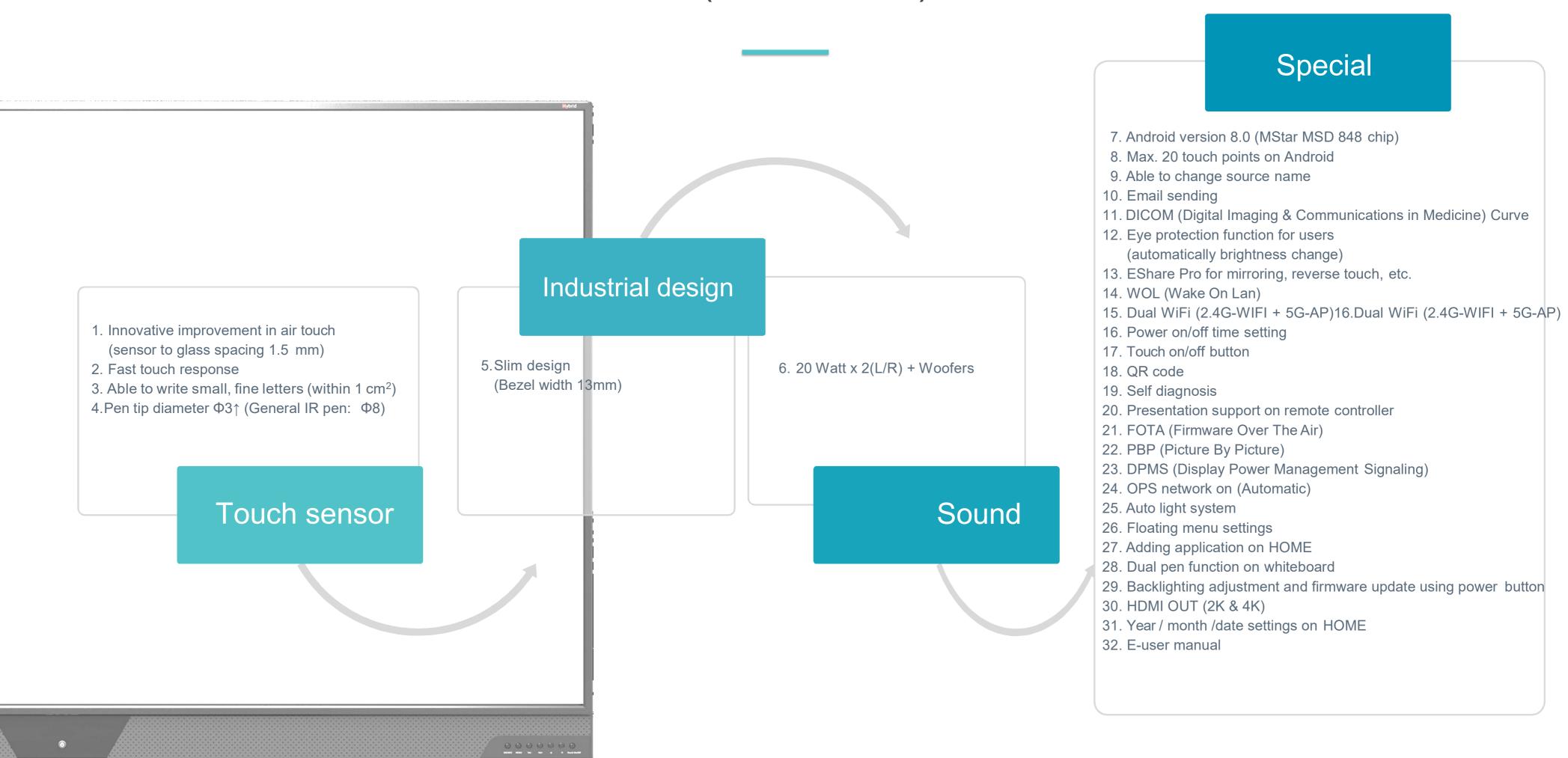
# ULTRA SLIM IR (8200 series) Introduction

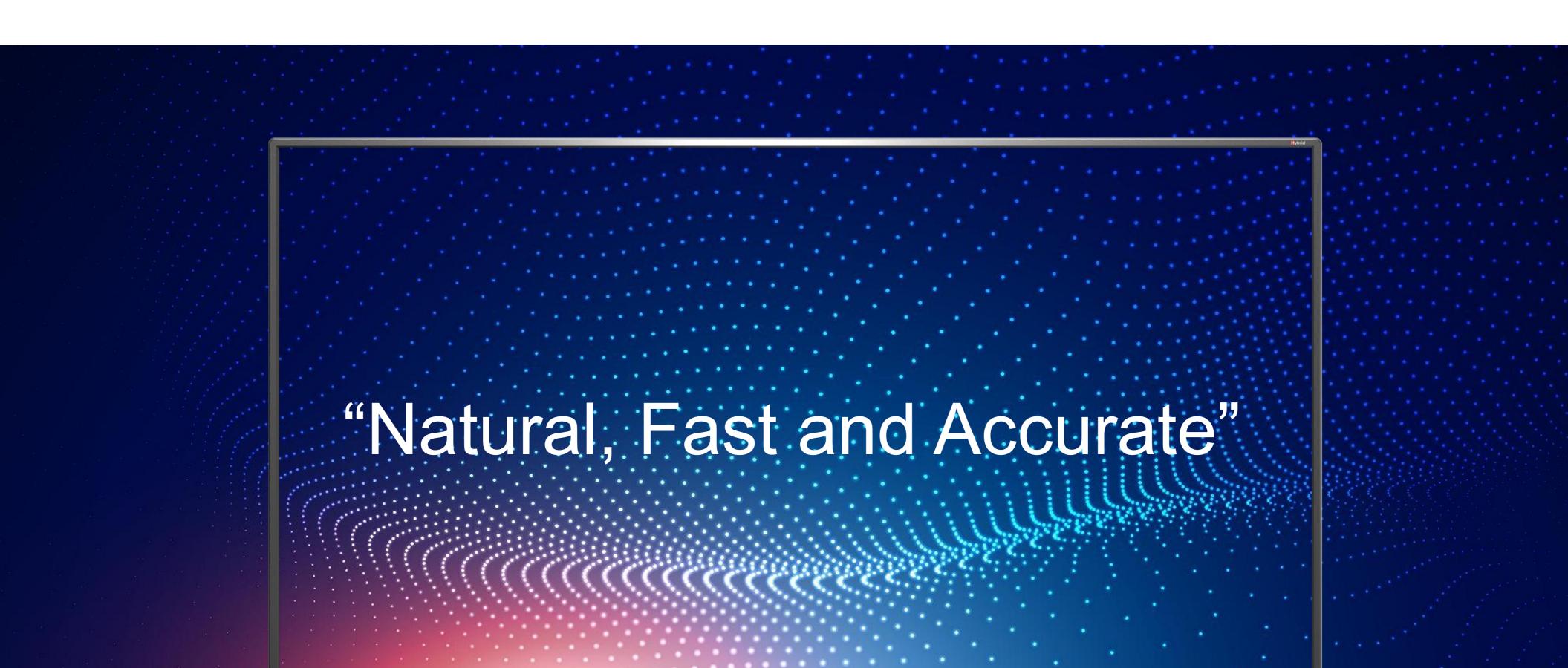


#### AHA ULTRA SLIM IR (8200 series) main 32 features



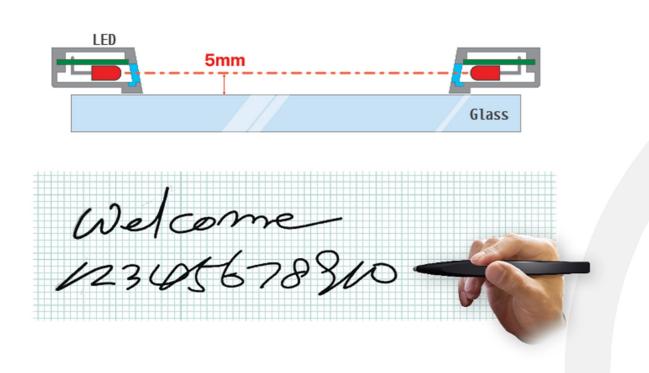
#### Touch sensor

Superior touch performance



#### Innovative improvement in air touch

Not only reducing bezel width from front view, but also dramatically reducing air touch more than 70% (sensor to glass : from 5 mm to 1.5 mm), it provides superior touch performance and experiences of smooth pen-on-paper writing without script-lag



"Natural, Fast and Accurate"

