

# GM331-CSFS Q370 H310

8th/9th Gen Intel® Core™  
Gaming Box PC



## KEY FEATURES



### BIOS Protect

Support Jurisdiction BIOS and BIOS write protect (comply with GLI regulation)



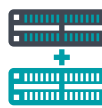
### Smart Meter Function

Meter current sense/ Meter out/ Meter detect/ Meter data stored in NVRAM when power off



### Data Retention

1-year NVRAM data retention during power off



### Expansion & Design

Optional RS232 / DIO / AMP 40W output

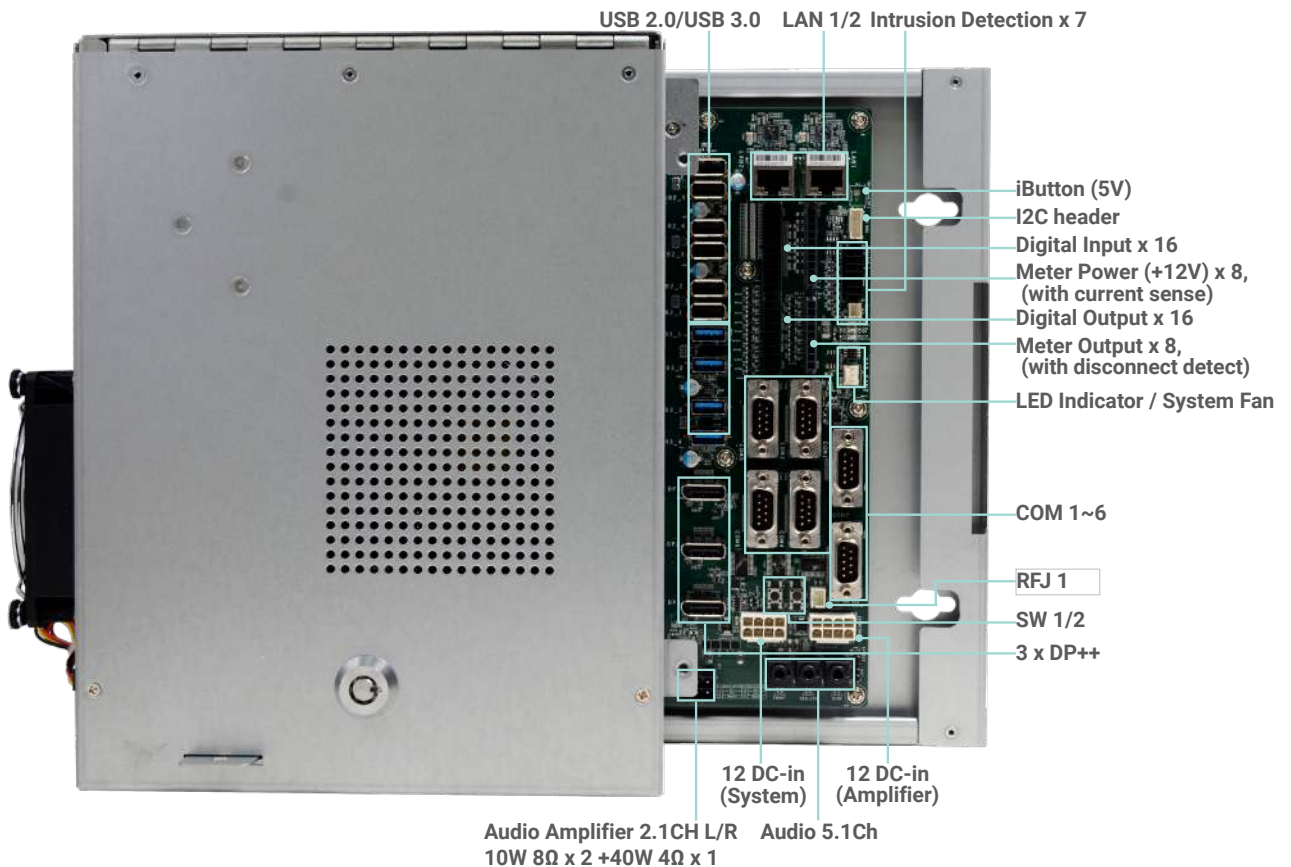


### Graphic Card

Support 1 graphic card with onboard DC-in 12V

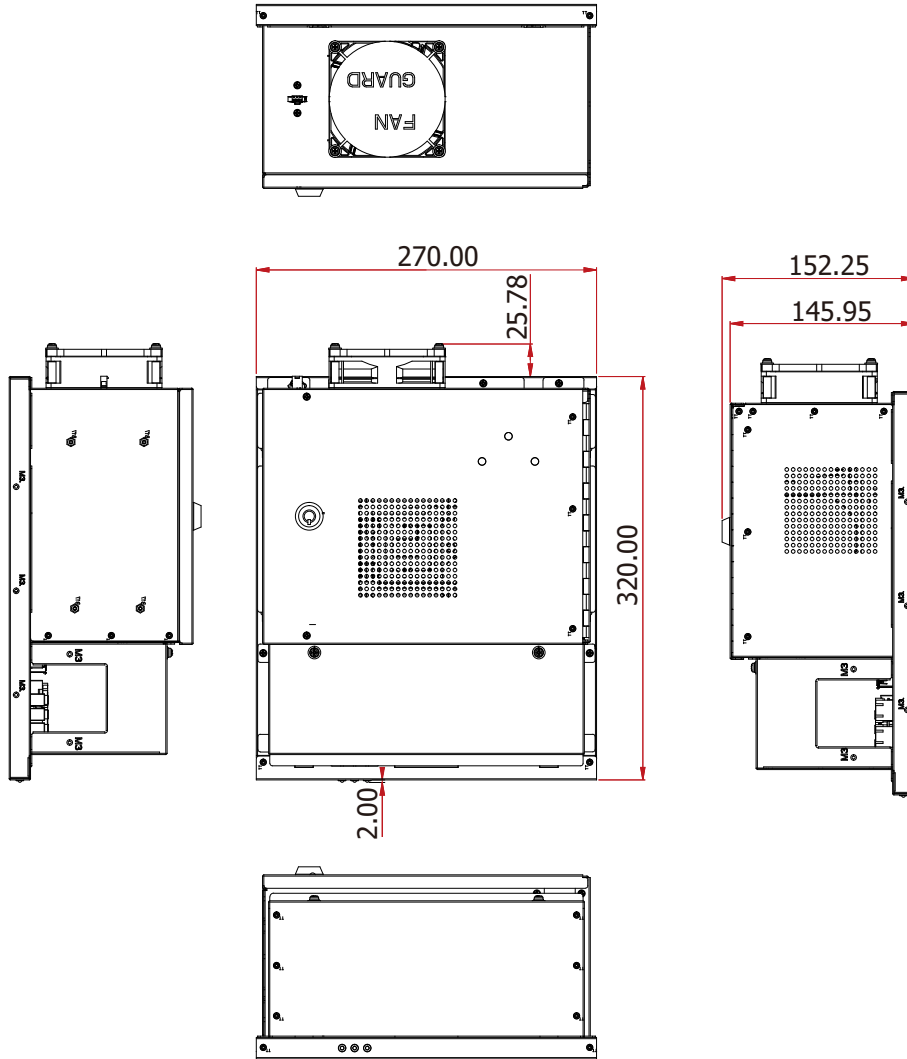


## PANEL



Rear View

# DIMENSIONS



## SPECIFICATION

SYSTEM	Processor	8th Generation Intel® Core™ /Pentium®/Celeron® LGA 1151 Socket Processors: Intel® Core™ i7-8700K (6 Cores, 12M Cache, up to 4.7 GHz); 95W 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 9th Generation Intel® Core™ LGA 1151 Socket Processors: Intel® Core™ i7-9700TE (8 Cores, 12M Cache, up to 3.8 GHz); 35W 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		
	Chipset	Intel® Q370/H310 Chipset		
	Memory	Dual Channel DDR4 2400/2666 MT/s SO-DIMM	Q370= DDR4 2666 MT/s H310= DDR4 2400 MT/s	
	BIOS	AMI SPI 128Mbit Support Jurisdiction BIOS		
