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1 Product Positioning and Highlights

1.1 Product Positioning

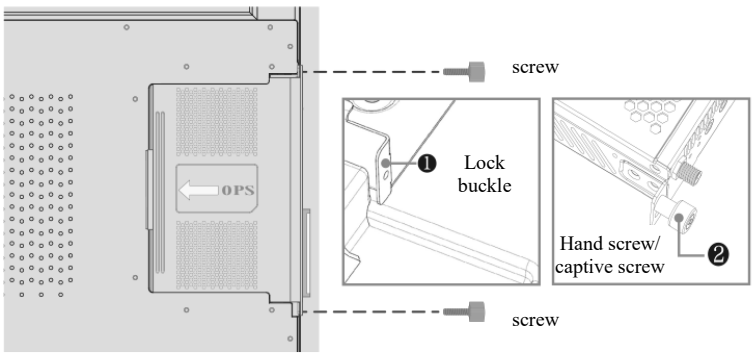
ICD OPS D series are pluggable computer modules based on Intel® OPS specification and integrated with Intel® 10th generation processors to meet the requirements of high performance, low power consumption, and low space consumption. It reduces the connection line and space occupation of the interactive IdeaHub, improves the overall stability, and achieves easier and faster installation, upgrade and service convenience, completing the design, deployment, and management of more cost-effective display solutions.

1.2 Highlights

Simple Installation and Upgrade Maintenance

- As a standard embedded computer module of display equipment, OPS can achieve an integrated solution with IdeaHub supporting the OPS interface, eliminating the need for complex wiring and space for storing OPS.
- Equipped with hand screws. Installation and upgrade maintenance can achieve without professional tools.

Figure 1-1 Installation method



Three Independent 4K Video Output

- Support 1 * HDMI1.4, 1 * DP1.2, 80 Pin expansion interface 1*HDMI2.0.
- Strong codec ability. In addition to the display of the IdeaHub itself, dual-stream (video image + conference data sharing) can be expanded. The content is more explicit. The details are presented perfectly.

High-Performance Computing

- The latest platform processor of Intel® 10th generation;
- Dual channel memory, up to16GB;
- SSD.

System Backup

- Connect to the keyboard, press the power button to boot, hold down the Ctrl key and keep pressing the F3 key until you enter the backup system prompt box. Select [Yes] to back up the system, and wait for the completion to restart OPS automatically.

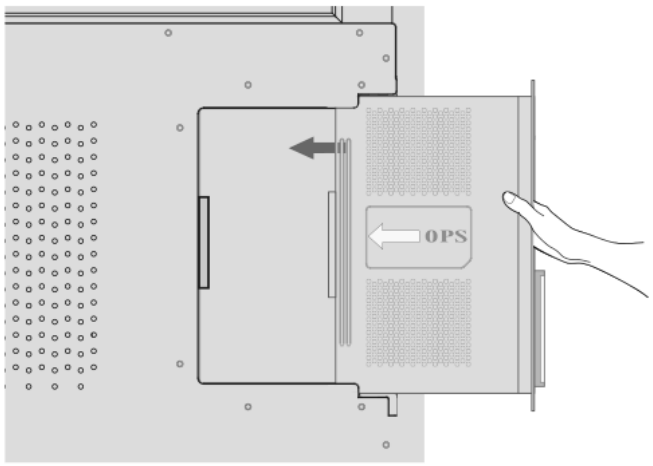
System Recovery

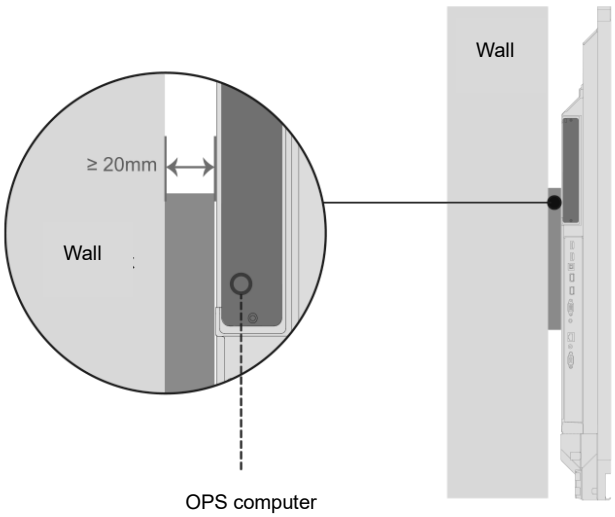
- Connect to the keyboard, press the power button to boot, hold down the Ctrl key and keep pressing the F4 key until you enter the recovery system. After waiting for completion, you will restart OPS automatically.

