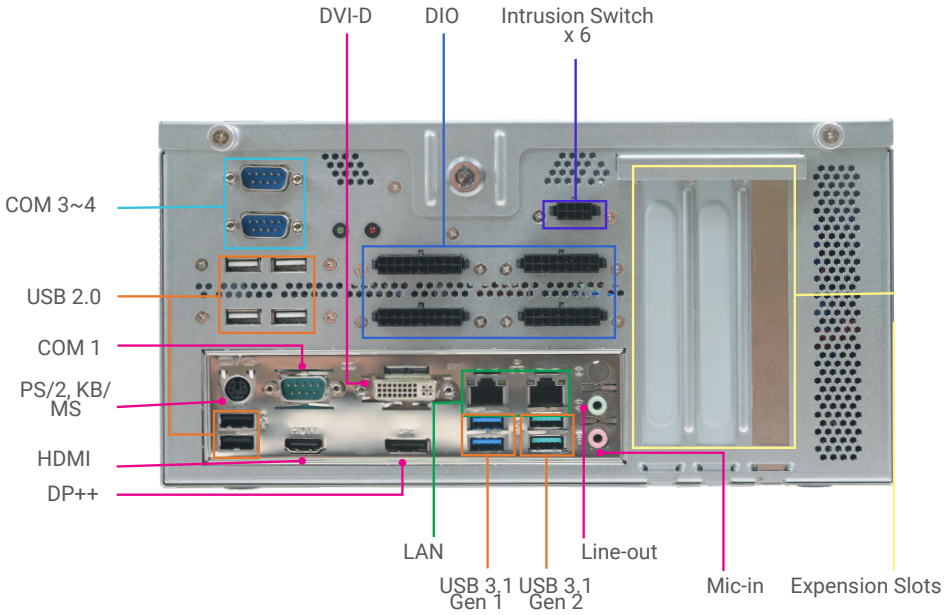
GM831-CSF Installation Guide

Package Contents

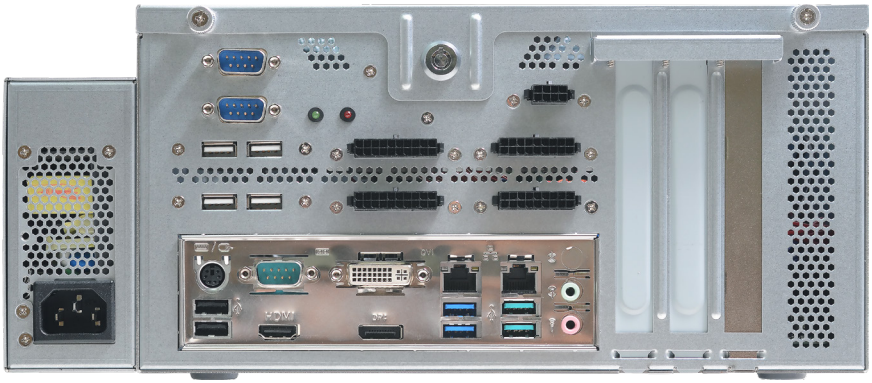
• One GM831-CSF system unit
• Demonstration kit: - Power Supply (PSU)

Note:
The software package that came with the system contains application and code samples to implement gaming software for the system.

