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## 1. Overview

THE OPS\_3583\_C\_08128 ANDROID™ SOCKET IN OPS (OPEN PLUGGABLE SPECIFICATION) PC IS AN IDEAL INTEGRATED SOLUTION FOR SMART WHITEBOARD AND SMART MEETING ROOM FUNCTIONALITY ON IFPD.

OPS\_3583\_C\_08128 SUPPORTS HD AUDIO AND VIDEO UP TO 4K60.

PRE-INSTALLED ANDROID 13 EDLA, WITH WIRELESS WIFI 6 DUAL BAND AND BLUETOOTH, A POWERFUL PROCESSOR WITH DUAL-CORE A76 +QUAD-CORE A55, UP TO 2GHZ, AND MAIL-G610 MC2 GPU, SUPPORT 8GB LPDDR4X MEMORY.

CONNECTIVITY OPTIONS INCLUDING HDMI IN, HDMI OUT, USB C PORT, USB 3.0 PORTS, AND GIGABIT LAN RJ45 ENSURE THAT YOU STAY CONNECTED TO ANY AND ALL PERIPHERAL DEVICES.

POWERFUL SYSTEM WITH THE ROCKCHIPS PROCESSOR, 8GB LPDDR4X MEMORY, AND 128GB EMMC STORAGE OR SSD STORAGE. COMPLETE NETWORK SUPPORT WIFI 6, BLUETOOTH 5.0, AND GIGABIT LAN ETHERNET.

## 2. Hardware Context

CPU	RK3583 dual-core Cortex-A76 and quad-core Cortex-A55 ARM, Mail-G610 MC2 GPU
Frequency	2x Cortex A76@2GHz 4x Cortex A55@1.8GHz
Memory	LPDDR4X 8GB
Storage	EMMC 128GB, Support for M.2 interface SSD expansion (Only NVMe is supported)
Power demand	12~19V, current $\geq$ 3A; Max working power 30W
Network	Have the RJ45 interface, support 1000M Ethernet
	Have the WIFI module, support WI-FI 802.11 b/g/n/ac/ax
	Have the BT module, support BT 5.0
Interface Device	USB 3.0*3, Type-C*1 (DP 1.2 out+USB 2.0 device or USB 3.0 host)
	Line out *1, Mic in *1
	HDMI IN *1, HDMI OUT *1
Light	Working indicator light, Power indicator light
Button	Power button, Reset button
System	Android 13
Software Function	Web browsing, E-mail, and resource manager
Language	Support multiple languages

### 3. HDMI Timing

#### ■ HDMI COMMON PC timing

Format	Resolution	H. Freq (KHz)	V. Freq (Hz)	Standard
Format	Resolution	H.Freq(KHz)	V.Freq(Hz)	Standard
VGA	640×480	31.5 37.9 37.5	60 72 75	VESA
SVGA	800×600	37.9 48.1 46.9	60 72 75	VESA
XGA	1024×768	48.4 56.5 60	60 70 75	VESA
	1152×864	67.5	75	
	1280×960	60	60	
SXGA	1280×1024	64 80	60 75	VESA
SXGA	1360×768	37.5	60	
WUXGA	1920×1080	37.5	60	

#### ■ hdmi common dtv timing

Format	Resolution	V. Freq (Hz)
480i	720×480	60
480p	720×480	60
576i	720×576	50
576p	720×576	50
720p	1280×720	50
		60
1080i	1920×1080	50
		60
1080p	1920×1080	50
		60

#### ■ 4K TIMING

Pixel clock=300MHZ	3840*2160	29. 97Hz/R444
	3840*2160	30Hz/R444
	3840*2160	25Hz/R444
	3840*2160	23. 98Hz/R444
	3840*2160	24Hz/R444
	4096*2160	24Hz/R444

	3840*2160	50Hz/Y420
	3840*2160	59Hz/Y420
	3840*2160	60Hz/Y420
Pixel clock=600MHZ	3840*2160	50Hz/R444
	3840*2160	59Hz/R444
	3840*2160	60Hz/R444
	4096*2160	50Hz/R444
	4096*2160	59Hz/R444
	4096*2160	60Hz/R444

