# EPD-660, EPD-662

# 13.3" ePaper Wi-Fi Display Solution



#### **Features**

- ARM Cortex-M4 Core Processor
- Supports IEEE 802.11b/g/n
- 13.3" ePaper panel display: EPD-662 for red/black/white, EPD-660 for black/ white (16 gray level)
- Multiple Control I/O: 5 buttons and 2 color LED
- Supports wide operating temperatures 0 ~ 40 °C; 32 ~ 105 °F (red/black/white), 0 ~ 50 °C; 32 ~ 122 °F(black/white without battery)
- High performance integrated system
- Supports upgrade over-the-air (OTA)
- Solution with WISE-3220 Wi-Fi AP and ARK DeviceOn/ePaper

#### **Introduction**

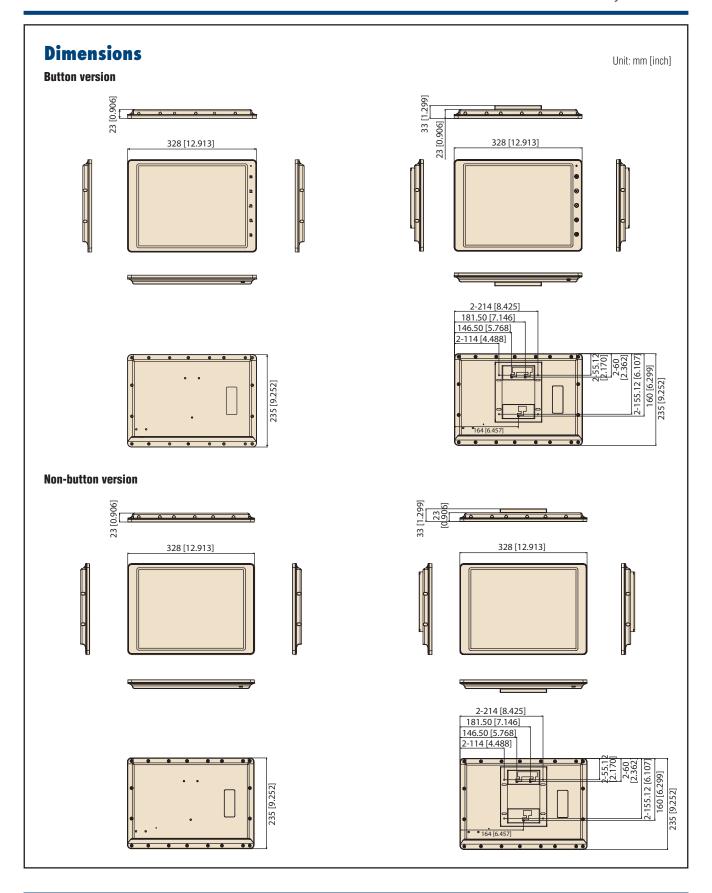
Advantech EPD-660 and EPD-662 ePaper solutions support 2.4GHz RF wireless protocols integrated within a 13.3" display solution with ARM Cortex-M4 processor. EPD-660 and EPD-662 support optimized power consumption and device management, delivering long battery lifetimes and a 2.4GHz Wi-Fi solution adaptable to diverse applications. These solutions offer multiple buttons and indicators for application control, and are integrated with RESTful APIs for DeviceOn/ePaper. They also support system integrator, yielding an effective, powerful solution.