Ports and Connectors



Front View

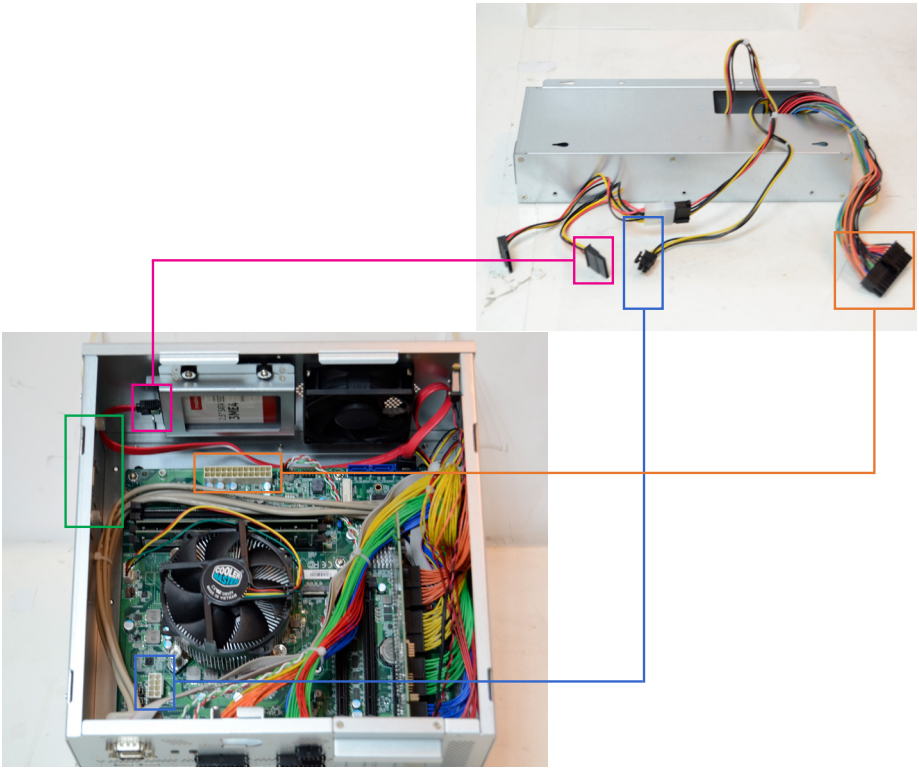


Front View
(with Power Supply)

Connecting the Power Supply

The PSU is an optional item of GM831-CSF for the power supply solution. The instruction below is to demonstrate the process to connect the PSU to GM831-CSF.

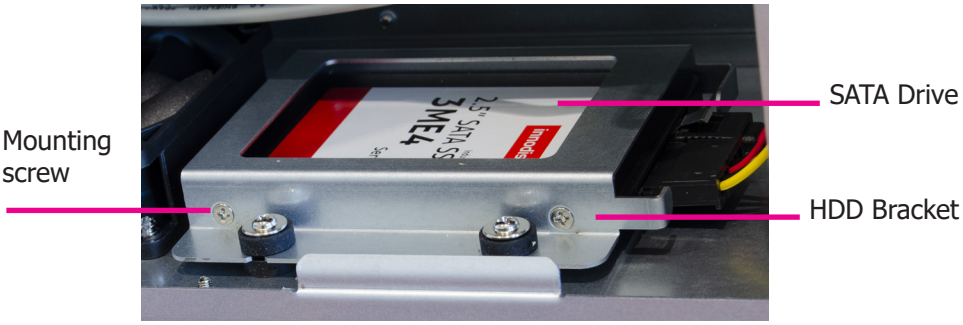
1. Make sure the system and all other peripherals connected to it have been powered off.
2. Disconnect all power cords and cables.
3. Remove the mounting screw on the side and take off the cover to unveil the hole. (Green label)
4. Put all the cables from the PSU into GM831-CSF through the hole.
5. Connect the PSU to GM831-CSF's port using the multi-clolor cable. (Orange label)
6. Connect the PSU to GM831-CSF's port using the small cable. (Blue label)
7. Connect the PSU to GM831-CSF's port using the 1 flat cable. (Pink label)



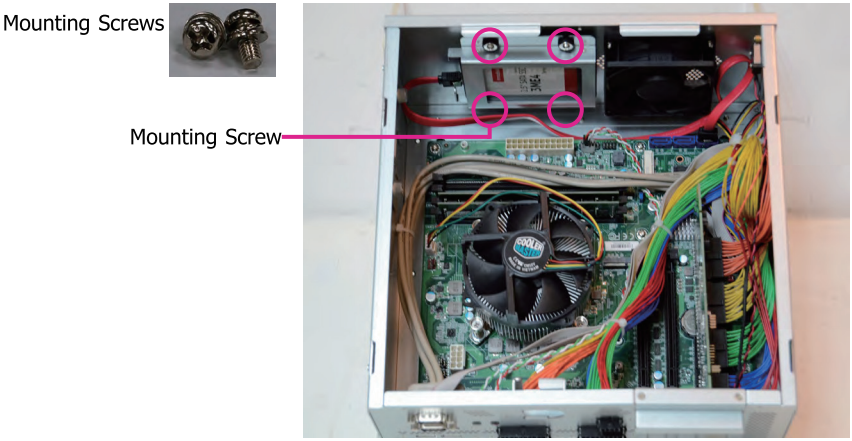
Installing a 2.5" SATA Drive

The system can accommodate one 2.5” HDDs.