#### 4. Product Photograph

The pictures are for reference only, please in kind prev

Front view



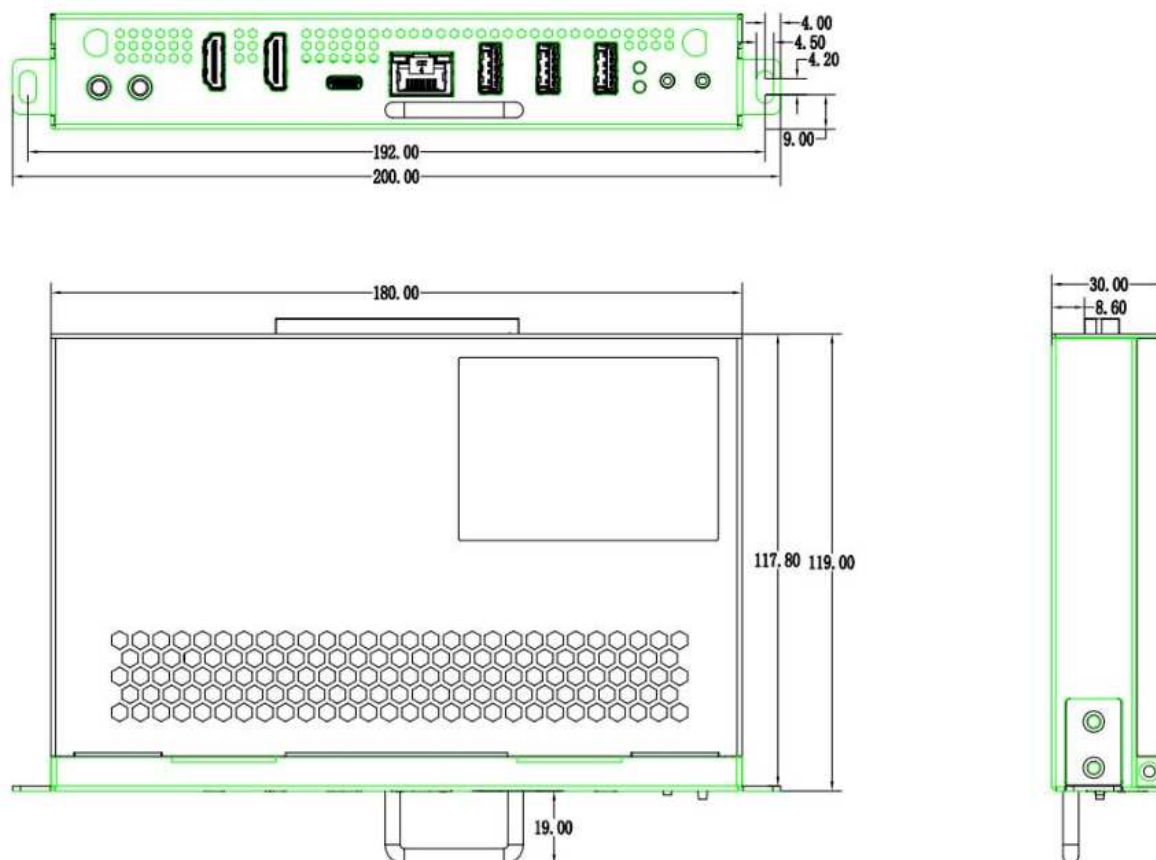
top view



side view

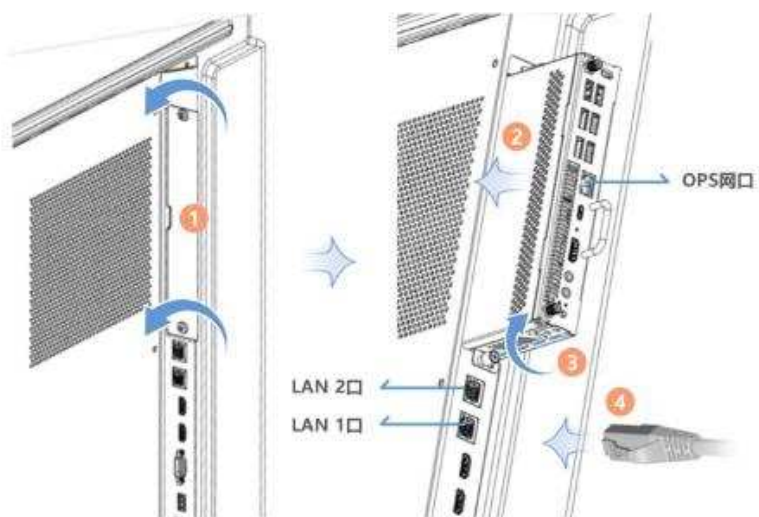


## 5. Product dimensions and installation diagram




### > OPS 安装

OPS 安装于大屏后侧并以螺丝固定，网线接大屏 LAN1 口。



OPS安装示意图

## 6. OPS Slot Definition

			
NO.	describe	NO.	describe
1	NC	41	NC
2	NC	42	NC
3	GND	43	NC
4	NC	44	NC
5	NC	45	NC
6	GND	46	NC
7	NC	47	NC
8	NC	48	NC
9	GND	49	NC
10	NC	50	NC
11	NC	51	UART_RX_3V3
12	GND	52	UART_TX_3V3
13	NC	53	GND
14	NC	54	USB30_SSRX2-
15	NC	55	USB30_SSRX2+
16	GND	56	GND
17	HDMITX_CLK-	57	USB30_SSTX2-
18	HDMITX_CLK+	58	USB30_SSTX2+
19	GND	59	GND
20	HDMITX_D0-	60	USB_D2-
21	HDMITX_D0+	61	USB_D2+
22	GND	62	GND
23	HDMITX_D1-	63	OPS_USB_D1-
24	HDMITX_D1+	64	OPS_USB_D1+
25	GND	65	GND
26	HDMITX_D2-	66	OPS_USB_D0-
27	HDMITX_D2+	67	OPS_USB_D0+
28	GND	68	GND
29	HDMITX_SDA	69	NC
30	HDMITX_SCL	70	NC
31	HDMITX_HPD_IN	71	HDMI_TX_CEC



32	GND	72	OPS_DET
33	+18V_IN	73	OPS_ON#
34	+18V_IN	74	OPS_OK#
35	+18V_IN	75	GND
36	+18V_IN	76	GND
37	+18V_IN	77	GND
38	+18V_IN	78	GND
39	+18V_IN	79	GND
40	+18V_IN	80	GND

## 7. FCC STATEMENT

This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and

(2) This device must accept any interference received, including interference that may cause undesired operation.

Any Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

**Note:** This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- ▶ -Reorient or relocate the receiving antenna.
- ▶ -Increase the separation between the equipment and receiver.
- ▶ -Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- ▶ -Consult the dealer or an experienced radio/TV technician for help.