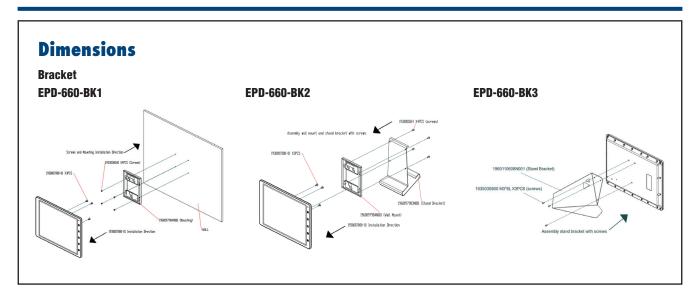
#### **Specifications**

Screen Size   28 x 213 mm; 13.3 in			
Color   Black/white (16 gray level) or red/black/white		Screen Size	285 x 213 mm; 13.3 in
Standard   IEEE 802.11h/g/n   2.4000-2.4840 GHz for Wi-Fi and BLE   2.4000-2.4840 GHz for Wi-Fi and BLE	ePaper Display	Resolution	1600x1200 pixels
Frequency Band   2.4000-2.4840 GHz for Wi-Fi and BLE		Color	Black/white (16 gray level) or red/black/white
Antenna  MLAN  PCB Ant 2.4GHz WiFi with MHF Gain 4.2 dBi. WALSIN: RFPCA400817/MAB301  BT4.1  Bluetooth  PCB Ant 2.4GHz BLE with MHF Gain 4.2 dBi. WALSIN: RFPCA400817/MAB301  Function Button  WALSIN: RFPCA400817/MAB301  Function Button  SW reset/wake-up/HW reset button in reset hole  Page Button (Without button version doesn't contain this item)  LED  Red: System Jarm and abnormal battery status  Green: Data transmit, battery starts charging, and button wake up  Power  Power Power Power Package Specification: 823mAhy5 Decin  Operational Temperature  Operational Temperature  Operational Temperature  Operational Temperature  Operational Temperature  Non-Operational Temp.  10 - 40 °C; 32 - 104 °F (w/ battery, W button) 0 - 40 °C; 32 - 104 °F (w/ battery, W button) 0 - 40 °C; 32 - 104 °F (w/ battery, W button) 0 - 40 °C; 32 - 104 °F (w/ battery, W button) 0 - 40 °C; 32 - 104 °F (w/ battery, W button) 0 - 40 °C; 32 - 104 °F (w/ battery, W button) 0 - 40 °C; 32 - 104 °F (w/ battery, W button) 0 - 40 °C; 32 - 104 °F (w/ battery, W button) 0 - 40 °C; 32 - 104 °F (w/ battery, W button) 0 - 40 °C; 32 - 104 °F (w/ battery, W button) 0 - 40 °C; 32 - 104 °F (w/ battery, W button) 0 - 60 °C; 14 - 144 °F (w/ battery, W button) -10 - 60 °C; 14 - 144 °F (w/ battery, M button) -10 - 60 °C; 14 - 144 °F (w/ battery, M button) -10 - 50 °C; 14 - 122 °F (w/ battery, W button) -10 - 50 °C; 14 - 122 °F (w/ battery, W button) -10 - 50 °C; 14 - 122 °F (w/ battery, W button) -10 - 50 °C; 14 - 122 °F (w/ battery, W button) -10 - 50 °C; 14 - 122 °F (w/ battery, W button) -10 - 50 °C; 14 - 122 °F (w/ battery, W button) -10 - 50 °C; 14 - 122 °F (w/ battery, W button) -10 - 50 °C; 14 - 122 °F (w/ battery, W button) -10 - 50 °C; 14 - 122 °F (w/ battery, W button) -10 - 50 °C; 14 - 122 °F (w/ battery, W button) -10 - 50 °C; 14 - 122 °F (w/ battery, W button) -10 - 50 °C; 14 - 122 °F (w/ battery, W button) -10 - 50 °C; 14 - 122 °F (w/ battery, W button) -10 - 50 °C; 14 - 122 °F (w/ battery, W button) -10 - 50 °C; 14 - 122 °F (w/ battery, W button)	Wireless Network	Standard	IEEE 802.11b/g/n
MALN	Wileless Network	Frequency Band	2.4000~2.4840 GHz for Wi-Fi and BLE
Bluetooth PCB And 2.4GHz BLE with MHF Gain 4.2 dBi. WALSIN: RFPCA400817IMAB301  System I/O Function Button Page Button (Without button version) Despite the containt this item)  LED Red: System alarm and abnormal battery status Green: Data transmit, battery starts charging, and button wake up  Power Power Package Specification: 8233mAh/5V DC-in  Operational Temperature Package Specification: 8233mAh/5V DC-in  Operational Temperature Power Package Specification: 8233mAh/5V Dc-in  Operational Temperature Package Specification: 8233mAh/5V Dc-in  Operational Temperature Package Specification: 8233mAh/5V Dc-in  Operational T	Antonno	WLAN	PCB Ant 2.4GHz WiFi with MHF Gain 4.2 dBi.