	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		
Triple Displays		3 x DP++	DP++: resolution up to 4096 x 2106 @ 60Hz	
STORAGE	External/Internal	2 x SATA III port 2 x SATA power ( chassis is with 2 x 2.5" SSD holder) 2 x CFast connector 1 x M.2 M key		
EXPANSION	Interface	1 x PCIe x16 for graphic card (card's max. length < 180mm) , onboard DC +12V for graphic card is available		
AUDIO	Audio Codec	5.1CH: Realtek ALC888S (Optional) 2.1CH AMP L/R 10W 8Ω +40W 4Ω: Realtek ALC888S + LY8326A and LPF solution		
ETHERNET	Controller	Realtek RTL8119/8111HN		
LED	Indicators	Power and HDD status LED		
External I/O	Gaming	- NVRAM x 2 up to 8Mbyte read/write 4 banks; keep data for 1 year with CR2032; system automatically sends notice when battery voltage is lower than 15% - Digital input x 16 ; Digital output x 16 ( Optional Digital input x 32 Digital output x 32 via expansion I.O card) - Smart Meter: Meter power x 8 (+12V) Meter current sense and Meter detect Meter data automatically writes in NVRAM when power off - iButton 8 x intrusion detection		
	Ethernet	2 x GbE (RJ-45)		
	Serial	COM1 (support 232/422/485) COM2 ~ 6 (support 232) Optional: COM7 (support simple 232 or ccTalk) COM 8~9 (support simple232/SAS/BACTA)		
