

# OPS Module

## OPS-i5 / i7

### INTRODUCTION

OPS is designed to simplify the deployment and maintenance of IFP by allowing for easy installation and upgrades of computing modules without the need for complex cabling or external devices. The OPS module, which is a small form-factor computer, can be inserted into a slot on the back of an OPS-compatible IFP, effectively turning it into a powerful interactive computing platform.



### FEATURES

- Anti-fouling, dust-proof, fully enclosed body, preventing dust from affecting product life
- Low CPU temperature and strong performance (Turbo on)
- TPY-C interface
- Strong anti-static (static cloth and cotton to prevent short circuit of OPS caused by static electricity)
- Normal operation at -20°-50°
- Maximum support for 6 3.0USB
- 8-layer PCB board with strong performance and double-layer design
- On-board WiFi, 2-in-1 audio
- Support: 12th generation CPU/dual memory-up to 64G/5GWiFi Bluetooth/2.4G dual-band
- 30-42 Chassis Thickness/Japan Imported JAE Plug 4K 60HZ

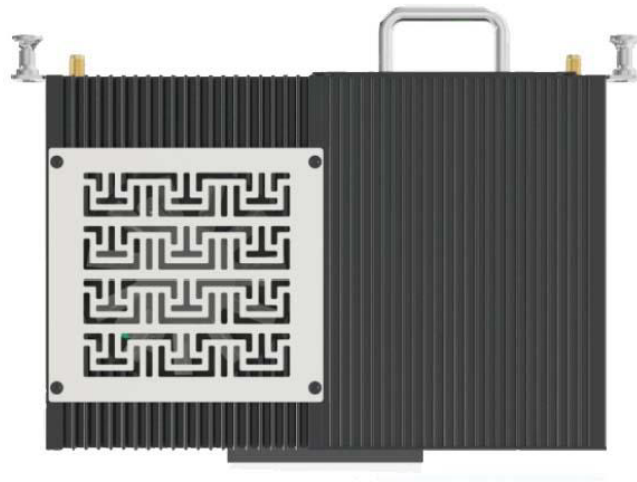
OPS

## FEATURES IN DETAIL

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### All Aluminum Material

All-aluminum integrated heat dissipation, wide groove design on the body surface for better heat dissipation, including double copper tubes and double radiators



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### Ultra Light

At the same time of high performance, the lightweight module design makes the installation very convenient



# SPECIFICATIONS

Model	OPS-i5-12	OPS-i7-12	OPS-i5-19	OPS-i7-19
CPU	I5-12450H<Primary Frequency-2G> 8 Core 12 Threads	I7-12650H<Primary Frequency-2.3G> 10 Core 16 Threads	I5-12450H<Primary Frequency-2G> 8 Core 12 Threads	I7-12650H<Primary Frequency-2.3G> 10 Core 16 Threads
Technology	2 x SODIMMs DDR4	2 x SODIMMs DDR4	2 x SODIMMs DDR4	2 x SODIMMs DDR4
Memory	DDR4-8G;DDR4-16G;DDR4-32G;	DDR4-8G;DDR4-16G;DDR4-32G;	DDR4-8G;DDR4-16G;DDR4-32G;	DDR4-8G;DDR4-16G;DDR4-32G;
Front End Output	DP-Max.3840 x 2160@60Hz	DP-Max.3840 x 2160@60Hz	DP-Max.3840 x 2160@60Hz	DP-Max.3840 x 2160@60Hz
	HDMI-Max.3840 x 2160@60Hz	HDMI-Max.3840 x 2160@60Hz	HDMI-Max.3840 x 2160@60Hz	HDMI-Max.3840 x 2160@60Hz
JAE End	HDMI-Max.3840 x 2160@60Hz	HDMI-Max.3840 x 2160@60Hz	HDMI-Max.3840 x 2160@60Hz	HDMI-Max.3840 x 2160@60Hz
Model	CPU integrated graphics	CPU integrated graphics	CPU integrated graphics	CPU integrated graphics
SSD	1*M.2 2280 PCIE/SATA, 1*JSATA 2.5-inch hard drive	1*M.2 2280 PCIE/SATA, 1*JSATA 2.5-inch hard drive	1*M.2 2280	1*M.2 2280
Interface	M.2 2230 PCIe	M.2 2230 PCIe	M.2 2230 PCIe	M.2 2230 PCIe
Support	wifi5/wifi6+BT	wifi5/wifi6+BT	wifi5/wifi6+BT	wifi5/wifi6+BT
JAE Connector	1(JAE TX25 80-PIN)	1(JAE TX25 80-PIN)	1(JAE TX25 80-PIN)	1(JAE TX25 80-PIN)
LAN	1 x RJ45.Gigabit	1 x RJ45.Gigabit	1 x RJ45.Gigabit	1 x RJ45.Gigabit
USB	4 x USB3.0 & 2 x USB2.0	4 x USB3.0 & 2 x USB2.0	4 x USB3.0 & 2 x USB2.0	4 x USB3.0 & 2 x USB2.0
Type-c	USB3.0	USB3.0	USB3.0	USB3.0
Audio frequency	1 x AUDIO OUT + 1 x MIN IN	1 x AUDIO OUT + 1 x MIN IN	1 x AUDIO OUT + 1 x MIN IN	1 x AUDIO OUT + 1 x MIN IN
Super IO	Main board reserved support RS232	Main board reserved support RS232	Implement serial port function (default TTL)	Implement serial port function (default TTL)
	Intelligent regulation of fan speed	Intelligent regulation of fan speed	Fan speed control	Fan speed control
Mini-PCLe(Built-in)	1 x M.2 2230(WIFI)	1 x M.2 2230(WIFI)	1 x M.2 2230(WIFI)	1 x M.2 2230(WIFI)
	1 x M.2 2280(SSD)	1 x M.2 2280(SSD)	1 x M.2 2280(SSD)	1 x M.2 2280(SSD)
Input voltage	DC-IN 19V-5A Complete machine calculation with CPU power	DC-IN 19V-5A Complete machine calculation with CPU power	DC-IN 19V-5A Complete machine calculation with CPU power	DC-IN 19V-5A Complete machine calculation with CPU power
Size	180x 119x 30MM	180x 119x 30MM	180x 195x 30MM (180x 195x 42MM-optional)	180x 195x 30MM (180x 195x 42MM-optional)
Shell material	Iron shell + aluminum heat sink	Iron shell + aluminum heat sink	Iron shell	Iron shell
Cooling mode	5V dual fan cooling	5V dual fan cooling	5V dual fan cooling	5V dual fan cooling
Working temperature	0 - 50°C	0 - 50°C	-20 - 60°C	-20 - 60°C
Relative humidity	5%~95°C(non-condensing)	5%~95°C(non-condensing)	10%~90°C(non-condensing)	10%~90°C(non-condensing)
Operating system	Windows® 10, Windows® 11	Windows® 10, Windows® 11	Windows® 10, Windows® 11	Windows® 10, Windows® 11

## Product Display Diagram

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OPS-i5-12 & OPS-i7-12  
180x 119x 30MM



OPS-i5-19 & OPS-i7-19  
180x 195x 30MM