Page Button (Without button version doesn't contain this item)  LED  Red: System alarm and abnormal battery status charging, and button wake up  Power  Power Package Specification: 8233mAh/5V  DC-in  0 ~ 40 °C; 32 ~ 104 °F (w/ battery, w/ button) 0 ~ 40 °C; 32 ~ 104 °F (w/ battery, button) 0 ~ 40 °C; 32 ~ 104 °F (w/ battery, button) 0 ~ 40 °C; 32 ~ 104 °F (w/ battery, button) 0 ~ 40 °C; 32 ~ 104 °F (w/ battery, black, White, Red, w/ button) 0 ~ 40 °C; 32 ~ 104 °F (w/ battery, black, White, Red, w/ button) 0 ~ 40 °C; 32 ~ 104 °F (w/ battery, black, White, Red, w/ button) 0 ~ 40 °C; 32 ~ 104 °F (w/ battery, black, White, Red, w/ button) 0 ~ 40 °C; 32 ~ 104 °F (w/ battery, black, White, Red, w/ button) 0 ~ 40 °C; 32 ~ 104 °F (w/ battery, black, White, Red, w/ button) 0 ~ 40 °C; 32 ~ 104 °F (w/ battery, black, White, Red, w/ button) 0 ~ 60 °C; 14 ~ 122 °F (w/ battery, black, White, Red, w/ button) 1 ~ 50 °C; 14 ~ 122 °F (w/ battery, w/ button) 0 ~ 50 °C; 14 ~ 122 °F (w/ battery, black, White, Red, w/ button) 0 ~ 50 °C; 14 ~ 122 °F (w/ battery, black, White, Red, w/ button) 0 ~ 50 °C; 14 ~ 122 °F (w/ battery, black, White, Red, w/ button) 1 ~ 50 °C; 14 ~ 122 °F (w/ battery, black, White, Red, w/ button) 0 ~ 50 °C; 14 ~ 122 °F (w/ battery, black, White, Red, w/ button) 1 ~ 50 °C; 14 ~ 122 °F (w/ battery, black, White, Red, w/ button) 1 ~ 50 °C; 14 ~ 122 °F (w/ battery, black, White, Red, w/ button) 1 ~ 50 °C; 14 ~ 122 °F (w/ battery, black, White, Red, w/ button) 1 ~ 50 °C; 14 ~ 122 °F (w/ battery, black, White, Red, w/ button) 1 ~ 50 °C; 14 ~ 122 °F (w/ battery, black, White, Red, w/ button) 1 ~ 50 °C; 14 ~ 122 °F (w/ battery, black, White, Red, w/ button) 1 ~ 50 °C; 14 ~ 122 °F (w/ battery, black, White, Red, w/ button) 1 ~ 50 °C; 14 ~ 122 °F (w/ battery, black, w/ blac	AIILEIIIIA	Bluetooth	PCB Ant 2.4GHz BLE with MHF Gain 4.2 dBi.
System I/O     LED   Red: System alarm and abnormal battery status   Green: Data transmit, battery status   Green: Data transmit, battery statrs charging, and button wake up		Function Button	SW reset/wake-up/HW reset button in reset hole
Power Power Power Power Seckage Specification: 8233mAh/5V DC-in  Power Package Specification: 8233mAh/5V DC-in  0 - 40 °C; 32 - 104 °F (w/ battery, w button) 0 - 40 °C; 32 - 104 °F (w/ battery, black, White,Red, w/ button) 0 - 50 °C; 32 - 104 °F (w/ battery, black, White,Red, w/ button) 0 - 40 °C; 32 - 104 °F (w/ battery, black, White,Red, w/ button) 0 - 40 °C; 32 - 104 °F (w/ battery, black, White,Red, w/ button) 0 - 40 °C; 32 - 104 °F (w/ battery, w/o button) 0 - 40 °C; 32 - 104 °F (w/ battery, w/o button) 0 - 40 °C; 32 - 104 °F (w/ battery, w/o button) 0 - 60 °C; 14 - 122 °F (w/ battery, w/o button) 10 - 50 °C; 14 - 144 °F (w/ battery, black, white,Red, w/ button) 10 - 50 °C; 14 - 144 °F (w/ battery, black, w/o button) 10 - 50 °C; 14 - 142 °F (w/ battery, black, w/o button) 0 - 10 - 50 °C; 14 - 122 °F (w/ battery, black, w/o button) 0 - 80 °C; 14 - 122 °F (w/ battery, black, w/o button) 0 - 80 °C; 14 - 122 °F (w/ battery, black, w/o button) 0 - 80 °C; 14 - 122 °F (w/ battery, black, w/o button) 0 - 80 °C; 14 - 122 °F (w/ battery, black, w/o button) 0 - 80 °C; 14 - 122 °F (w/ battery, black, w/o button) 0 - 80 °C; 14 - 122 °F (w/ battery, black, w/o button) 0 - 80 °C; 14 - 122 °F (w/ battery, black, w/o button) 0 - 80 °C; 14 - 122 °F (w/ battery, black, w/o button) 0 - 80 °C; 14 - 122 °F (w/ battery, black, w/o button) 0 - 80 °C; 14 - 122 °F (w/ battery, black, w/o button) 0 - 80 °C; 14 - 122 °F (w/ battery, black, w/o button) 0 - 80 °C; 14 - 122 °F (w/ battery, black, w/o button) 0 - 80 °C; 14 - 122 °F (w/ battery, black, w/o button) 0 - 80 °C; 14 - 122 °F (w/ battery, black, w/o button) 0 - 80 °C; 14 - 122 °F (w/ battery, w/o button) 0 - 80 °C; 14 - 122 °F (w/ battery, w/o button) 0 - 80 °C; 14 - 122 °F (w/ battery, w/o button) 0 - 80 °C; 14 - 122 °F (w/ battery, w/o button) 0 - 80 °C; 14 - 122 °F (w/ battery, w/o button) 0 - 80 °C; 14 - 122 °F (w/ battery, w/o button) 0 - 80 °C; 14 - 122 °F (w/ battery, w/o button) 0 - 80 °C; 14 - 122 °F (w/ battery, w/o button) 0 - 80 °C; 14 - 122 °F (w/ battery, w/o butt	System I/O	Page Button (Without button version doesn't contain this item)	P1 next page P2 previous page P3 13th page for alarm P4 14th page for system information
Operational Temperature  O ~ 40 °C; 32 ~ 104 °F (w/ battery, w/ button) Operational Temperature  O ~ 50 °C; 32 ~ 104 °F (w/o battery, Black,White,Red, w/ button) O ~ 50 °C; 32 ~ 102 °F (w/o battery, Houtton) O ~ 40 °C; 32 ~ 104 °F (w/o battery, Wo button) O ~ 40 °C; 32 ~ 104 °F (w/o battery, Black,White,Red, w/o button) O ~ 40 °C; 32 ~ 104 °F (w/o battery, Black,White,Red, w/o button)  -10 ~ 50 °C; 14 ~ 122 °F (w/o battery, Wo button) -10 ~ 60 °C; 14 ~ 144 °F (w/o battery, Black,White,Red, w/o button) -10 ~ 50 °C; 14 ~ 144 °F (w/o battery, Black,White,Red, w/o button) -10 ~ 50 °C; 14 ~ 122 °F (w/o battery, Black,White,Red, w/o button) -10 ~ 50 °C; 14 ~ 122 °F (w/o battery, Black,White,Red, w/o button)  Operating Humidity  5 ~ 80% relative humidity, non-condensing  Material Type  Button version with IP65 plastic housing Non-button version with IP54 plastic housing  Dimension  235 x 328 x 23 mm; 9.25 x 12.9 x .9 in -1.2kg (2.64lb) with battery/button -1.37kg (2.57lb) with battery/button -1.37kg (2.57lb) with battery/button -1.37kg (2.57lb) with battery/button -1.37kg (2.57lb) with battery and w/o button -0.865kg (1.90lb) w/o battery and w/o button		LED	