Conventional IR

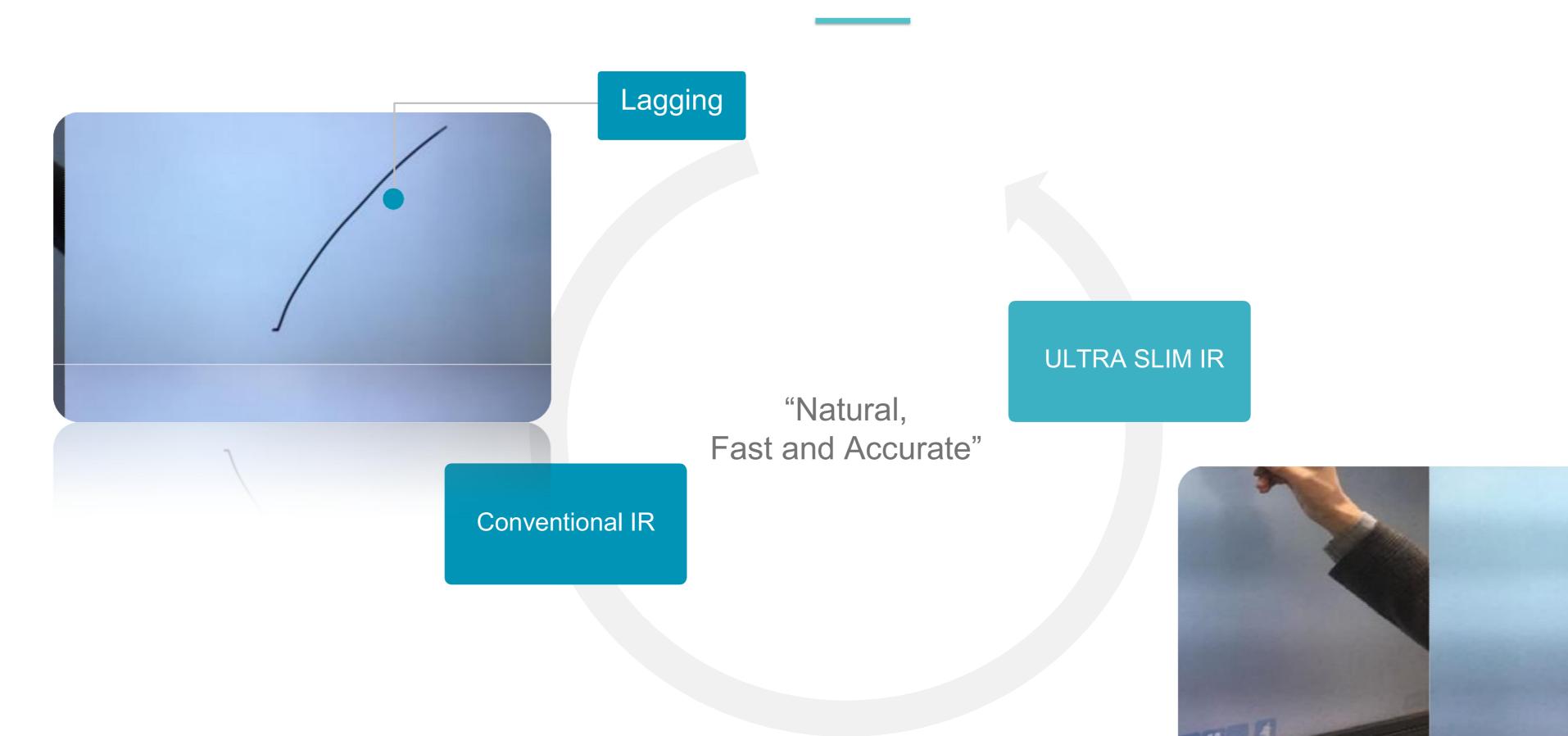
ULTRA SLIM IR



Welcome 12345678910

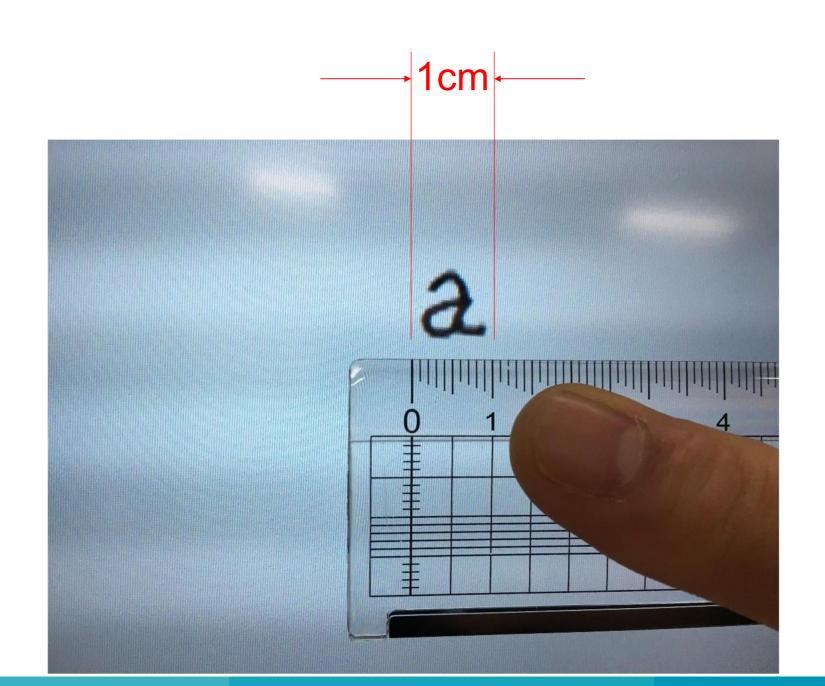
## Fast touch response

Fast touch response and speed (does not generate Time Lagging issues as seen in conventional IR)



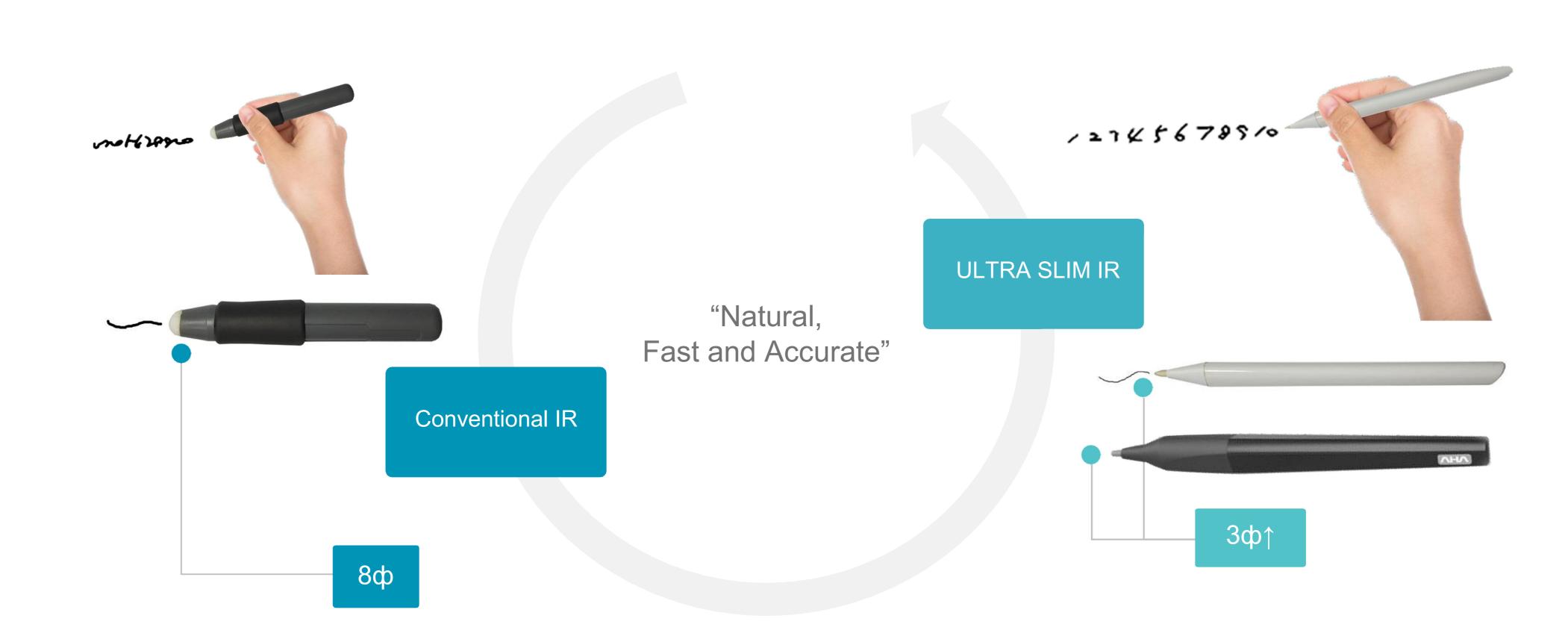
## Able to write small, fine letters

Able to write a small letter in a box even less than 10 mm in width and length (1 cm²)

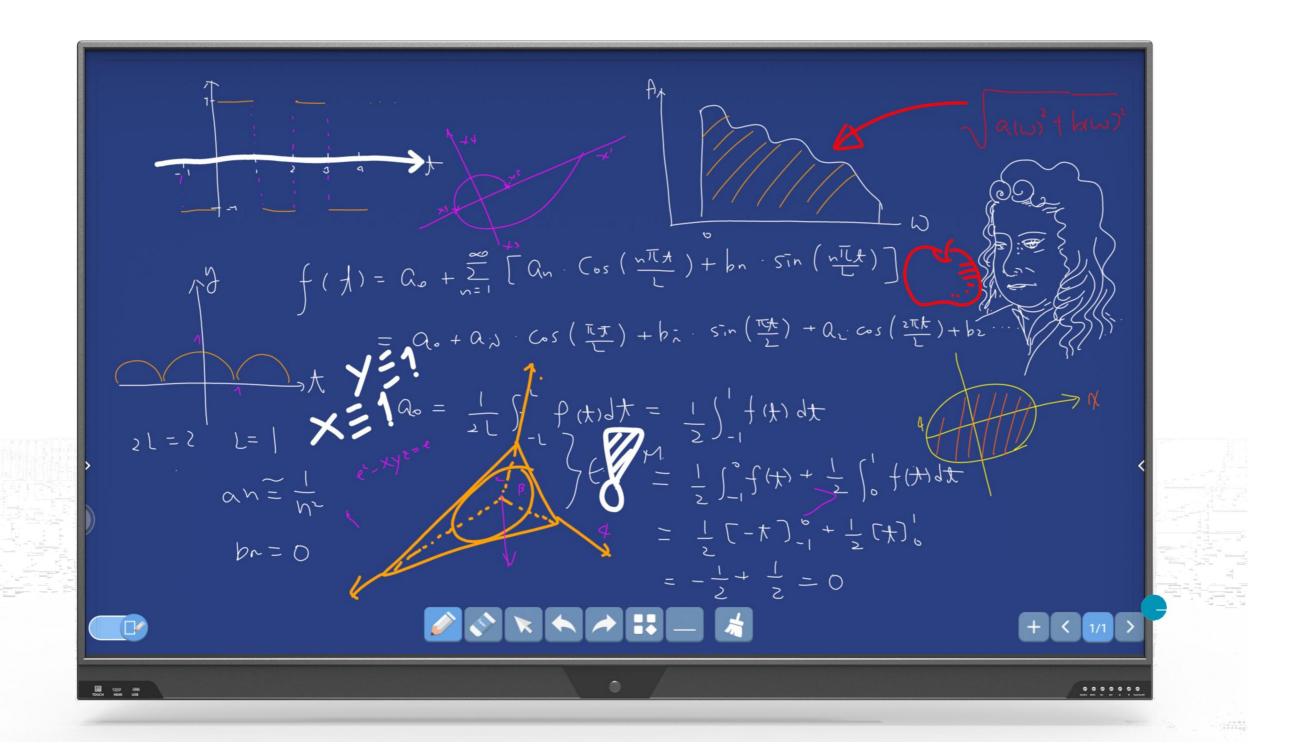


### Pen tip diameter Ф3 ↑

Pen tip diameter, used to be 8 mm in conventional IR, now is reduced to 3 mm for very fine and accurate writing