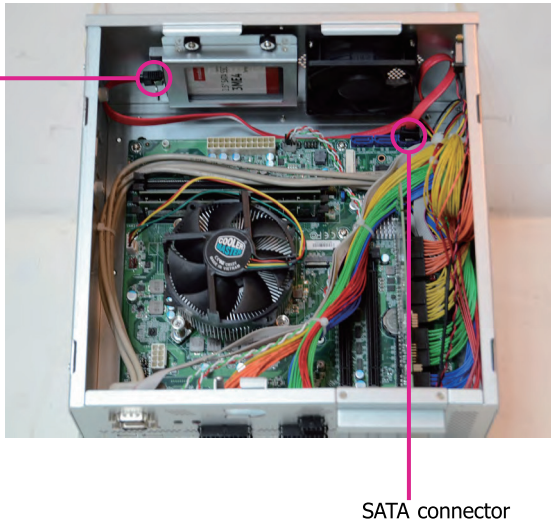
1. To install a 2.5" HDD, use the 2.5" HDD bracket as shown below. Align the mounting holes on the SATA drive with the mounting holes on the HDD bracket and use the mounting screws provided in the drive bay kit to secure the drive in place.



2. Place the HDD bracket with the installed SATA drives back into the chassis and use the provided mounting screws to attach the HDD bracket to the drive bay. Use the provided mounting screws to attach the HDD bracket to the drive bay.



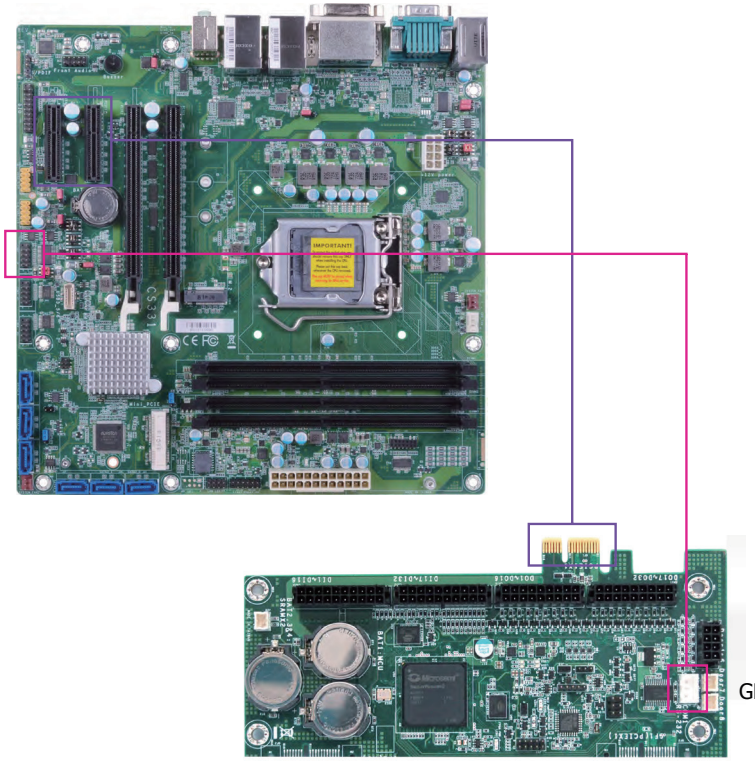
3. Connect the SATA data cable to the SATA drive.



