

# GM841-HPF

AMD® Ryzen™ Embedded 8000 Series  
Gaming Embedded System

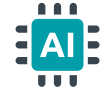


## KEY FEATURES



### Powerful Computing Processor

AMD® Ryzen™ Embedded 8000 Hawk Point Series up to 54W



### High Performance AI

AMD® Ryzen™ Embedded 8000 Hawk Point APUs (38 TOPs Total)



### Superior Graphic Engine

Support 4 DP++ (up to 4096x2160@60Hz)



### Design for Gaming system

- Retain NVRAM Data for 5 Years during AC off
- 8 Intrusion Detection, 32 x DIDO, 8 x Meter, iButton x1, cctalk x4, Stereo 6W+6W Audio AMP Output

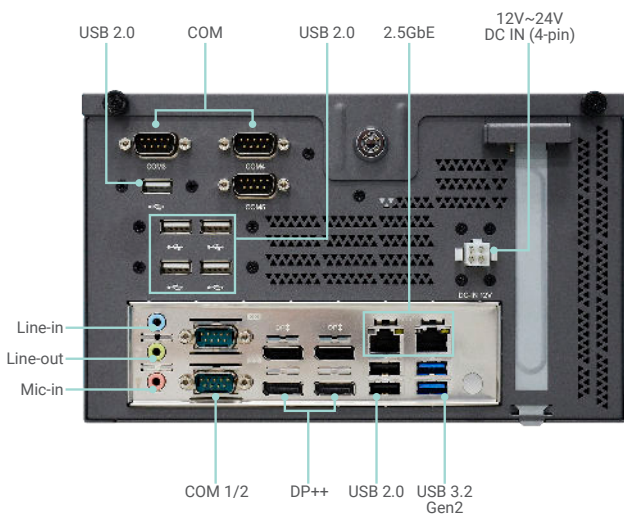


### Reliable Data Security

Jurisdiction BIOS, RSA & Hash Verification



## PANEL



## SPECIFICATION

SYSTEM	Processor	AMD® Ryzen™ Embedded 8000 Series Processors, TDP up to 54W AMD® Ryzen™ Embedded 8845HS, 8C/16T, 8MB Cache, 3.8GHz (5.1GHz), 45W (35-54W) AMD® Ryzen™ Embedded 8645HS, 6C/12T, 6MB Cache, 4.3GHz (5.0GHz), 45W (35-54W) AMD® Ryzen™ Embedded 8840U, 8C/16T, 8MB Cache, 3.3GHz (5.1GHz), 28W (15-30W) AMD® Ryzen™ Embedded 8640U, 6C/12T, 6MB Cache, 3.5GHz (4.9GHz), 28W (15-30W)
	Memory	Dual-channel SODIMM up to 64GB Dual-channel DDR5 5600/5200/4800MHz, with ECC support
	BIOS	AMI SPI 256 Mbit
GRAPHICS	Controller	RDNA3 graphics with up to 6 WGP's (Work Group processors)
	Feature	OpenGL 4.6, DirectX 12, OpenCL 2.1 <b>HW Decode:</b> AVC/H.264, MPEG2, VC1/WMV9, JPEG/MJPEG, HEVC/H265, VP8, VP9, AV1 <b>HW Encode:</b> MPEG2, AVC/H264, JPEG, HEVC/H265, VP8, VP9, AV1
	Display	4 x DP++ <b>DP1.2:</b> resolution up to 4096x2304 @ 60Hz
	Quad Displays	4 DP++
STORAGE	Interface	2 x SATA 3.0 1 x 2.5" SSD Bay
EXPANSION	Interface	1 x PCIe Gen4 x16 slot (x8 Gen4) 1 x M.2 M Key 2280 (SATA 3.0/ PCIe Gen3x4) SATA3(opt) selected by BIOS
AUDIO	Audio Codec	Realtek ALC888S
ETHERNET	Controller	2 x i226-V (10/100/1000/2500 MHz)
LED	Indicators	1 x Power LED 1 x HDD LED
I/O	Ethernet	2 x 2.5GHz RJ45
	Serial	1 x DB-9 (RS-232/422/485) 1 x DB-9 (RS-232) 1 x DB-9 (TX/RX, TTL-5V) 2 x DB-9 (TX/RX, CCTalk) 2 x Microfit (TX/RX, 2 ccTalk) (Provide the hardware circuit design for the SAS 9-bit interface.)
	USB	2 x USB 3.2 Gen2 7 x USB 2.0
	Display	4 x DP++
	Audio	1 Audio Jack ( Line-in/Line-out/Mic-in) Stereo 6W+6W Class D Audio AMP Output S/PDIF Out
	Cooling	1 x 8cm System Fan, with replaceable air filter
WATCHDOG TIMER	Output & Interval	System Reset, Programmable via Software from 1 to 255 Seconds
GAMING	Intrusion Detection	8 x Intrusion detection Operates With and Without AC Power Logs Date/ Time of latest 64 events Coin Battery backup to Retain Data for 5 years during AC off
	NVRAM	Supports up to 16Mbyte Coin Battery backup to Retain Data for 5 years during AC off Support Battery voltage monitoring & Warning
	DI/DO	32-bit Digital Input 32-bit OC output (29-bit x 500mA, disconnect detection up to 8 meters; 3-bit x 3A)
	iButton	Support iButton 1-wire protocol
SECURITY	TPM	TPM 2.0
POWER	Type	12V~24V DC IN
	Connector	DC-in Jack or Right Angle Connector (4-pin)
OS SUPPORT	Microsoft	Windows 10 IoT Enterprise LTSC(64-bit) Windows 11 22H2 GAC
	Linux	Linux Ubuntu 22.04
	Software	Supplied with gaming function SDK
ENVIRONMENT	Operating Temperature	0~45°C
	Storage Temperature	-20~85°C
	Relative Humidity	5%~90%
MECHANISM	Mounting	Wall Mount
	Dimensions (W x H x D)	230 x 140 x 210 mm
	Weight	2.9 kg

## SPECIFICATION

STANDARDS AND CERTIFICATIONS	Shock	<p><b>Operation:</b> IEC 60068-2-27 Test Ea: Shock test Half-sine, 3G @ 11ms, 18 Shock <math>\pm X</math>, <math>\pm Y</math>, <math>\pm Z</math> (each axis 3 times)</p> <p><b>Non-Operation:</b> IEC 60068-2-27 Test Ea: Shock test Half-sine, 5G @ 11ms, 18 Shock <math>\pm X</math>, <math>\pm Y</math>, <math>\pm Z</math> (each axis 3 times)</p>
	Vibration	<p><b>Operation:</b> IEC 60068-2-64 Test Fh: Vibration Board-Band Random Test Random, 1Grms @ 5~500 Hz, 30min.</p> <p><b>Non-Operation:</b> IEC 60068-2-6 Test Fc: Vibration Sinusoidal Test Sweep sine, 2Grms @ 10~500Hz, 30min.</p>
	Certifications	CE, FCC class A (ongoing)