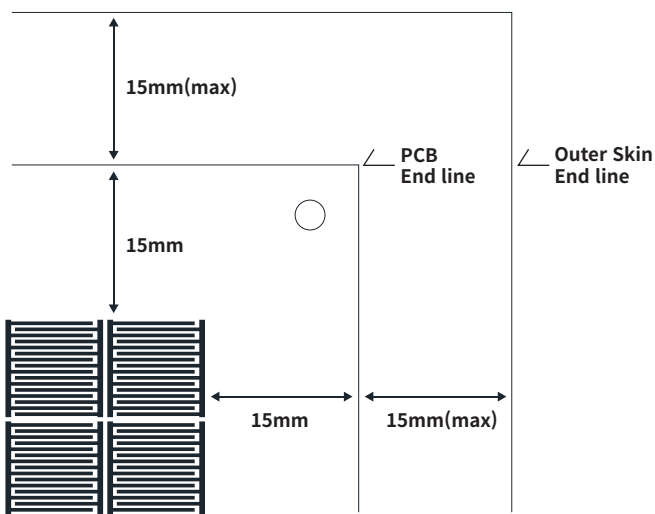


1. Outer Skin 110 μ m(nominal)
(Film 90 μ m and adhesive 20 μ m)
2. Tape 0.6mm(nominal)
3. Carbon plate 1.6mm

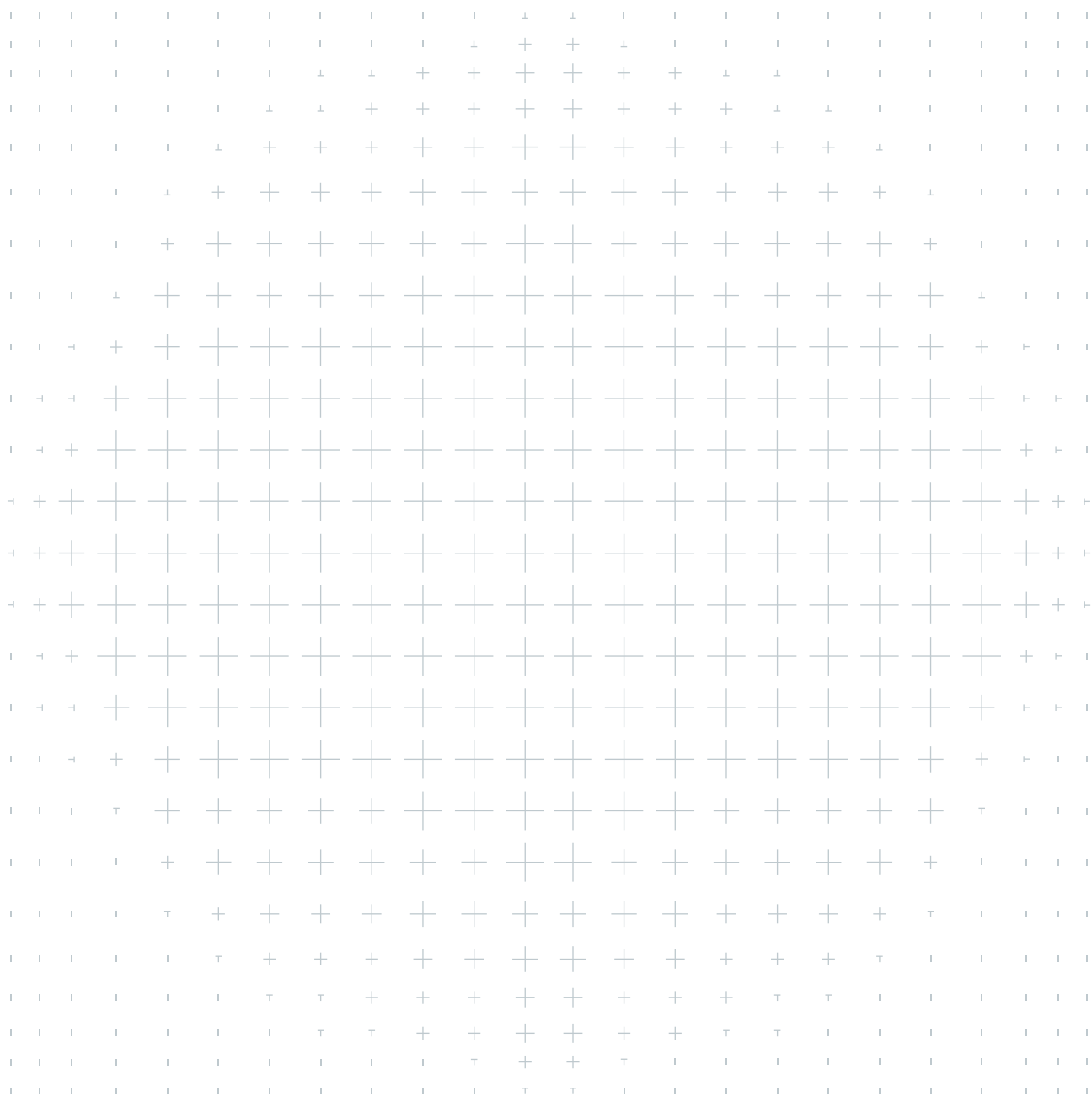
4.2 传感器



1. 用黑色薄膜覆盖的部分是测定压力区域。
2. 拥有768个压力传感器。
3. 边缘的4个白框是位置调整时用的零点。



4. 传感器，PCB和中央的间距为15mm。
5. 传感器条纹大小为9.5 x 9.5 mm。
6. 条纹之间的距离为0.5mm。



문의

콩테크 주식회사 고객 상담실

문의내용: 사용방법, 관리방법, A/S 상담등

전화번호: 1522 - 9928

이메일: kongtech@kong-tech.com

Contact Us

Customer Service

Regarding product usage, maintenance, repair

Tel: +82 2-1522-9928

Email: kongtech@kong-tech.com

咨询

KongTech有限公司客服

使用方法, 维护方法, 维修咨询等

热线: +82 2-1522-9928

邮箱: kongtech@kong-tech.com



콩테크 주식회사

경기도 성남시 분당구 판교역로 231 808호
(삼평동, 에이치스퀘어 에스동)