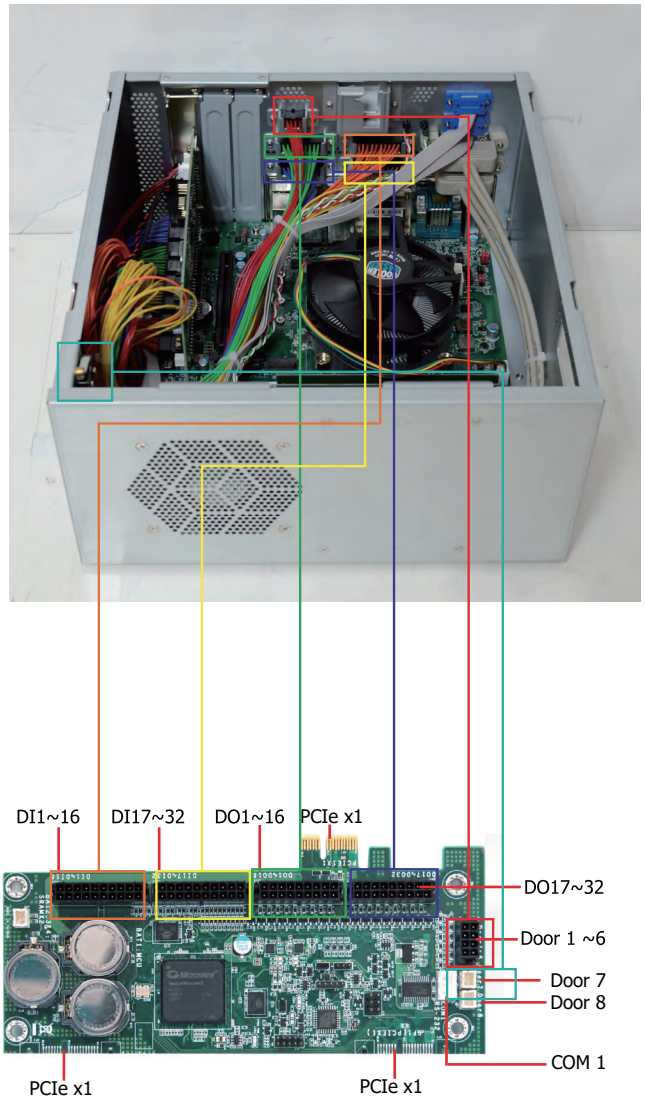
Installing GM901

GM901 is the expansion for gaming solution.

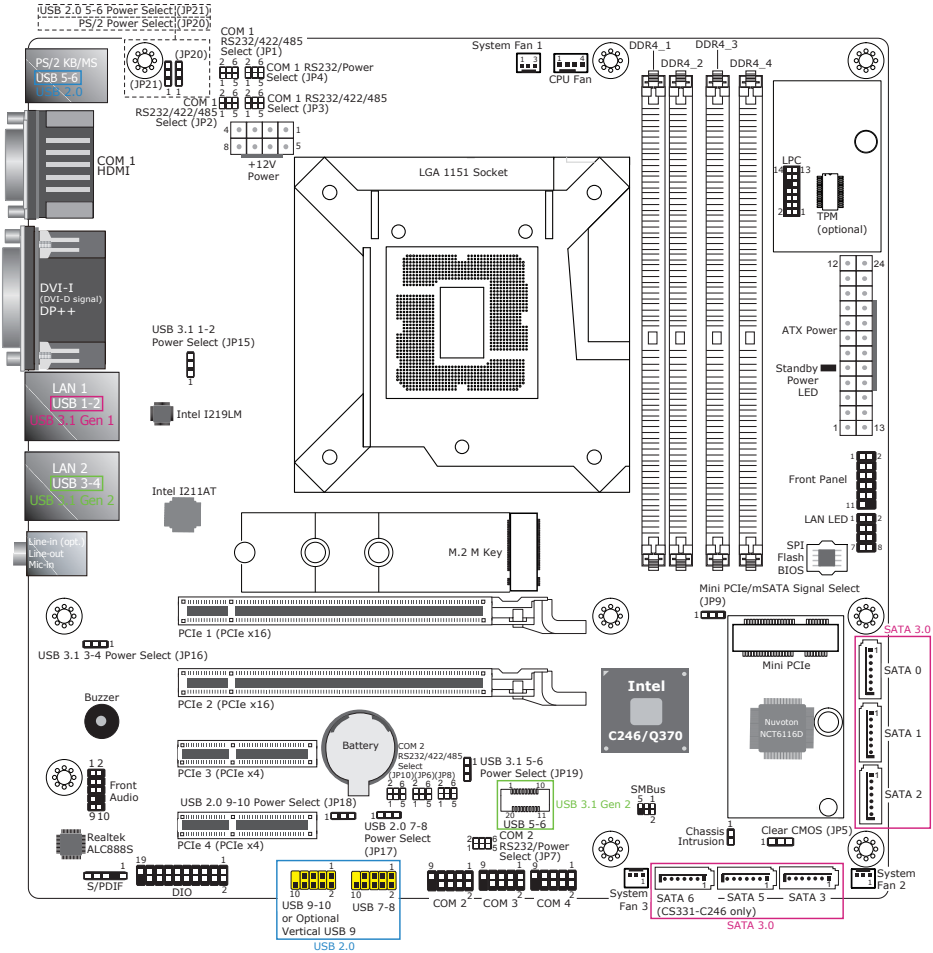
1. Make sure the system and all other peripherals connected to it have been powered off.
2. Disconnect all power cords and cables.
3. Insert GM901 into GM831 with PCIe. (Purple label)
4. Connect GM901's COM 1 to GM831's COM 2. (Pink label)
5. Connect GM901's Door 1~6 to GM831's Intrusion port. (Red label)
6. Connect GM901's D/O 01~16 to GM831's D/O 01~16. (Green label)
7. Connect GM901's D/O 17~32 to GM831's D/O 17~32. (Blue label)
8. Connect GM901's D/I 01~16 to GM831's D/I 01~16. (Orange label)
9. Connect GM901's D/I 17~32 to GM831's D/I 17~32. (Yellow label)
10. Connect GM901's Door 7 to GM831. (Tiffany Blue label)