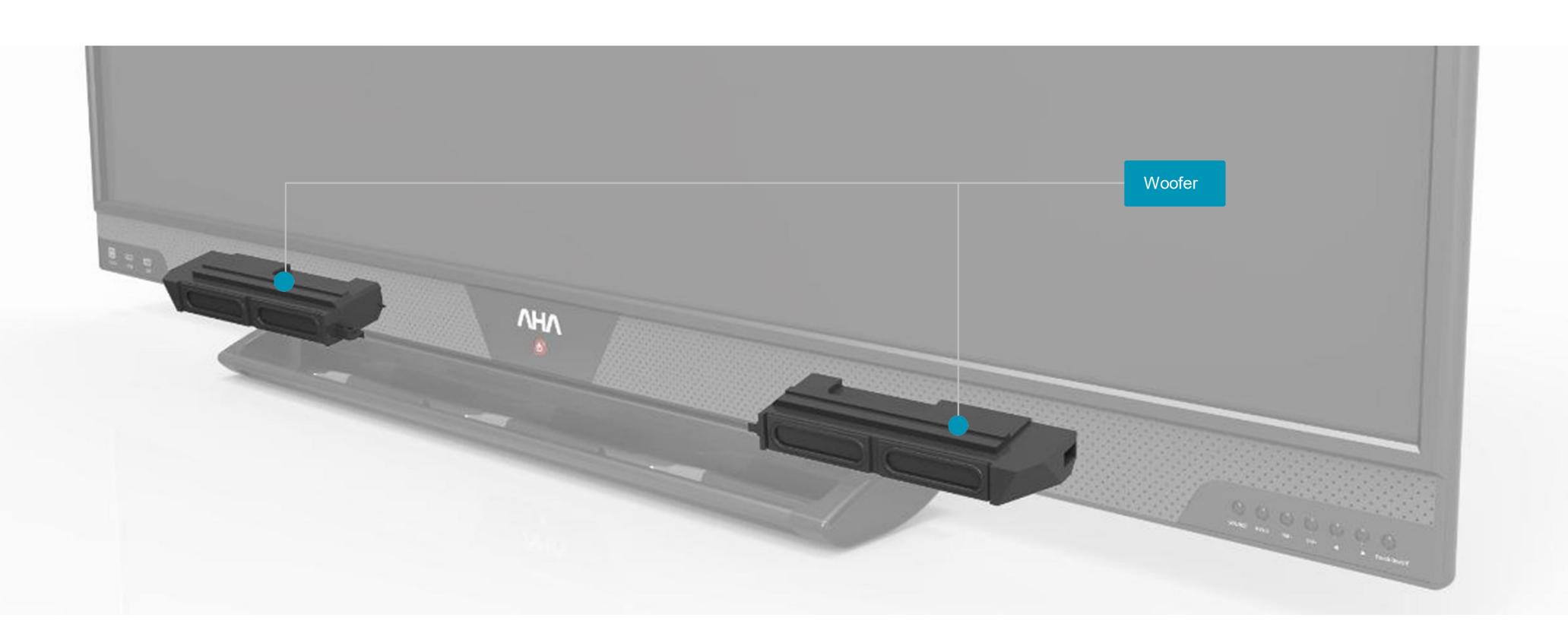
# Slim design



Bezel Total width 13 mm

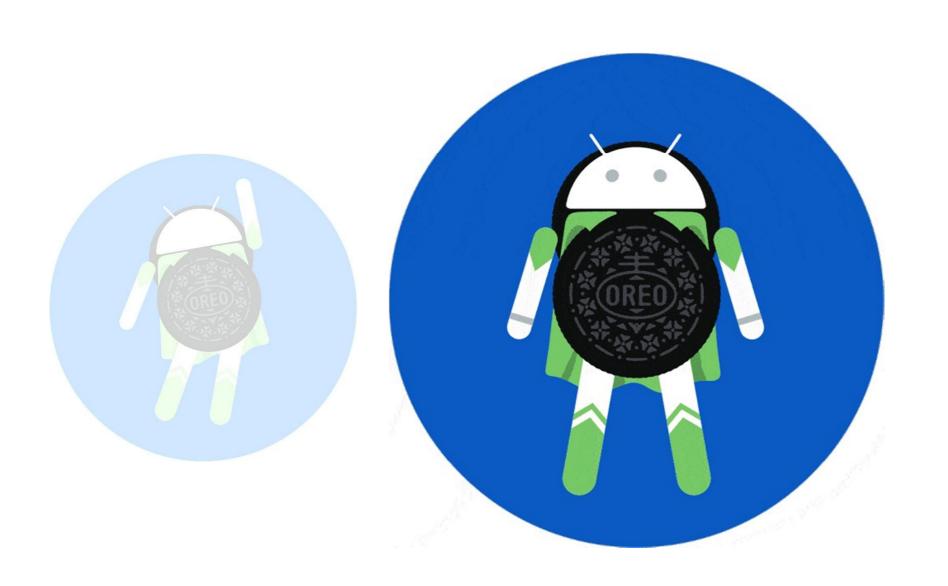
# Sound Improvement: 20 W x 2, Woofer

High power output of 20W x 2 as well as better low-pitched sound quality through woofer



## Android version 8.0 (Mstar MSD 848)

Android version 8.0 provides high performance as well as various features



High performance CPU(A73 x 2 + A53 x 2)

GPU(G51 MP)

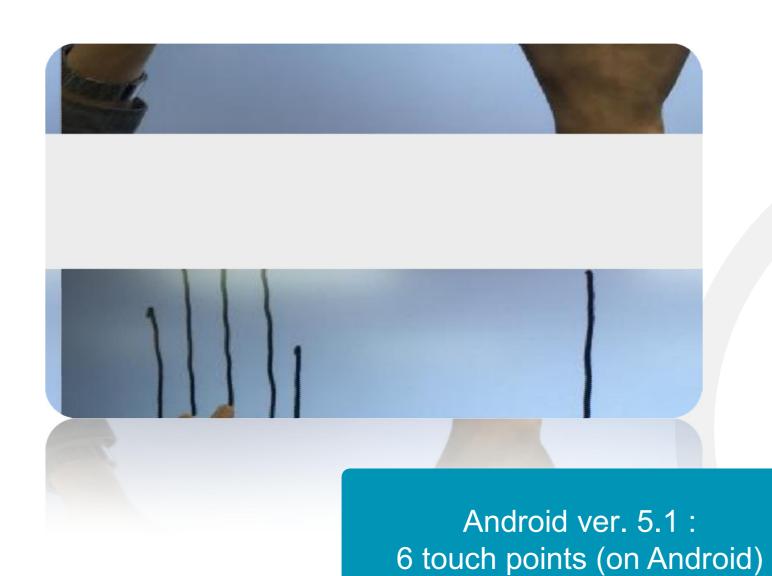
2GB, DDR4 2.4GHz

High speed WiFi by PCle

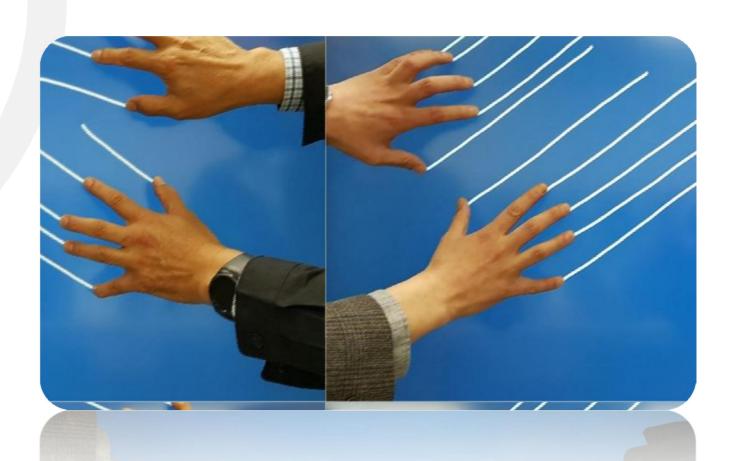
HDMI out

## Max. 20 touch points on Android

Not only for Windows, but also for Android, Max. 20 touch points are supported

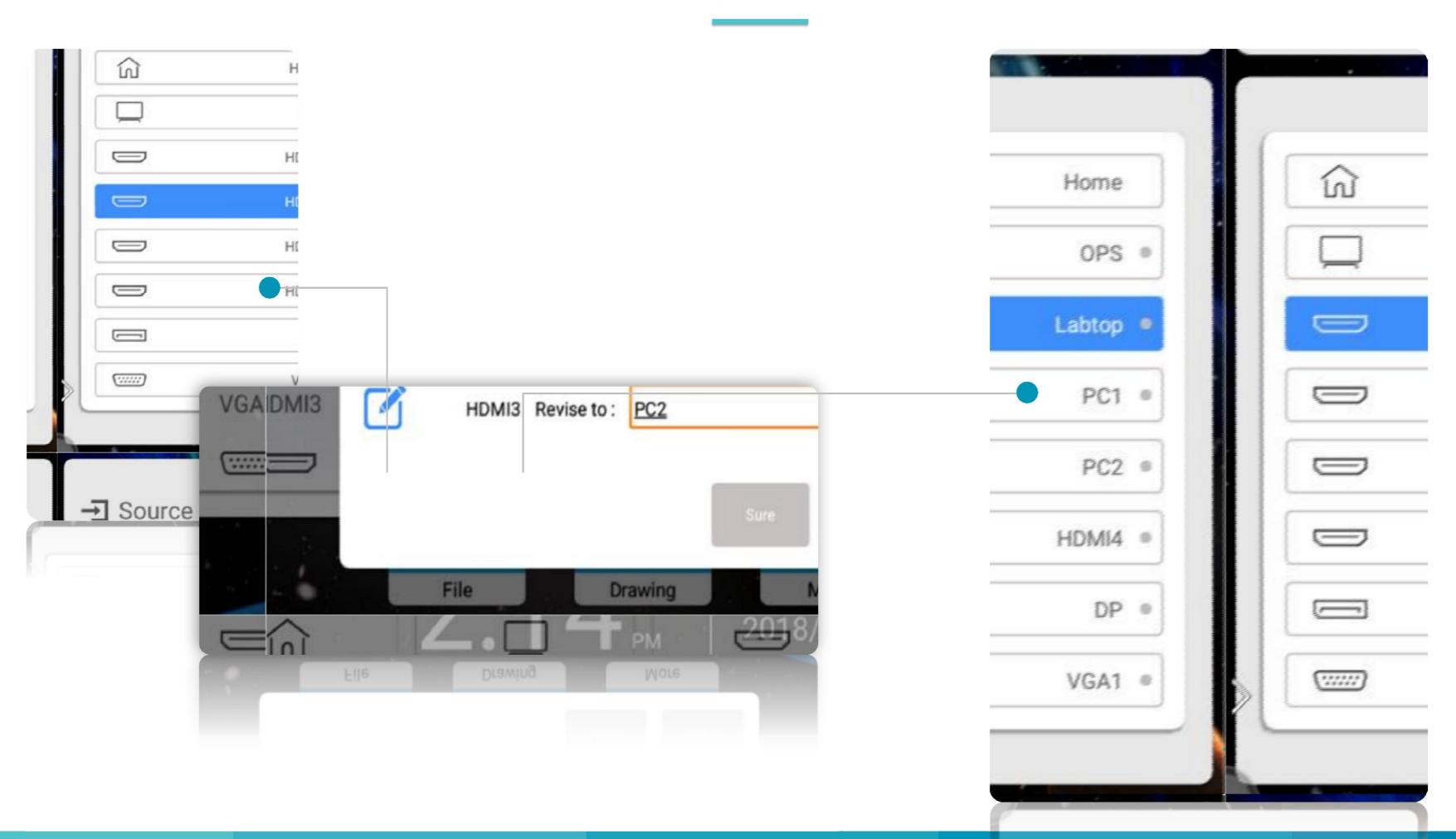


"Natural, Fast and Accurate" Android ver. 8.0 : Max. 20 touch points (on Android)



#### Able to change source name

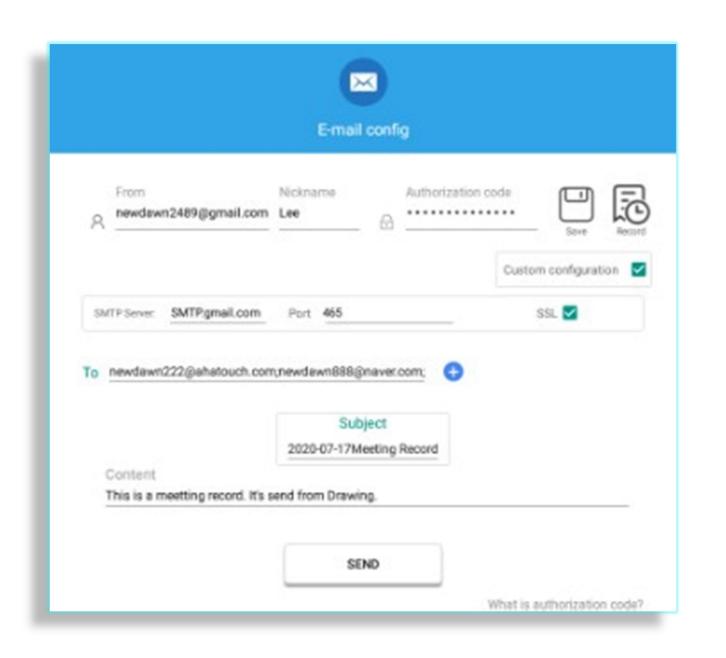
Source name can be changed to another user-friendly name



#### E-Mail sending

The contents saved on the whiteboard can be delivered through email (up to 50 email address) and the email addresses can be saved.





