



Product model	<b>SD890-680GM</b>
processor	<b>Supports LGA1700 12th/13th Intel® Celeron/Pentium/Core™ i3/i5/i7/i9 Alder Lake-S and Raptor Lake-S and Xeon processors, Note: Supports 125W cpus</b>
chipset	<b>Using Intel® W680 chipset,</b>
Internal memory	<b>4 * DDR4 DIMM slots support a dual-channel memory of up to 3200MHz, 128GB, and ECC memory</b>
display	<b>Integrated Intel®HD Graphics core graphics card supports DirectX12.1,OpenGL4.5, and supports 4K display</b>
	1* VGA port (IPMI display port)
	1* HDMI1.4 interface, support the highest resolution of 4096x2160@24Hz
	<b>1* DP interface, the maximum resolution is 4096x2160@60Hz</b>
network	<b>2* I210AT Gigabit network adapter chip, supports network wake up /PXE function</b>
	<b>1* RTL8211F Gigabit network Adapter (IPMI Remote Management</b>

	port)
deposit	<b>2* MSAS hard disk interface, each MSAS supports 4 7pin SATA, a total of 8 7pin SATA transmission speed up to 6Gbps</b>
	2 x M.2 slot, support M.2 Key M 2280 NVME PCIE X4 standard SSD
Tone frequency	<b>Onboard ALC897 7.1+ 2-channel hi-Fi audio controller with MIC/Line-out/Line-in support</b>
Expansion slot	<b>4* PCIE3.0 X16 slot, the actual X8 signal</b>
I/O ports on the backplane	<b>2* USB2.0 port</b>
	1* DP interface
	1* HDMI1.4 port
	1 x VGA port
	1* DB9 serial interface
	3* RJ45 Gigabit network interface
	2* USB3.0 interface (5Gbps)
	1* Layer 3 audio interface, support Line-out,MICK,Line-in
Built-in I/O interface	<b>1* vertical USB3.0 interface</b>
	2* USB2.0 interface 2*5pin
	2* USB3.0 interface 2*10pin
	1* front audio interface 2*5pin
	1* TPM1 interface 2 x 6pin
	1* 24pin ATX power interface
	2* 8pin ATX power interface
	2* Front panel function buttons and indicator ports 2*5pin
Fan interface	<b>2*4pin CPU fan interface; 3*4pin system fan port</b>
BIOS	<b>128Mb Flash ROM</b>
Guard dog	<b>Support hardware reset function (256 level, 0~255 seconds)</b>
Operating system	<b>Windows 10/Windows 11/Linux</b>
Power supply type	<b>Powered by ATX 24Pin and 8pin power supplies</b>

Operating temperature	<b>0°C to 60°C</b>
Storage temperature	<b>-20°C to 70°C</b>
Working humidity	<b>5%-95% relative humidity, no condensing</b>
Size	<b>305mm * 245mm</b>

