

# GM831-CSF Q370 H310

8th/9th Gen Intel® Core™  
Gaming Embedded System



## KEY FEATURES



### High Performance CPU

9th/8th Gen Intel® Core™



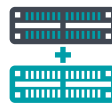
### Modularized Gaming Box PC

Discrete Gaming I/O card & PSU module



### Three Independent Displays

DP++, DVI-D, HDMI (up to 4096x2160@ 60Hz)



### Multiple Expansion Slots

1 PCIe x16, 2 PCIe x4, 1 mini PCIe, 1 M.2 M  
key support NVMe

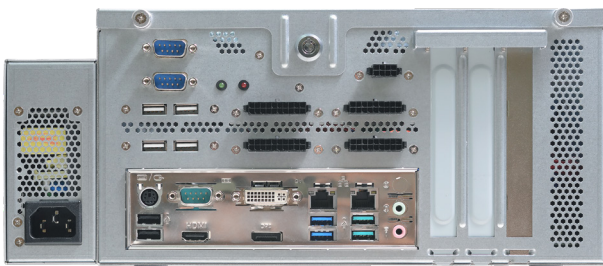


### Rich I/O

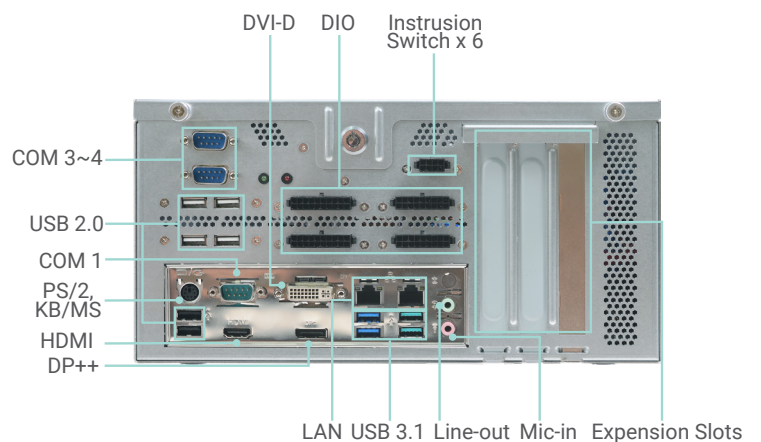
2 Intel GbE, 4 USB 3.1, 6 USB 2.0, 3 COM



## PANEL



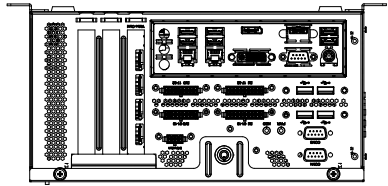
Front View  
(with Power Supply)



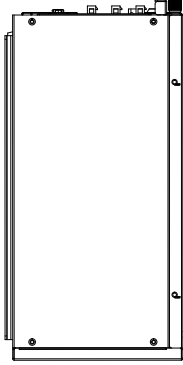
Front View

# DIMENSIONS

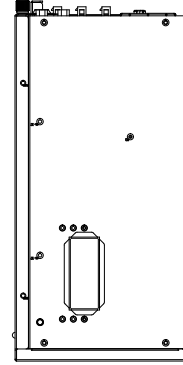
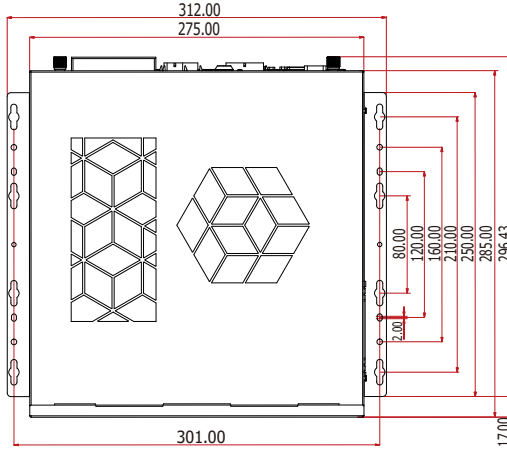
## Without Power Supply