#### **DICOM Curve**

With improvement of picture quality, especially adjusting luminance, DICOM(Digital Imaging & Communications in Medicine) Curve embedded into product and this feature helps and can be used for medical meetings & seminar



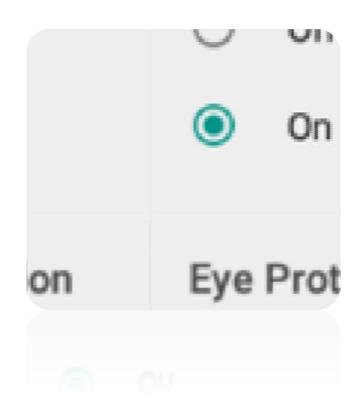
"Natural, Fast and Accurate" DICOM MODE ON



DICOM MODE OFF

Eye protection function

If eye protection is selected and user starts to write, brightness is automatically adjusted(to less bright) and when user stop writing, then brightness automatically back up to the original level



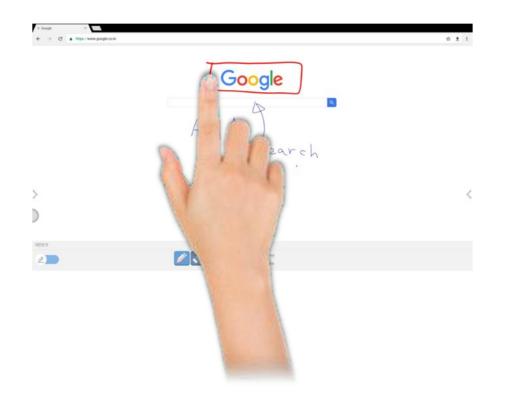




EShare Pro for mirroring, reverse touch

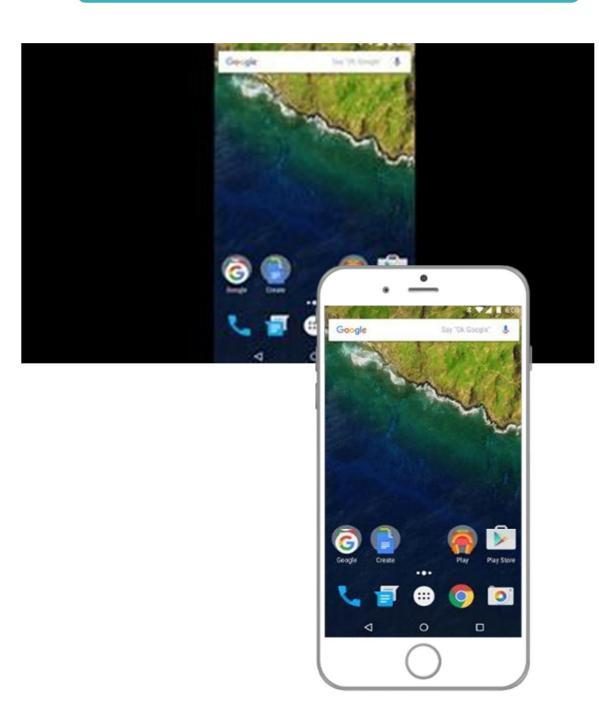
EShare Pro allows users to simply mirror IFPD to peripherals in the same Wi-Fi and also, peripherals do mirror to IFPD including touch functionalities

IFPD → Smartphone mirroring

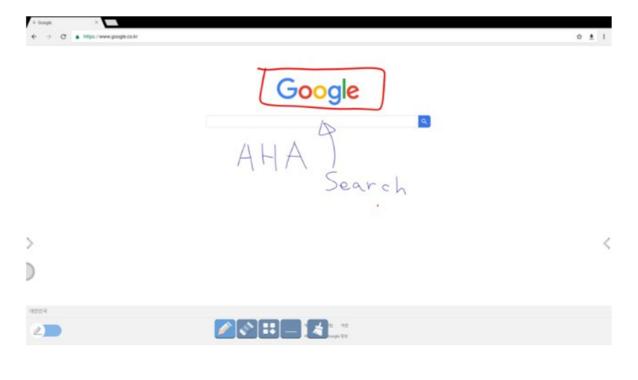




Smartphone → IFPD mirroring



Smartphone writing → IFPD writing

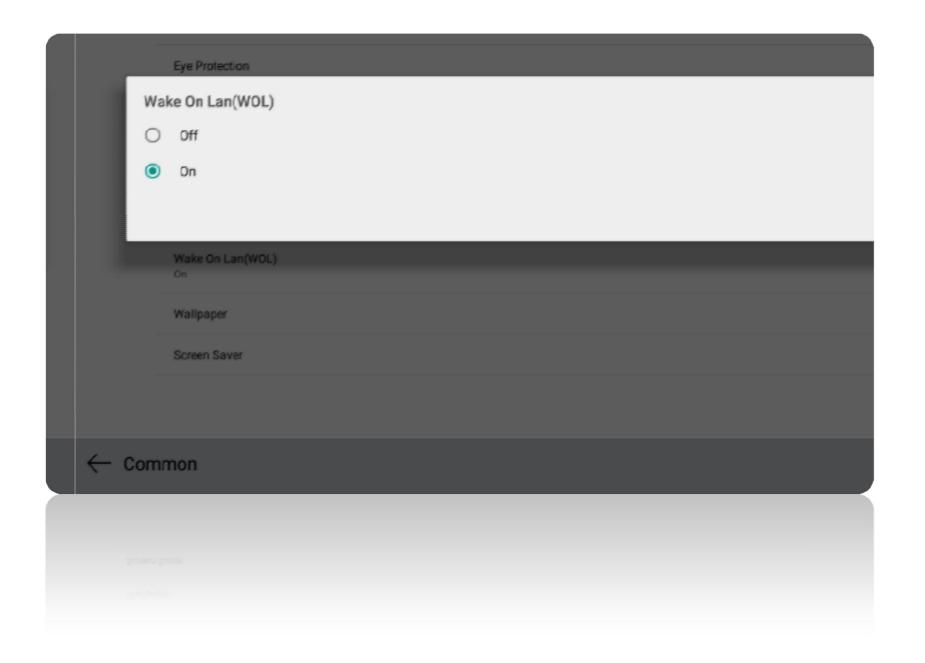




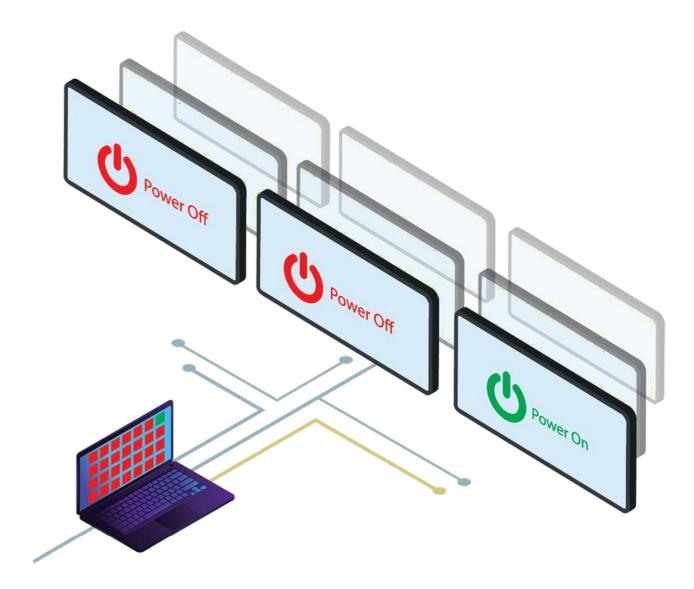
# WOL (Wake On Lan)