GM901


DI1~16
DI17~32
DO1~16
PCIe x1
DO17~32
Door 1 ~6
Door 7
Door 8
COM 1
PCIe x1
PCIe x1

Board Layout and Jumper Settings



Clear CMOS Data	JP5
Normal (default)	1-2 On
Clear CMOS Data	2-3 On

Mini PCIe/mSATA Signal Select	JP9
Mini PCIE (default)	1-2 On
mSATA	2-3 On

Selection for COM 1	JP1/JP2
RS232	1-3, 2-4 On
RS422	3-5, 4-6 On
RS485	3-5, 4-6 On

Selection for COM 2	JP6/JP8
RS232	1-3, 2-4 On
RS422	3-5, 4-6 On
RS485	3-5, 4-6 On

Selection for COM 1	JP3
RS232	1-3, 4-6 On
RS422	3-5, 4-6 On
RS485	3-5, 2-4 On

Selection for COM 2	JP10
RS232	1-3, 4-6 On
RS422	3-5, 4-6 On
RS485	3-5, 2-4 On

Selection for COM 1	JP4
RS232	1-3 (RI-), 2-4 (DCD-) On
RS232 with power	3-5 (+5V), 4-6 (+12V) On

Selection for COM 2	JP7
RS232	1-3 (RI-), 2-4 (DCD-) On
RS232 with power	3-5 (+5V), 4-6 (+12V) On

PS/2 Power Select	JP20
+5VDU (default)	1-2 On
+5V	2-3 On

USB Power Select	JP15 (USB 3.1 1-2)
+5VDU (default)	1-2 On
+5V	2-3 On

USB Power Select	JP16 (USB 3.1 3-4)
+5VDU (default)	1-2 On
+5V	2-3 On

USB Power Select	JP17 (USB 2.0 7-8)
+5VDU (default)	1-2 On
+5V	2-3 On

USB Power Select	JP18 (USB 2.0 9-10)
+5VDU (default)	1-2 On
+5V	2-3 On

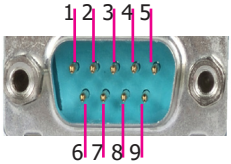
USB Power Select	JP19 (USB 3.1 5-6)
+5VDU (default)	1-2 On
+5V	2-3 On

USB Power Select	JP21 (USB 2.0 5-6)
+5VDU (default)	1-2 On
+5V	2-3 On

Connector Pin Assignment

COM1/COM2 RS232/422/485 Select

Pins	RS232	RS422	RS485
1	DCD-	RX+	DATA+
2	SIN-	RX-	DATA-
3	SO-	TX+	NC
4	DTR-	TX-	NC
5	GND	GND	GND
6	DSR-	NC	NC
7	RTS-	NC	NC
8	CTS-	NC	NC
9	RI-	NC	NC