### RF warning:

This equipment complies with FCC radiation exposure limits set forth for an uncontrolled environment. This equipment should be installed and operated with minimum distance 20cm between the radiator & your body.

## 8. ATTENTION

- FOR SAFETY ISSUE, PLEASE KEEP THE TERMINAL AT LEAST 8.0MM AWAY FROM METAL PARTS OF THE MACHINE .
- A ESD SHIELD BAG IS OFFERED TO PROTECT THE PRODUCT FROM ELECTROSTATIC OR MAGNETIC SHOCK , PLEASE TAKE CARE OF ESD AT ANYTIME.
- KEEP THE BOX SURFACE CLEAN. CHECK THE APPEARANCE OF THE BOX IF THERE IS ANY DEFECTIVE PARTS, SUCH AS DILAPIDATED, WEIGHTY NICK, ETC.
- KEEP THE BOX AWAY FROM CONDUCTOR WHEN IT IS WORKING.
- DON' T PRESS, DISTORT OR DISASSEMBLE THE BOARD. 。
- DON' T SWITCH ON THE POWER SUPPLY BEFORE PANEL IS CORRECTLY CONNECTED.

## 9. ENVIRONMENTAL CHARACTERISTICS

### ■ Temperature

Operating: 0°Cto 40°C Store: -20°C to 60°C

### ■ Humidity

Operating: 10% to 90% (non-condensing) Store: 5% to 95% (non-condensing)

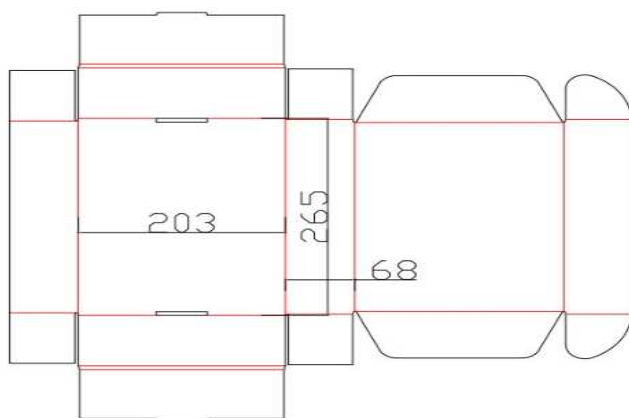
### ■ Altitude

Operating: 10,000 ft.(max) Store: 20,000ft.(max)

## 10. Packaging

### ■ Inner box

Three layers of E-shaped corrugated, with a thickness of approximately 1.5mm. The drawings are as follows



### ■ Outer box

It should conform to GB13023 《corrugated board》、GB13024 《boxboard》 rules (the Drawings'rules is based on the drawing records)

The size of the PE bag		The size of box			Company)	Packing list
Long(cm)	Wide(cm)	Long(cm)	Wide(cm)	High(cm)		
30	20	55	42.7	16	PCS	8

use	board	Corrugated cord	kgf/cm <sup>2</sup> (Bursting strength kgf/cm <sup>2</sup> )	Edge pressure strength kgf/cm	kg*cm Puncture strength kg*cm	Water content%
box	K=A	BC	12	8	90	9%±1

**■ Product weight**

OPS complete machine	Inner box/1 OPS complete machine	Outer box / 8 inner boxes
0.7kg	0.84kg	7.5kg