With WOL setting, IFPD can be turned on through LAN

#### WOL SETTING

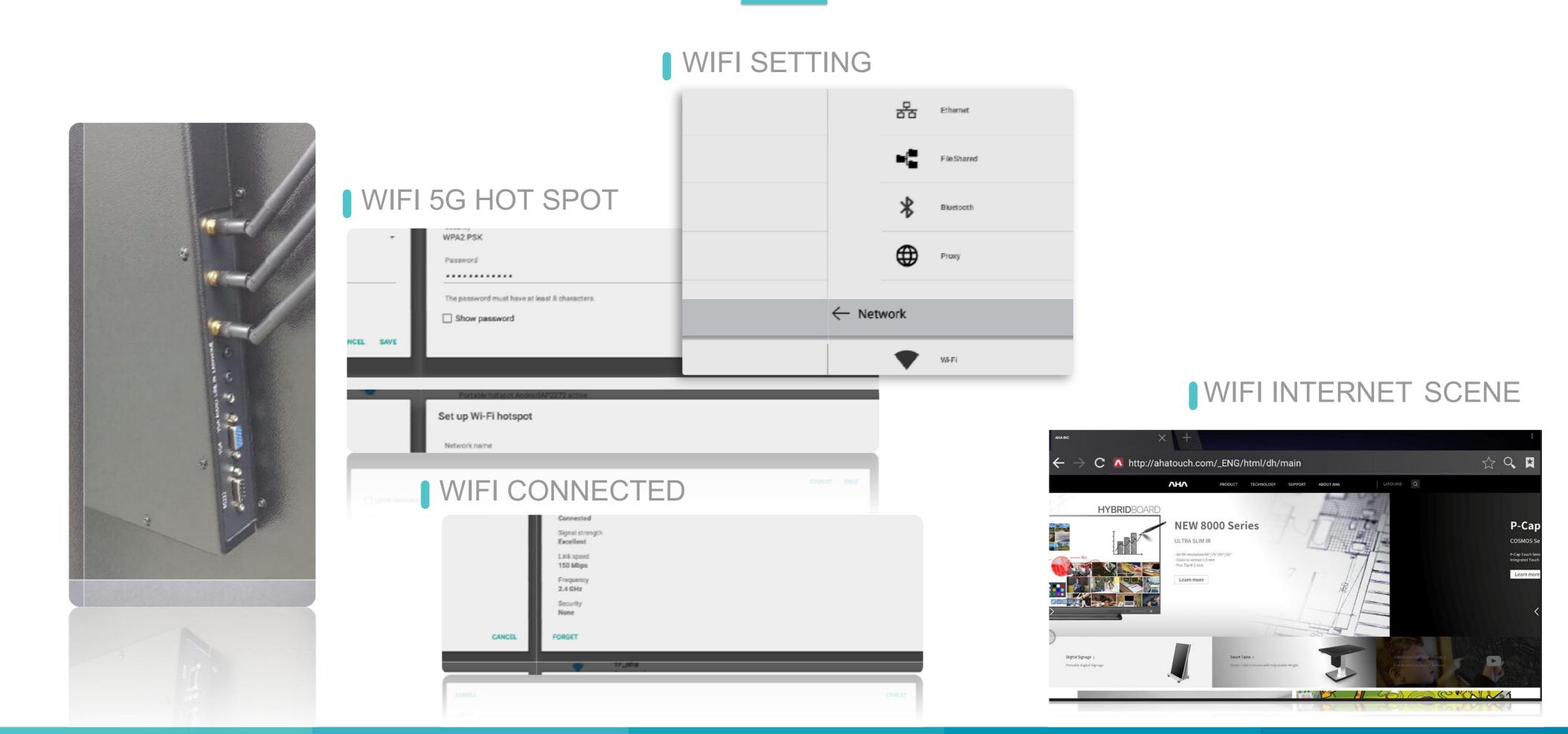


#### WOL POWER ON



## Dual Wi-Fi (2.4G-WIFI + 5G-AP)

With Dual Wi-Fi(2.4G Wi-Fi + 5G-AP) IFPD easily gets connected to internet as well as various devices linked

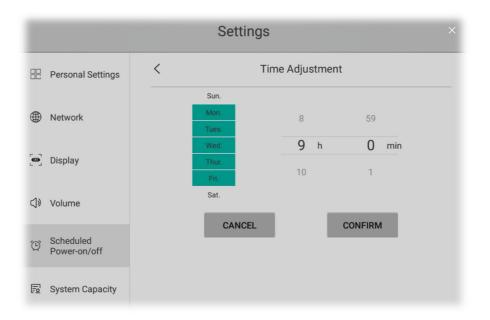


### Power on/off time setting

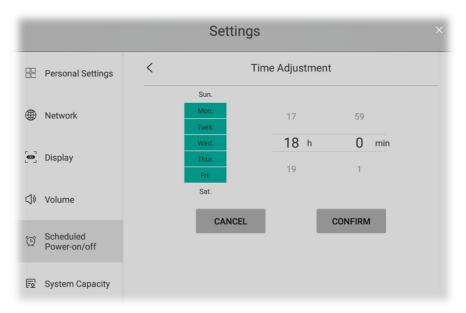
Power on/off time setting is supported (day of week, hour, minutes, etc.)



Power on



Power off

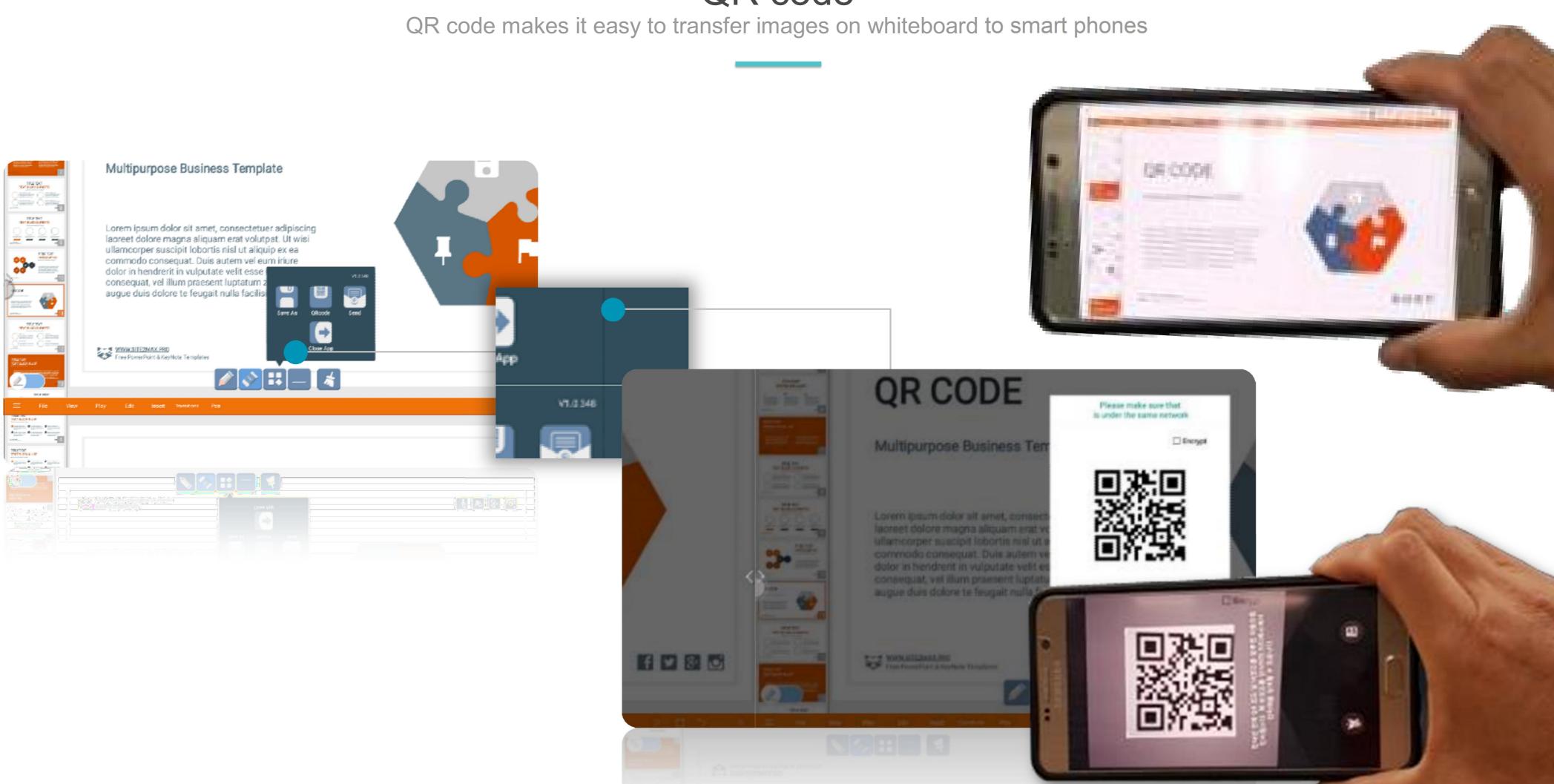


#### Touch on/off button

With the button on front bottom, a user can simply use IFPD with touch or non-touch Monitor. In case button pushed for non-touch, display show "LOCK" image as below

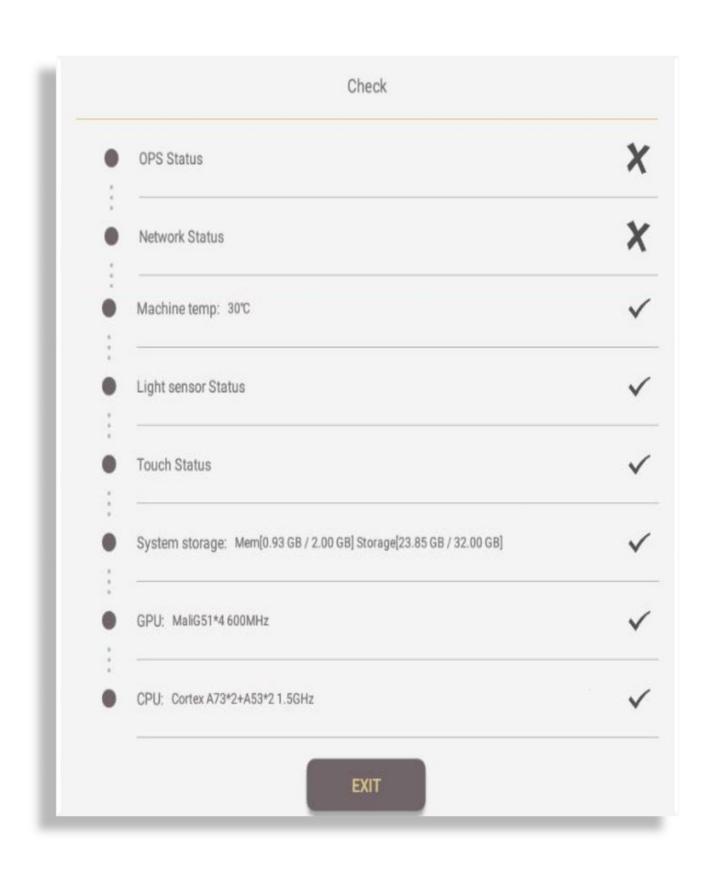


#### QR code



Self diagnosis

The IFPD can self-diagnose whether the system has any defects or not.( Self diagnosis )



#### Self diagnosis

- OPS status
- Network status
- Temperature status
- Light sensor status
- Touch sensor status
- System storage

#### Presentation supports on remote controller

With using remote controller, user enable to move forward or backward presentation materials



# FOTA (Firmware Over The Air)

Firmware update can be done easily using the server located at AHA in Korea.

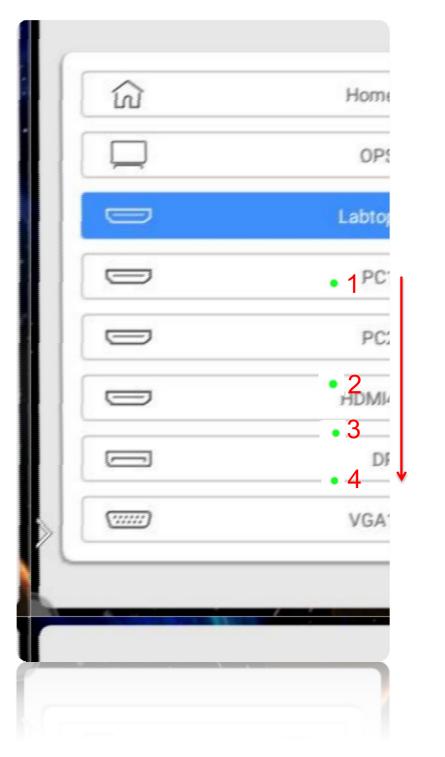


#### PBP (Picture By Picture)

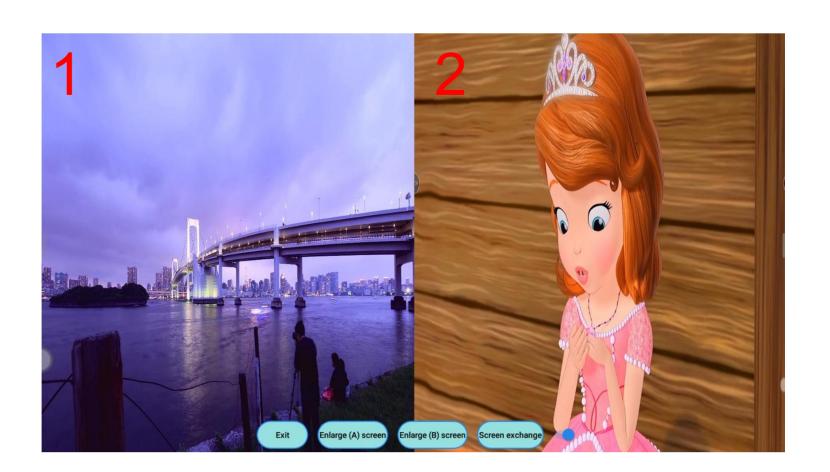
PBP function separates the screen in 4 or 2 split displaying from different source devices that are connected to IFPD.