COM1/COM2 RS232 Power Select

Pins	RS232	RS232 with power
1	DCD-	+12V
2	SIN-	SIN-
3	SO-	SO-
4	DTR-	DTR-
5	GND	GND
6	DSR-	DSR-
7	RTS-	RTS-
8	CTS-	CTS-
9	RI-	+5V

COM 3/4: RS232

Pins	Pin Assignment
1	DCD-
2	SIN-
3	SO-
4	DTR-
5	GND
6	DSR-
7	RTS-
8	CTS-
9	RI-

Front Panel Pin Assignment

	Pins	Assignment		Pins	Assignment
	1	N.C.	PWR-LED	2	LED Power
HD-LED	3	HDD Power		4	LED Power
	5	Signal		6	Signal
RESET	7	Ground	ATX-SW	8	Ground
	9	Signal		10	Signal
	11	N.C.		12	---

USB 3.1 Gen 2 5-6 Header

Pins	Assignment	Pins	Assignment
1	GND	20	PWR
2	TX+	19	DATA-
3	TX-	18	DATA+
4	GND	17	GND
5	RX+	16	RX+
6	RX-	15	RX-
7	GND	14	GND
8	DATA+	13	TX+
9	DATA-	12	TX-
10	PWR	11	GND

USB 2.0 7-8/9-10 Headers

Pins	Assignment	Pins	Assignment
1	PWR	2	PWR
3	DATA-	4	DATA-
5	DATA+	6	DATA+
7	GND	8	GND
9	---	10	NC

Digital I/O Connector

Pins	Pin Assignment	Pins	Pin Assignment
1	GND	2	+12V
3	DIO7	4	+12V
5	DIO6	6	GND
7	DIO5	8	+5V
9	DIO4	10	+5V
11	DIO3	12	GND
13	DIO2	14	+5VDU
15	DIO1	16	+5VDU
17	DIO0	18	GND
19	GND	20	---

LAN LED Pin Assignment

Pins	Assignment	Pins	Assignment
1	GBE_1000-	2	GBE_LED_100-
3	GBE_LED_LINK_ ACT-	4	3V3DU
5	LINK_1000_4	6	LINK_100_4
7	LINK_ACTIVITY_4	8	3V3DU

LPC Pin Assignment

Pins	Assignment	Pins	Assignment
1	CLK	2	LAD1
3	RST#	4	LAD0
5	FRAME#	6	3V3
7	LAD3	8	GND
9	LAD2	10	---
11	INT_SERIRQ	12	GND
13	5VDU	14	5V

CPU Fan

Pins	Pin Assignment
1	GND
2	+12V
3	Sense
4	Speed Control

System Fan 1/2/3

Pins	Pin Assignment
1	GND
2	Power
3	Sense

SATA 3.0 0/1/2/3/5 /6 (CS331~C246 only)

Pins	Pin Assignment
1	GND
2	TX+
3	TX-
4	GND
5	RX-
6	RX+
7	GND

+12V Power

Pins	Assignment	Pins	Assignment
1	GND	5	+12V
2	GND	6	+12V
3	GND	7	+12V
4	GND	8	+12V

ATX Power

Pins	Pin Assignment	Pins	Pin Assignment
1	+3.3V	13	+3.3V
2	+3.3V	14	-12V
3	GND	15	GND
4	+5V	16	PS_ON#
5	GND	17	GND
6	+5V	18	GND
7	GND	19	GND
8	PWR_OK	20	NC
9	+5VSB	21	+5V
10	+12V	22	+5V
11	+12V	23	+5V
12	+3.3V	24	GND

SMBus

Pins	Assignment	Pins	Assignment
1	3V3DU	2	GND
3	SMB_CLK	4	SMB_DATA
5	SMB_ALERT	6	---

S/PDIF

Pins	Pin Assignment
1	+5V
2	---
3	SPDIF out
4	GND
5	SPDIF in

Chassis Intrusion

Pins	Pin Assignment
1	Signal
2	GND