Operational Temperature  O ~ 40 °C; 32 ~ 104 °F (w/o battery, Black, White, Red, w/ button) O ~ 50 °C; 32 ~ 122 °F (w/o battery, 16 grey, w/ button) O ~ 40 °C; 32 ~ 104 °F (w/ battery, w/o button) O ~ 40 °C; 32 ~ 104 °F (w/o battery, Black, White, Red, w/o button) O ~ 40 °C; 32 ~ 104 °F (w/o battery, Black, White, Red, w/o button)  - 10 ~ 60 °C; 14 ~ 122 °F (w/o battery, Black, White, Red, w/o button)  - 10 ~ 60 °C; 14 ~ 122 °F (w/o battery, Black, White, Red, w/o button) - 10 ~ 60 °C; 14 ~ 122 °F (w/o battery, Black, White, Red, w/o button) - 10 ~ 50 °C; 14 ~ 122 °F (w/o battery, Black, White, Red, w/o button) - 10 ~ 50 °C; 14 ~ 122 °F (w/o battery, Black, White, Red, w/o button)  Operating Humidity  5 ~ 80% relative humidity, non-condensing  Material Type  Button version with IP65 plastic housing Non-button version with IP54 plastic housing  Dimension  235 x 328 x 23 mm; 9.25 x 12.9 x .9 in  1.2kg (2.64lb) with battery/button 0.9kg (1.98lb) w/o battery and w/o button  1.17kg (2.57lb) with battery and w/o button 0.865kg (1.90lb) w/o battery and w/o button	Power		Power Package Specification: 8233mAh/5V DC-in
Housing Mechanical (preliminary)  Non-Operational Temp.  -10 ~ 60 °C; 14 ~ 144 °F (w/o battery, 16 grey, w/ button) -10 ~ 60 °C; 14 ~ 142 °F (w/o battery, 16 grey, w/ button) -10 ~ 50 °C; 14 ~ 122 °F (w/o battery, W/o button) -10 ~ 50 °C; 14 ~ 122 °F (w/o battery, Black, White, Red, w/o button) -10 ~ 50 °C; 14 ~ 122 °F (w/o battery, Black, White, Red, w/o button)  5 ~ 80% relative humidity, non-condensing  Material Type  Button version with IP65 plastic housing Non-button version with IP54 plastic housing  Dimension  235 x 328 x 23 mm; 9.25 x 12.9 x .9 in 1.2kg (2.64lb) with battery/button 0.9kg (1.98lb) w/o battery and w/ button  1.17kg (2.57lb) with battery and w/o button 0.865kg (1.90lb) w/o battery and w/ button		Operational Temperature	0 ~ 40 °C; 32 ~ 104 °F (w/o battery, Black,White,Red, w/ button) 0 ~ 50 °C; 32 ~ 122 °F (w/o battery, 16 grey, w/ button) 0 ~ 40 °C; 32 ~ 104 °F (w/ battery, w/o button)
Material Type  Button version with IP65 plastic housing Non-button version with IP54 plastic housing  Dimension  235 x 328 x 23 mm; 9.25 x 12.9 x .9 in 1.2kg (2.64lb) with battery/button 0.9kg (1.98lb) w/o battery and w/ button 1.17kg (2.57lb) with battery and w/o button 0.865kg (1.90lb) w/o battery and w/ button	Environment	Non-Operational Temp.	-10 ~ 60 °C; 14 ~ 144 °F (w/o battery, Black, White, Red, w/ button) -10 ~ 60 °C; 14 ~ 144 °F (w/o battery, 16 grey, w/ button) -10 ~ 50 °C; 14 ~ 122 °F (w/ battery, w/o button)
Housing Mechanical (preliminary)  Dimension  235 x 328 x 23 mm; 9.25 x 12.9 x .9 in  1.2kg (2.64lb) with battery/button  0.9kg (1.98lb) w/o battery and w/ button  1.17kg (2.57lb) with battery and w/o button  0.865kg (1.90lb) w/o battery and w/ button		Operating Humidity	5 ~ 80% relative humidity, non-condensing
(preliminary)  Weight  1.2kg (2.64lb) with battery/button 0.9kg (1.98lb) w/o battery and w/ button 1.17kg (2.57lb) with battery and w/o button 0.865kg (1.90lb) w/o battery and w/ button		Material Type	
(preliminary)  Weight  1.2kg (2.54lb) with battery/button 0.9kg (1.98lb) w/o battery and w/ button 1.17kg (2.57lb) with battery and w/o button 0.865kg (1.90lb) w/o battery and w/ button	Housing Machanical	Dimension	235 x 328 x 23 mm; 9.25 x 12.9 x .9 in
EMC CE/FCC/NCC/Telec		Weight	0.9kg (1.98lb) w/o battery and w/ button 1.17kg (2.57lb) with battery and w/o button
	EMC		CE/FCC/NCC/Telec