If there are 4 in put source signals, there can be 4 split displaying.

It is displayed on each split displaying from the source above. The resolution of the split displaying is FHD and top left displaying on the PBP 4 split displaying and left displaying on the 2 split displaying is the main source that can be played in video and the others are in mage.





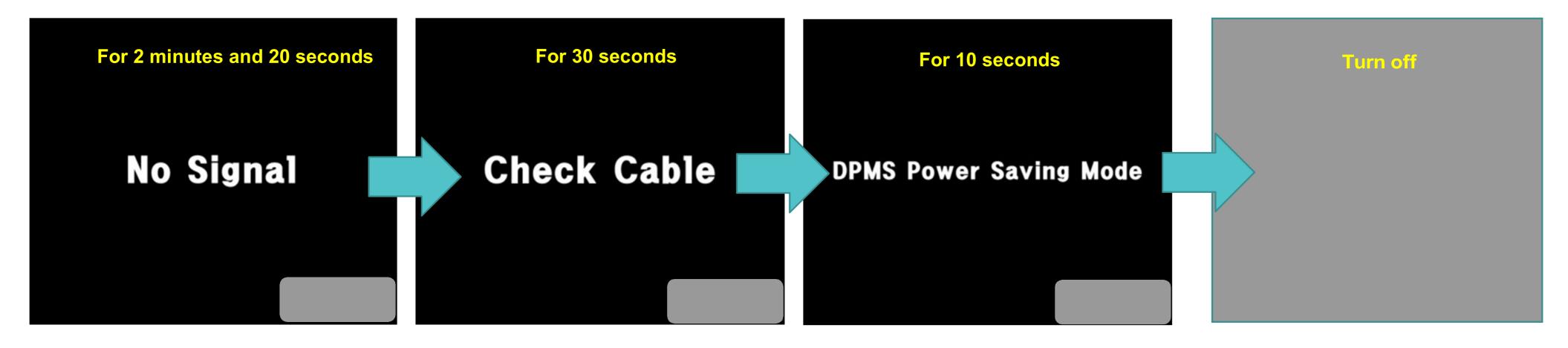


PBP 4 split displaying

PBP 2 split displaying

### DPMS (Display Power Management Signaling) VESA standard

IFPD can be turned off by itself 3 minutes after there is no signal on external Windows connected to IFPD or OPS built in IFPD.



# Auto light system

The brightness of IFPD can be automatically adjusted according to the ambient light with the illumination sensor. So the user can save the energy.



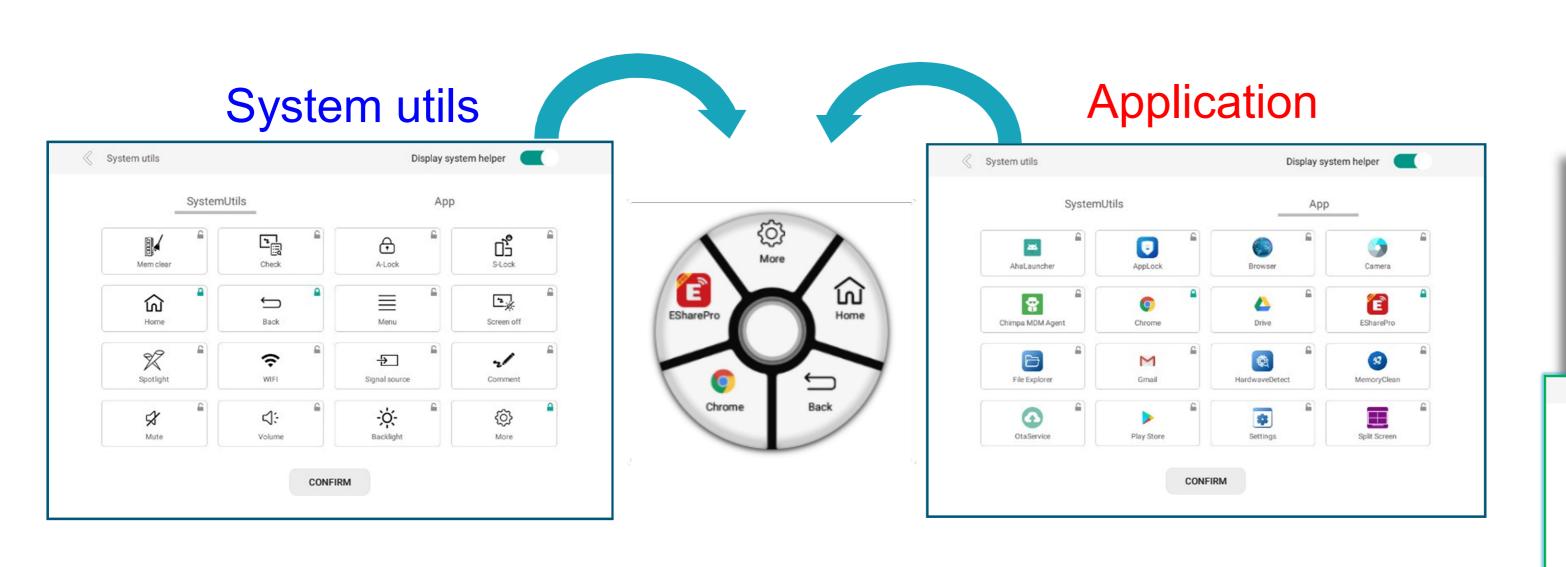




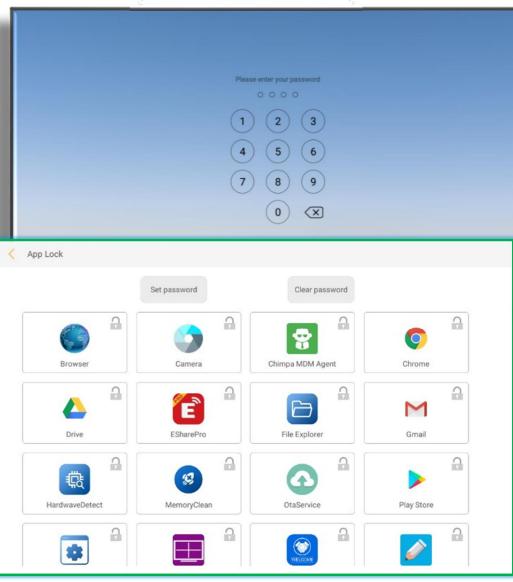


## Floating menu settings

The user can select 5 system utils or applications the user want and use them quickly.



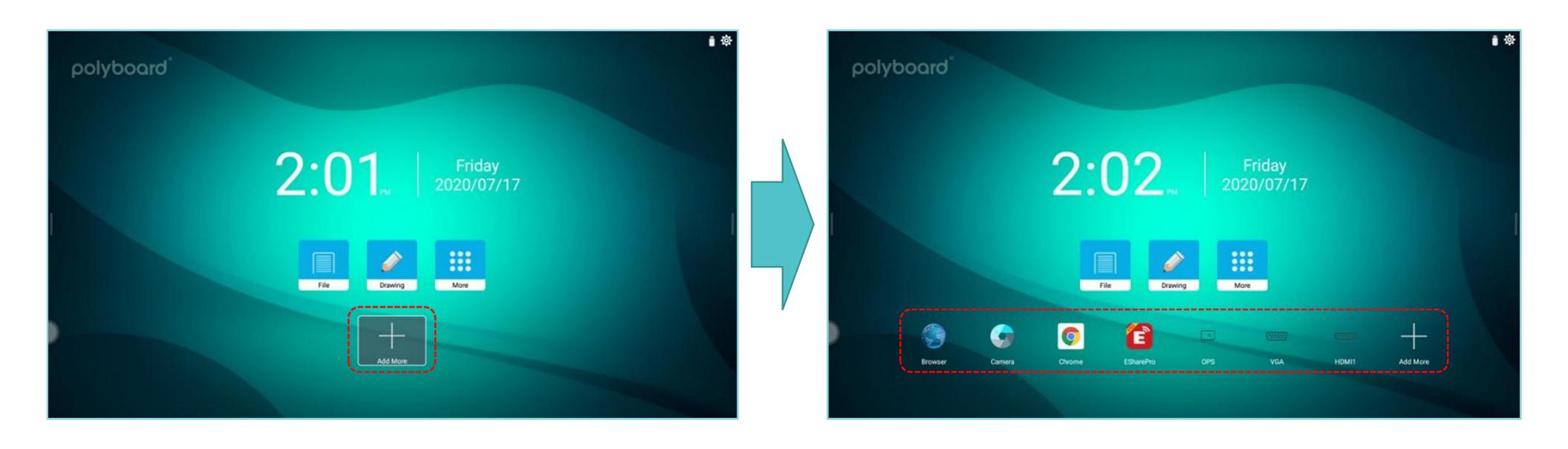




## Adding application on HOME

You can add 7 applications or sources on HOME to use them frequently and conveniently.

Applications or sources can be added with + icon and can be deleted easily.



