

CPU information

CPU specifications	CPU brand	CPU model	Core/Thread	Main frequency	Turbo frequency	CPU basic power consumption (W)	Maximum Turbo Power Consumption (W)
12th generation i3	core	1215U	Six cores and eight threads	1.2G	4.4G	15	55
		1210U	Six cores and eight threads	1.0G	4.4G	9	29
12th generation i5	core	1235U	Ten cores and twelve threads	1.3G	4.4G	15	55
		1240U	Ten cores and twelve threads	1.1G	4.4G	9	29
		1230U	Ten cores and twelve threads	1.0G	4.4G	9	29
		1245U	Ten cores and twelve threads	1.6G	4.4G	15	55
12th generation i7	core	1250U	Ten cores and twelve threads	1.1G	4.7G	9	29
		1260U	Twelve cores and sixteen threads	1.1G	4.7G	9	29
		1265U	Ten cores and twelve threads	1.8G	4.8G	15	55
		1255U	Ten cores and twelve threads	1.7G	4.7G	15	55
12th generation i3	core	1220P	Ten cores and twelve threads	1.5G	4.4G	28	64
12th generation i5	core	1240P	Twelve cores and sixteen threads	1.7G	4.4G	28	64
		1250P	Twelve cores and sixteen threads	1.7G	4.4G	28	64
12th generation i7	core	1280P	Fourteen cores and twenty threads	1.8G	4.8G	28	64

		1260P	Twelve cores and sixteen threads	2.1G	4.7G	28	64
		1270P	Twelve cores and sixteen threads	2.2G	4.8G	28	64
12th generation i5	core	12450H	Eight cores and twelve threads	2.0G	4.4G	45	95
		12500H	Twelve cores and sixteen threads	2.5G	4.5G	45	95
12th generation I7	core	12800H	Fourteen cores and twenty threads	2.4G	4.8G	45	115
		12700H	Fourteen cores and twenty threads	2.7G	4.7G	45	115
		12650H	Ten cores and sixteen threads	2.3G	4.7G	45	115
		12600H	Twelve cores and sixteen threads	2.7G	4.5G	45	95
12th generation I9	core	12900H	Fourteen cores and twenty threads	2.5G	5.0G	45	115
13th generation i3	core	1305U	Five cores and six threads	1.6G	4.5G	15	55
		1315U	Six cores and eight threads	1.2G	4.5G	15	55
13th generation i5	core	1334U	Ten cores and twelve threads	1.3G	4.6G	15	55
		1335U	Ten cores and twelve threads	1.3G	4.6G	15	55
		1345U	Ten cores and twelve threads	1.6G	4.7G	15	55
13th generation I7	core	1355U	Ten cores and twelve threads	1.7G	5.0G	15	55
		1365U	Ten cores and twelve	1.8G	5.2G	15	55

			threads				
13th generation i5	core	1340P	Twelve cores and sixteen threads	1.8G	4.6G	28	64
		1350P	Twelve cores and sixteen threads	1.9G	4.7G	28	64
13th generation I7	core	1360P	Twelve cores and sixteen threads	2.2G	5.0G	28	64
		1370P	Fourteen cores and twenty threads	1.9G	5.2G	28	64
13th generation i5	core	13420H	Eight cores and twelve threads	2.1G	4.60G	45	95
		13500H	Twelve cores and sixteen threads	2.6G	4.70G	45	95
		13505H	Twelve cores and sixteen threads	2.6G	4.70G	45	115
		13600H	Twelve cores and sixteen threads	2.8G	4.80G	45	95
13th generation I7	core	13620H	Ten cores and sixteen threads	2.4G	4.90G	45	115
		13700H	Fourteen cores and twenty threads	2.4G	5.00G	45	115
		13705H	Fourteen cores and twenty threads	2.4G	5.00G	45	115
		13800H	Fourteen cores and twenty threads	2.5G	5.20G	45	115
13th generation I9	core	13900H	Fourteen cores and twenty threads	2.6G	5.40G	45	115

Product Specifications

PC model	OPS-12U OPS-13U	
PC size	120mm(L)*180mm(W)*30mm(H)	
CPU processor	OPS-12U	Supports Intel Alder Lake 12th generation U/P/H series CPUs
	OPS-13U	Supports Intel Raptor Lake 13th generation U/P/H series CPUs
Memory support	1*NB-DDR4 SODIMM memory slot, supports 2133/2400/2666/3200 MHz memory, supports up to 32 GB	
Power supply	1*DC_IN	Supports 12V/19V voltage, the inner diameter of the DC head is 2.5MM The maximum turbo power consumption of U series CPU is 55W. It is recommended to use a power supply of 12V 7A or 19V5A or above; The maximum turbo power consumption of P series CPU is 64W. It is recommended to use a power supply of 12V 7A or 19V5A or above; The maximum turbo power consumption of H series CPU is 115W. It is recommended to use a 12V 10A or 19V 6.3A or above power supply;
Display function	Integrated Intel UHD Graphics super core graphics card , supports single display, dual display/triple display/quad display copy, dual display/triple display/quad display expansion, supports dual display under SHELL, does not support DOS	
	1*HDMI 2.0 interface (mainboard side)	Support 4K resolution 4096/3840*2160@60Hz
	1*DP interface (motherboard side)	Support DP++; support 4K resolution 4096/3840*2160@60Hz
	1*HDMI 2.0 interface (daughter card side)	Support 4K resolution 4096/3840*2160@60Hz
	1*DP interface (daughter card side)	Does not support DP++; supports 4K resolution 4096/3840*2160@60Hz
Internet function	1*LAN interface	Intel I219V Gigabit network card chip, supports network wake-up and PXE diskless boot function
	1* M2_WIFI interface	PCIE 3.0 signal, supports Key-E interface M.2_2230 WIF Bluetooth module
Hard drive function	1*NGFF1 (M.2) interface	PCIE 4.0 signal, supports Key-M interface, default M.2 2280 hard drive, optional M.2 2242 hard drive; It supports NVME protocol by default, and the hardware can be changed to support SATA protocol.
	1*JSATA interface	Supports SATA3.0 signal by default and supports 2.5-inch SSD/HDD disks
Sound function	Integrated Realtek ALC 897 HD digital audio decoder, 6-channel high-fidelity audio controller; The hardware can be modified to support BBH621 USB sound card;	
	1*LIN_OUT interface	Support audio output (green)
	1*MIC_IN interface	Support microphone input (red)
USB function	2*USB3.2 interface	Rear standard USB3. 2 Gen1 interface, maximum transmission bandwidth is 5Gbps
	2*USB2.0 interface	Rear standard USB2.0 interface , maximum transmission bandwidth is 480Mbps
	1*Type-C interface	Standard Type-C interface, only supports USB function and does not support display function
Switch function	1*PWR_SW 1 button	switch button
	1*RST_SW1 button	Support hardware restart
Other I/O	1*J CMOS button	Motherboard reset and discharge buttons

	1*OPS interface	Standard 80Pin OPS interface
	1*GHOST button	Support system one-click restore
	1*LED	Power and hard drive status indicators
Operating environment	Working temperature: -10℃~60℃; Working humidity: 5%~95% relative humidity, no condensation	
BIOS	AMI BIOS supports power on, scheduled boot, and remote power on/off device intelligent identification	
Watch Dog	Watchdog programming, supports hardware reset function (level 256, 0~255 seconds)	
Operating system	Supports Windows 11, Windows 10, Linux, etc.	