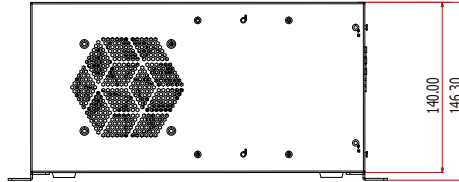
Front View



Left View

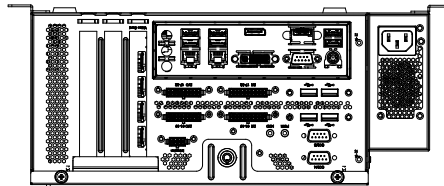


Right View

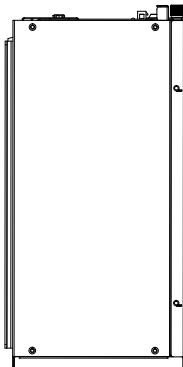


Rear View

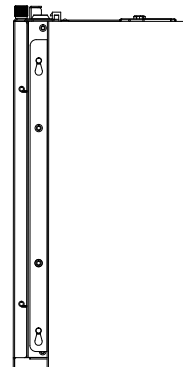
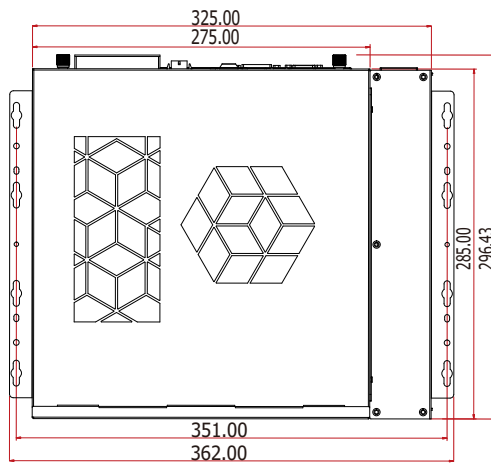
## With Power Supply