#### OPS network on (Automatically)

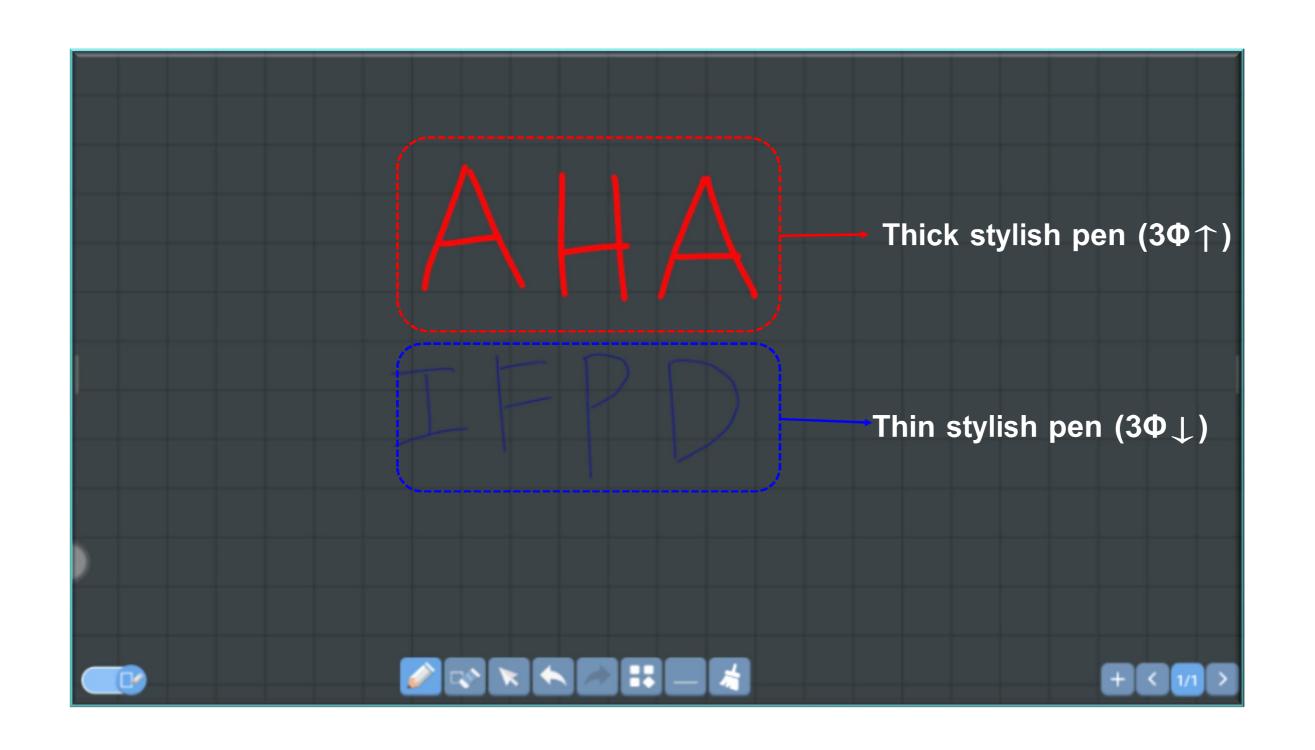
When the IFPD is turned on, OPS automatically can be turned on.

When RJ45 cable is connected to the LAN port of the IFPD, OPS is also automatically connected to the same network.



### Dual pen function on whiteboard

IFPD recognizes the thickness of the stylish pen so that the user can use thin pen stylish pen and thick stylish pen at the same time with different color.



## Backlighting adjustment and firmware update using power button

The backlighting can be adjusted

when the power button is on and pressed shortly.

The firmware can be updated when the power button is off and is pressed for approximately 4 seconds.

Long press (approximately 4 seconds): Power off

Short press : Backlight off



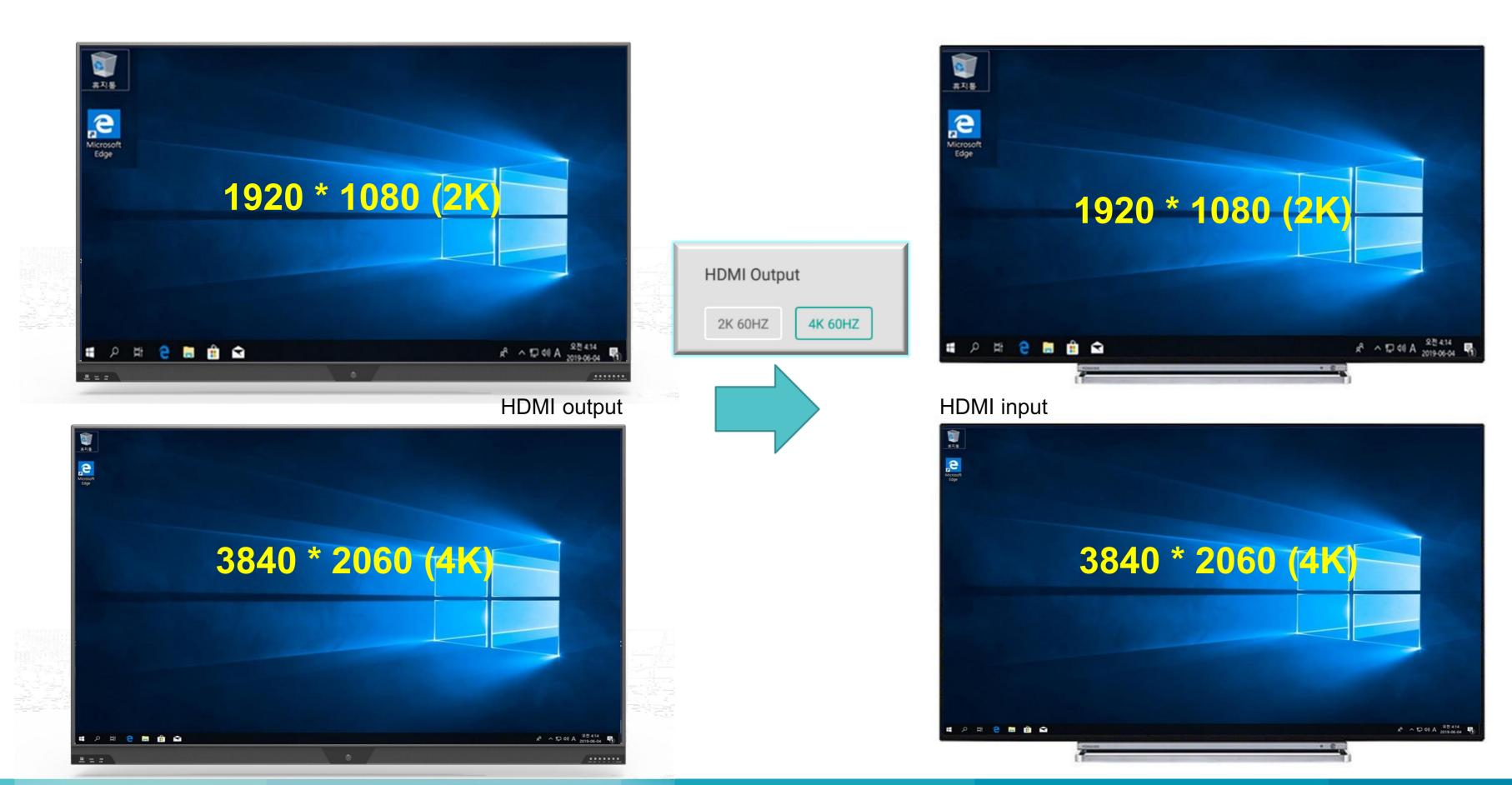
Long press (approximately 4 seconds): Firmware update

Short press : Power on



### HDMI OUT (2K & 4K)

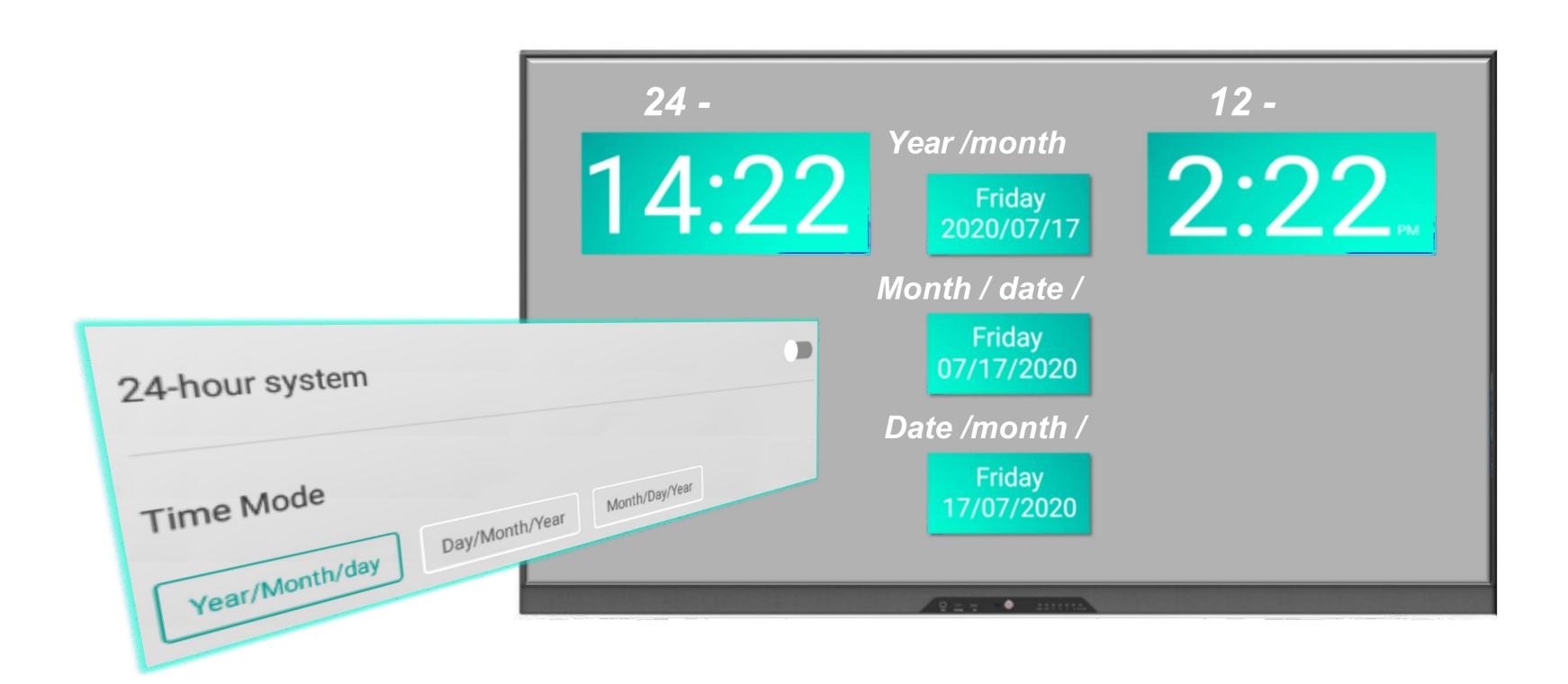
You can connect the HDMI cable between IFPD HDMI output port and HDMI input port of any display device like TV or monitor so that you can see the same resolution image of IFPD on the display device.