2 Application Scenarios

The ICD OPS D series is suitable for installing pluggable computers on IdeaHub with baffles on the back. The application scenario is shown in Figure 2-1.

Figure 2-1 Application scenario





3 Product Structure

ICD OPS D series is mainly composed of integrated chassis.

Whole Structure

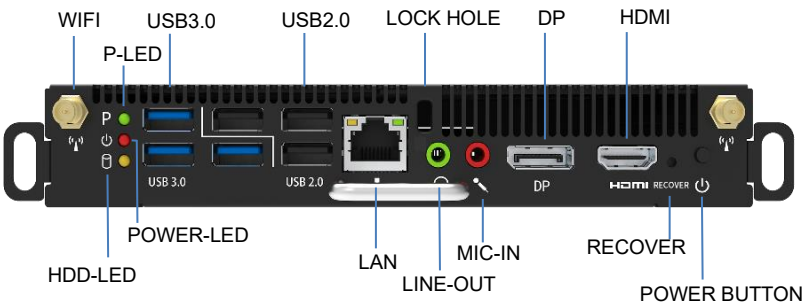
The appearance of the ICD OPS D series is shown in Figure 3-1.

Figure 3-1 Appearance

Front Panel

The front panel of the ICD OPS D series is shown in Figure 3-2.

Figure 3-2 Front panel



Front panel O/I interface description:

- WIFI: WIFI antenna interface.

- POWER BUTTON
- RECOVER: one-click recovery button.
- HDD_LED: hard disk indicator.
- POWER_LED: power indicator.
- P_LED: 80pin power-on indicator.
- LINE_OUT: audio output interface.
- MIC_IN: microphone Jack.
- DP: DP display interface.
- HDMI: HDMI display interface.
- USB3.0: USB3.0 interface.
- USB2.0: USB2.0 interface.
- LAN: RJ45 network interface.
- LOCK HOLE: burglar lock hole.

Rear Panel

The rear panel of the ICD OPS D series is shown in Figure 3-3.

Figure 3-3 Rear panel

JAE Conn: 80pin extension interface, containing the primary signal:

- Power supply
- HDMI and DisplayPort
- USB2.0 /3.0
- UART

4 Operation and Maintenance

- **OPS ON /OFF**

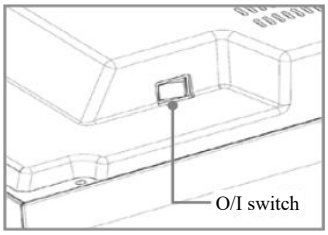
1. Power on：

Press the O/I switch, the OPS computer will be boot up after the IdeaHub is turned on.

2. Power off：

(1) No AC shutdown. Do not shutdown the OPS computer while it is running;

Figure 4-1 Schematic diagram of O/I switch



(2) O/I switch can be used to turn off OPS computer when it doesn't turn on or work, please follow the next steps to turn off under other conditions: in the OPS computer operating system, the OPS computer is shut down normally. The indicator is off, and then use the "O/I" switch to shut down.

- **Use OPS computer**

1. The OPS computer has been installed on the back of the IdeaHub (when installing or uninstalling the OPS computer, please make sure that the IdeaHub is power-off, while it may cause computer to be abnormal).
2. Click the OPS computer icon in the lower-left corner of the IdeaHub homepage to enter the OPS computer.

- **Remove the OPS computer**

1. No hot plugging. It is prohibited to directly unplug the OPS computer from the 80-pin connector when the OPS computer is running or the display is turned on.
2. Ensure that both IdeaHub and OPS computers are not started or running. And the sidelight on the front panel of IdeaHub has been turned off before you can pull out the OPS computer from the plug-in terminals. Please pay attention to maintaining the level of the OPS computer to avoid evident up and down twisting and pulling out.

5 Technical Index

The physical parameters of the ICD OPS D series are shown in Figure 5-1.

Figure 5-1 Product specifications

Processor	Intel® Core™ i5/i7
Memory	DDR4 8/16GB
Storage	M.2 2280 128/512GB SSD
Display Controller	Intel® UHD Graphics 630
Audio	Integrated high-definition stereo sound card
HDMI output	HDMI1.4，support 4096*2160 P30
DP output	DP1.2，support 4096*2160 P30
Network	GE
Wi-Fi /BT	Wi-Fi /BT 2-in-1. Wi-Fi supports 802.11
USB2.0	3
USB3.0	3
MIC IN	1
LINE OUT	1
JAE 80-pin	1*HDMI，2*USB2.0，1*USB3.0，UART
Power Supply	19V DC，4.74A
Size	195 mm（L）*180 mm（W）*30mm（H）
OS	Windows 10 IoT EE