#### Note

- The channel frequency selection can be supported by further plan.
- EPD Data Report and Wakeup behavior duration can be adjusted by different scenario from RESTful API
- System bundles wireless modules; which need RED compliance





### **Ordering Information**

	Model Name	Part Number	Description
	EPD-660	EPD-660-002	13.3" B,W WiFi IP65 w/ battery
	EPD-660	EPD-660-102	13.3" B,W WiFi IP65 w/o battery
	EPD-662	EPD-662-002	13.3" R,B,W IP65 WiFi w/Battery
	EPD-662	EPD-662-102	13.3" R,B,W WiFi IP65 w/o battery
	EPD-662	EPD-662-003	13.3" RBW WiFi w/ battery w/o button and IP54
	EPD-662	EPD-662-103	13.3" RBW WiFi w/o battery w/o button and IP54
	EPD-662	EPD-662-004	13.3" RBW WiFi w/ battery w/ button and IP54
	EPD-662	EPD-662-104	13.3" RBW WiFi w/o battery w/ button and IP54

### **Development Kit Ordering Information**

	Part No.	Description
	EPD-662-102	13.3" red/black/white ePaper Wi-Fi display system device in 2.4G
EPD device	EPD-660-102	13.3" black/white ePaper Wi-Fi display system device in 2.4G
	EPD-662-103	13.3" red/black/white ePaper Wi-Fi display system device in 2.4G
	WISE-3220IOS-21A1E	Wi-Fi AP and configuration router for EU
	WISE-3220IOS-21A1J	Wi-Fi AP and configuration router for JP
Router	WISE-3220IOS-21A1N	Wi-Fi AP and configuration router for NA
	WISE-3220IOS-21A1T	Wi-Fi AP and configuration router for TW
	WISE-3220IOS-21A1C	Wi-Fi AP and configuration router for China
ePaper	ARK-1123H-EP2A2 for entry-level use	Ubuntu 18.4/128G SSD/8G RAM and build in ePaper Manager Software with 500 device licenses
Manager Server	ARK-2250L-EP1A2 for enterprises	Ubuntu 18.4/1T HD/16G RAM and build in ePaper Manager Software with 500 device licenses

 $<sup>^\</sup>star$  Ordering EPD device, WISE-3220, and ARK ePaper Manager Server one each to try Advantech wireless EPD displayl solution

## **Packing List**

Before installing ePaper device system, please check the items that listed as below are in good condition. If there are any items which are not consistent with your goods, please contact with your dealer immediately.

#### EPD-660, EPD-662 EPD device

Model Name	Part Number	Description
EPD-660	EPD-660-002	1. 13.3" B,W WiFi IP65 w/ battery 2. Type-C connector cable 100 cm (3.2 ft)
EPD-660	EPD-660-102	1. 13.3"B,W WiFi IP65 w/o battery 2. Type-C connector cable 100 cm (3.2 ft)
EPD-662	EPD-662-002	1. 13.3" R,B,W IP65 WiFi w/Battery 2. Type-C connector cable 100 cm (3.2 ft)
EPD-662	EPD-662-102	1. 13.3" R,B,W WiFi IP65 w/o battery 2. Type-C connector cable 100 cm (3.2 ft)
EPD-662	EPD-662-003	1. 13.3" RBW WiFi w/ battery w/o button and IP54 2. Type-C connector cable 100 cm (3.2 ft)
EPD-662	EPD-662-103	1. 13.3" RBW WiFi w/o battery w/o button and IP54 2. Type-C connector cable 100 cm (3.2 ft)
EPD-662	EPD-662-004	1. 13.3" RBW WiFi w/ battery w/ button and IP54 2. Type-C connector cable 100 cm (3.2 ft)
EPD-662	EPD-662-104	1. 13.3" RBW WiFi w/o battery w/ button and IP54 2. Type-C connector cable 100 cm (3.2 ft)

<sup>\*</sup> All Eink Panel inspection criteria refer to Eink CAS & Inspection standard document.

### **Optional Accessories**

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	Model Name	Description
	PSA-A45WM-U	ADP A/D 100-240V 45W 5/9/12/15/20V US Plug
	EPD-660-BK1	EPD-660.662 wall mount kit
	EPD-660-BK2	EPD-660.662 stand bracket kit
	EPD-660-BK3	EPD-660.662 wall mount kit_ID
	1960099319N001	Type C plug bracket
	1930005541	Screw for type-C bracket