#### Year / month / date setting on HOME

Time setting can be displayed in 24-hour system or 12-hour system on Home screen

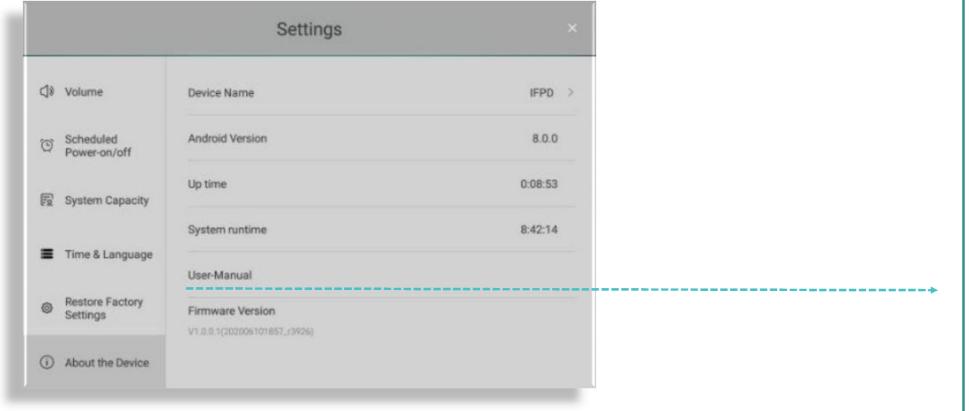
and the date settings can be displayed in three type, year / month / date or month / date / year or date / month / year.

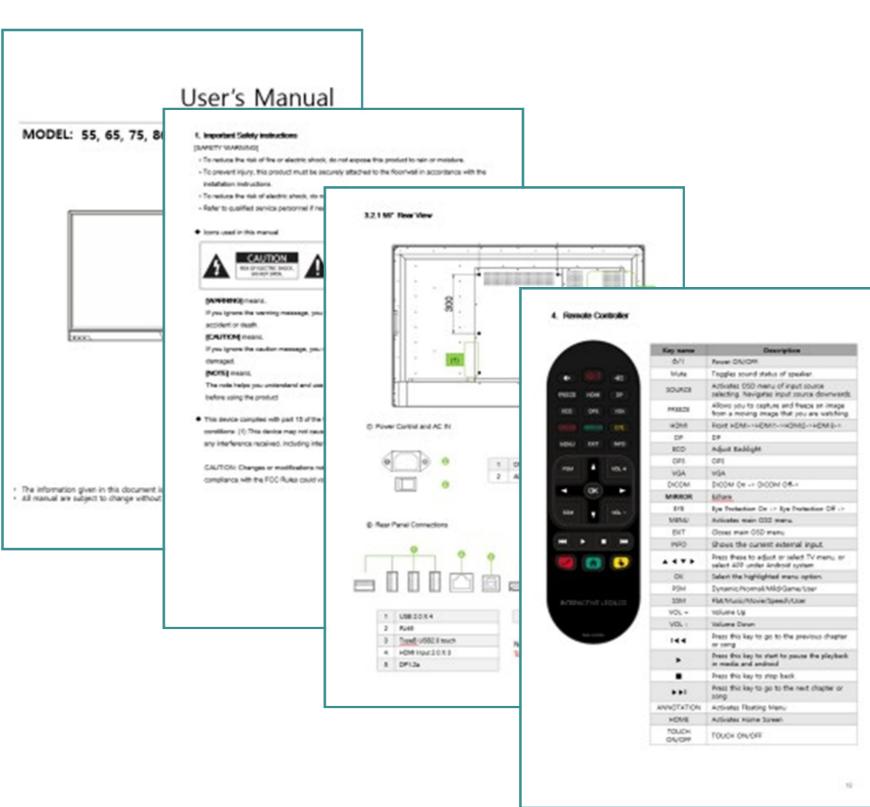


#### E-user manual

Without internet connection user can open the user's manual.

When the language changes, the language of user's manual change as well. (English and Korean, Japan only)





| Model                 | ULTRA-8255 (55")  | ULTRA-8265 (65")  | ULTRA-8275 (75")   | ULTRA-8286 (86")    | ULTRA-8298 (98")    |  |  |  |
|-----------------------|---|---|--------------------|---------------------|---------------------|--|--|--|
| LED Display           |   |   |                    |                     |                     |  |  |  |
| Screen Size           | 54.64 inches (138)  | 64.53 inches (163)  | 74.52 inches (189) | 85.60 inches (219)  | 98 inches           |  |  |  |
| Active Area (mm)      | 1209.6 * 680.4  | 1428.48 * 803.52  | 1649.664 * 927.936 | 1895.04 * 1065.96   | 2158.848 * 1214.352 |  |  |  |
| Aspect Ratio          | 16:9  |   |                    |                     |                     |  |  |  |
| Resolution            | 3840×2160   |   |                    |                     |                     |  |  |  |
| Pixel Pitch(mm)       | 0.315 x 0.315   | 0.372 x 0.372   | 0.4296 x 0.4296    | 0.4935 x 0.4935     | 562.2um x 0.5622um  |  |  |  |
| Brightness            | 350cd/m²  |   |                    |                     |                     |  |  |  |
| Contrast Ratio        | 1300:1 (Typ)  |   | 1100:1 (Typ)       | 1200:1 (Typ)        |                     |  |  |  |
| Response Time         | 9 ms (Typ. G to G)  |   |                    | 8 ms (Typ. G to G ) |                     |  |  |  |
| Color Rate            | 10-bit(D), 1.07 Billion colors  |   |                    |                     |                     |  |  |  |
| View Angle (CR>10)    | Viewing angle free ( R/L 178 (Min.), U/D 178 (Min.))                  |   |                    |                     |                     |  |  |  |
| Touch Panel           |   |   |                    |                     |                     |  |  |  |
| Touch Technology      | ULTRA SLIM IR (Infrared)  |   |                    |                     |                     |  |  |  |
| Detect Area (mm)      | 1209.6 * 680.4  | 1428.48 * 803.52  | 1649.664 * 927.936 | 1895.04 * 1065.96   | 2158.848 * 1214.352 |  |  |  |
| Touch Point           | Windows: 20 points,   |   |                    |                     |                     |  |  |  |
| TOUGHT OHK            | Mac OS: 2 points (Mac with driver software), Android: up to 20 points |   |                    |                     |                     |  |  |  |
| Touch Tools           |   | Hand or other Solid Object (Pen tip >2.0mm)   |                    |                     |                     |  |  |  |
| Driver                | Plug & Play Compatible  |   |                    |                     |                     |  |  |  |
| Communication         | USB   |   |                    |                     |                     |  |  |  |
| Calculate             | AUTO  |   |                    |                     |                     |  |  |  |
| Resolution            | 32768×32768   |   |                    |                     |                     |  |  |  |
| Resonse Speed         | <10 ms ( 1 Touch ) <12 ms ( 1 Touch )                                 |   |                    |                     |                     |  |  |  |
| Linear Torrance       | +/- 1 mm  |   |                    |                     |                     |  |  |  |
| Operation System      | Windows 7 and above / Mac 10.10 and above / Linux / Android           |   |                    |                     |                     |  |  |  |
| I/O                   |   |   |                    |                     |                     |  |  |  |
| Front Panel Terminals | HDMI x1,USB-A x 1 ,USB-B (For Touch) x 1                              |   |                    |                     |                     |  |  |  |
| Input Terminals       | Camera In,Mic In, VGA x<br>DF   | Camera In,Mic In, VGA x 1, USB-A x 3,<br>LAN(RJ45) x 1, USB-B(For Touch) x2,<br>HDMI(2.0) x 3 (1 for OPS), VGA Audio In<br>x 1, DP1.2a x 1, PC Audio-In(3.5mm) x<br>1, TF Card x 1, AV IN x 1 |                    |                     |                     |  |  |  |
| Output Terminals      |   | HDMI(2.0) x1, Earphone x 1,<br>LAN(RJ45) x1   |                    |                     |                     |  |  |  |

| Communication Terminals        | RS232 x 1 (D-SUB9/RJ45)  |   |                                   |                     |   |  |  |  |
|--------------------------------|--|---|-----------------------------------|---------------------|---|--|--|--|
| Android System                 |  |   |                                   |                     |   |  |  |  |
| Main Chip                      |  | Mstar MSD8386/MS848   |                                   |                     |   |  |  |  |
| CPU                            |  | A73*2+A53*2   |                                   |                     |   |  |  |  |
| GPU                            |  | G51I  | MP                                |                     | G51MP   |  |  |  |
| RAM                            | 3G Bytes DDR4 2400MHZ  |   |                                   |                     | 2G (1G build in+0.5G*2) Bytes DDR4<br>2400MHZ |  |  |  |
| FLASH                          |  | 32G Bytes EMMC5.1 nand fiash  |                                   |                     |   |  |  |  |
| Android Version                |  |   | 8.0(Oreo)                         |                     |   |  |  |  |
| OPS / Wifi                     |  |   |                                   |                     |   |  |  |  |
| OPS / Wifi                     |  | OPS Slot Only (Intel Standard) / Wifi (ANT1: 2.4G Wifi, ANT2: BT, ANT3: 2.4G+5G Wifi) |                                   |                     |   |  |  |  |
| Front Panel Button             | Power On/Off   |   |                                   |                     |   |  |  |  |
|                                | 7 function key: Source, Menu, Menu Up/Down, VR Up/Down, Touch On/Off |   |                                   |                     |   |  |  |  |
| OSD Control Function           | RS232C, IR Remote controller   |   |                                   |                     |   |  |  |  |
| Quality Certificates           | CB, CE, FCC, NRTL, KC, RoHS, EAC, PSE, RCM                           |   |                                   |                     |   |  |  |  |
| Power Supply & Speaker         | AC100-240V 50/60 Hz  |   |                                   |                     |   |  |  |  |
|                                | A  | AC100-240V 50Hz 30mA , Standby<br>Power Consumption ≤ 0.5 W                           |                                   |                     |   |  |  |  |
|                                | Speak: (Stereo 20W × 2 6Ω, with woofer)                              |   |                                   |                     |   |  |  |  |
| Front Protect Glass / Haze     |  |   | Anti-Glare(T= 5mm) /Haze = 8%~12% |                     |   |  |  |  |
| Frame Type / Surface treatment |  | Aluminum / Both side AG(Anti-Glare)<br>Coating, AF (Anti-Finger) Coating              |                                   |                     |   |  |  |  |
| Working Temp.                  | 0 ~ 40°C, 20% to 80% RH (no condensation)                            |   |                                   |                     |   |  |  |  |
| Storage Temp.                  | - 20 ~ 60°C  |   |                                   |                     |   |  |  |  |
| Dimension (L*W*D, ± 5mm)       | 1277 x 812 x 100mm   | 1486 x 923 x 93 mm  | 1713 x 1053 x 93 mm               | 1959 x 1191 x 91 mm | 2231 x 1344 x 118 mm                          |  |  |  |
| VESA Mount                     | 400 x 300 (mm), M8 Screw   |   | 600 x 400 (mm), M8<br>Screw       | 800 x               | 400 (mm), M8 Screw                            |  |  |  |
| NET Weight                     | ~42.5 Kg(TBD)  | ~41.5 Kg(TBD)   | ~61.5 Kg(TBD)                     | ~77.5 Kg(TBD)       | ~132 Kg(TBD)                                  |  |  |  |
| Gross Weight                   | ~50 Kg(TBD)  | ~51 Kg(TBD)   | ~76.5 Kg(TBD)                     | ~94 Kg(TBD)         | ~150 Kg(TBD)                                  |  |  |  |













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