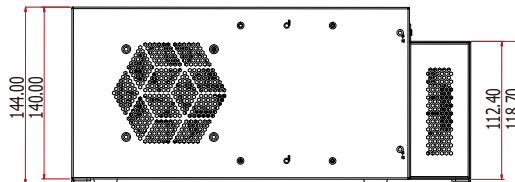
Front View



Left View

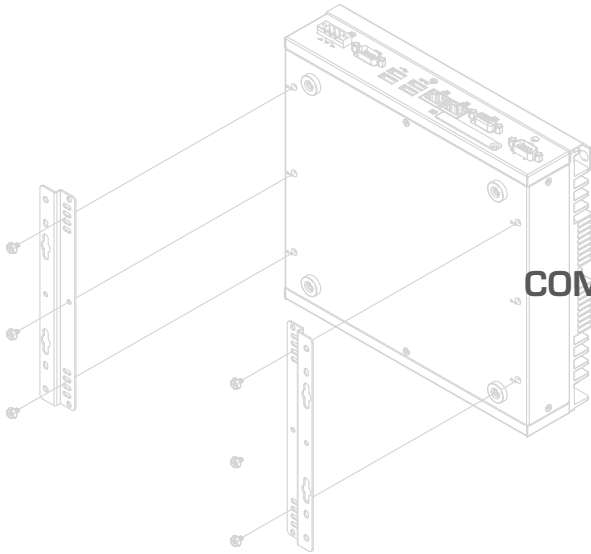


Right View

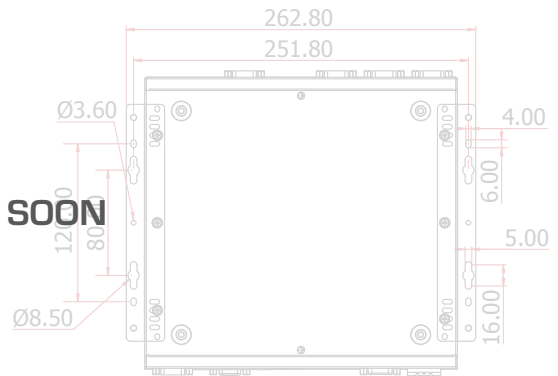


Rear View

## WALL MOUNTING



COMING SOON



## SPECIFICATION

SYSTEM	Processor	9th/8th Generation Intel® Core™ LGA 1151 Socket Processors: Intel® Core™ i5-9500E (6 Cores, 9M Cache, up to 4.2 GHz); 65W Intel® Core™ i5-9500TE (6 Cores, 9M Cache, up to 3.6 GHz); 35W Intel® Core™ i3-9100E (4 Cores, 6M Cache, 3.7 GHz); 65W Intel® Core™ i3-9100TE (4 Cores, 6M Cache, to 3.2 GHz); 35W Intel® Core™ i7-8700 (6 Cores, 12M Cache, up to 4.6 GHz); 65W Intel® Core™ i7-8700T (6 Cores, 12M Cache, up to 4.0 GHz); 35W Intel® Core™ i5-8500 (6 Cores, 9M Cache, up to 4.1 GHz); 65W Intel® Core™ i5-8500T (6 Cores, 9M Cache, up to 3.5 GHz); 35W Intel® Core™ i3-8100 (4 Cores, 6M Cache, 3.6 GHz); 65W Intel® Core™ i3-8100T (4 Cores, 6M Cache, to 3.1 GHz); 35W Intel® Pentium® G5400 (2 Cores, 4M Cache, 3.7 GHz); 58W Intel® Pentium® G5400T (2 Cores, 4M Cache, 3.1 GHz); 35W Intel® Celeron® G4900 (2 Cores, 2M Cache, 3.1 GHz); 54W Intel® Celeron® G4900T (2 Cores, 2M Cache, 2.9 GHz); 35W	
	Chipset	Intel® Q370/H310 Chipset	
	Memory	Four 288-pin DIMM up to 64GB Dual Channel DDR4 2400/2666 MHz	
	BIOS	Insyde or AMI UEFI (Supports hash and public key validation)	
	GRAPHICS	Controller	Intel® HD Gen 9 Graphics
Feature		OpenGL 5.0, DirectX 12, OpenCL 2.1 HW Decode: AVC/H.264, MPEG2, VC1/WMV9, JPEG/MJPEG, HEVC/H265, VP8, VP9 HW Encode: MPEG2, AVC/H264, JPEG, HEVC/H265, VP8, VP9	
Display		1 x HDMI 1 x DVI-I (DVI-D signal) 1 x DP++	HDMI 2.0a: resolution up to 4096x2160 @ 60Hz DVI-D: resolution up to 1920x1200 @ 60Hz DP++: resolution up to 4096x2106 @ 60Hz
Triple Displays		DVI-D + HDMI + DP++	
STORAGE	Interface	5 x SATA 3.0 1 x 2.5" SSD Bay	
EXPANSION	Interface	1 x PCIe x16 (Gen 3) 2 x PCIe x4 (Gen 3) 1 x mini PCIe (PCIe/mSATA/USB2.0) 1 x M.2 2242/2260/2280 M key (PCIe Gen3 x4 NVMe)	Support AMD E9260 Graphic card 180(L) x115(H)mm; up to 75W
AUDIO	Audio Codec	Realtek ALC888	
ETHERNET	Controller	1x Intel i219LM PCIe (10/100/1000Mbps) with iAMT 12.0 (only Core i7/ i5 supports iAMT) 1x Intel I211at PCIe (10/100/1000 Mbps)	
LED	Indicators	1 x Power LED 1 x HDD LED	
I/O	Ethernet	2 x GbE (RJ-45)	
	Serial	COM1 : RS-232/422/485 DB9 (RS-232 w/ power) COM3: RS-232 COM4: RS-232	
	USB	2 x USB 3.1 Gen 2 2 x USB 3.1 Gen 1 6 x USB 2.0	
	Display	1 x HDMI 1 x DVI-I (DVI-D signal) 1 x DP++	
	Audio	1x Line-out 1x Line-in (colay,opt. by request, MOQ required) 1xMic-in	
	PS/S	1x PS/2 (mini-DIN-6)	
GAMING	Intrusion Detection	6 x Intrusion Dections ( one is already applied to PC BOX) Operates with and without AC power Logs Date/ Time of latest 64 events 5 Years data retention 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 for up to 8 meters; 3-bit x 3A)	
WATCHDOG TIMER	Output & Interval	System Reset, Programmable via Software from 1 to 255 Seconds	
SECURITY	TPM	Infineon TPM 1.2/ 2.0 (Available upon request, MOQ required)	
POWER	Type	Flex-ATX 250W (optional)	
	Connector	12V DC-in , 24-pin ATX power	
OS & SOFTWARE SUPPORT	OS Support	Windows 10(64bit) Ubuntu 18.04 LTS 64bit	
	Software	Supplied with gaming function SDK	

<b>ENVIRONMENT</b>	<b>Operating Temperature</b>	0~45°C
	<b>Storage Temperature</b>	-20~85°C
	<b>Relative Humidity</b>	5%~90%
<b>MECHANISM</b>	<b>Mounting</b>	Wall Mount
	<b>Dimensions (W x H x D)</b>	275x146.3x296.43mm (without PSU & mounting kits) 365x145.3x296.43 (with PSU & without mounting kits)
	<b>Weight</b>	4.88kg (w/o PSU) 6.08kg (w/ PSU)
<b>STANDARDS AND CERTIFICATIONS</b>	<b>Shock</b>	Operation: IEC 60068-2-64 Test Fh: Vibration board-band random test Half-sine, 3G @ 11ms, 18 Shock ±X, ±Y, ±Z (each axis 3 times) Non-Operation: IEC 60068-2-27 Test Ea: Shock test Half-sine, 5G @ 11ms, 18 Shock ±X, ±Y, ±Z (each axis 3 times)
	<b>Vibration</b>	Operation: IEC 60068-2-64 Test Fh: Vibration Board-Band Random Test Random, 1Grms @ 5~500 Hz, 30min. Non-Operation: IEC 60068-2-6 Test Fc: Vibration Sinusoidal Test Sweep sine, 2Grms @ 10~500Hz, 30min.
	<b>Certifications</b>	CE, FCC class A

## ORDERING INFORMATION

Model Name	Part Number	Description
GM831-CSF (without PSU)	750-GM8310-000G	GM831-CSF: CS331-Q370, 3 COM, 10 USB, 2 LAN, 1 HDMI, 1 DVI, 1 DP, 6 Intrusion, 32 input, 32 output, PCIe x16, F/G SYSTEM RoHS
GM831-CSF (with PSU)	750-GM8310-100G	GM831-CSF: CS331-Q370, 3 COM, 10 USB, 2 LAN, 1 HDMI, 1 DVI, 1 DP, 6 Intrusion, 32 input, 32 output, PCIe x16, F/G SYSTEM RoHS, Power supply

## PACKING LIST

1 GM831-CSF system unit
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