	USB	4 x USB 3.0 5 x USB 2.0 ( H310: 4 x USB 2.0 ; Q370: 5 x USB 2.0)		
	Display	3 x DP++	DP++: resolution up to 4096x2106 @ 60Hz	
	Power	2 x 12V DC-IN ( 1 for system ; 1 for Amplifier & graphic card)		
	System Fan	1 x system fan conn.		
	I2C	1 x I2C Header		
	Audio	1 x 5.1 CH Line-out(Audio Jack) 1 x SPDIF 1 x 2.1ch AMP L/R 10W 8Ω +40W 4Ω (2*3 pin header)(optional)		
	INTERNAL I/O	External Graphic	1 x DC-out + 12V 1 x PCIe x 16	
		Gaming	1 x 8 bit Dip switch	
		USB	2 x USB 2.0	

<b>COOLING</b>	<b>FAN</b>	1 x System fan conn.(internal)
	<b>Cooler</b>	CPU cooler for 65W CPU
<b>WATCHDOG TIMER</b>	<b>Output &amp; Interval</b>	System Reset, Programmable via Software from 1 to 255 Seconds
	<b>SECURITY</b>	
<b>POWER</b>	<b>TPM</b>	TPM 2.0
	<b>Type</b>	2 x 12V DC-IN ( 1 for MB ; 1 for Amplifier & graphic card) 1 x 12V DC-Out (for+ 12V meter x 8)
<b>OS SUPPORT</b>	<b>Connector</b>	BOX Header
	<b>OS Support</b>	Windows 10 Linux-based OS
<b>ENVIRONMENT</b>	<b>Operating Temperature</b>	0~45°C
	<b>Storage Temperature</b>	-20~70°C
	<b>Relative Humidity</b>	5%~90%
<b>MECHANISM</b>	<b>Dimensions (W x H x D)</b>	270mm x 150mm x 295mm (W x H x D)
	<b>Weight</b>	3.9 kg
	<b>STANDARDS AND CERTIFICATIONS</b>	
	<b>Certifications</b>	CE, FCC Class B