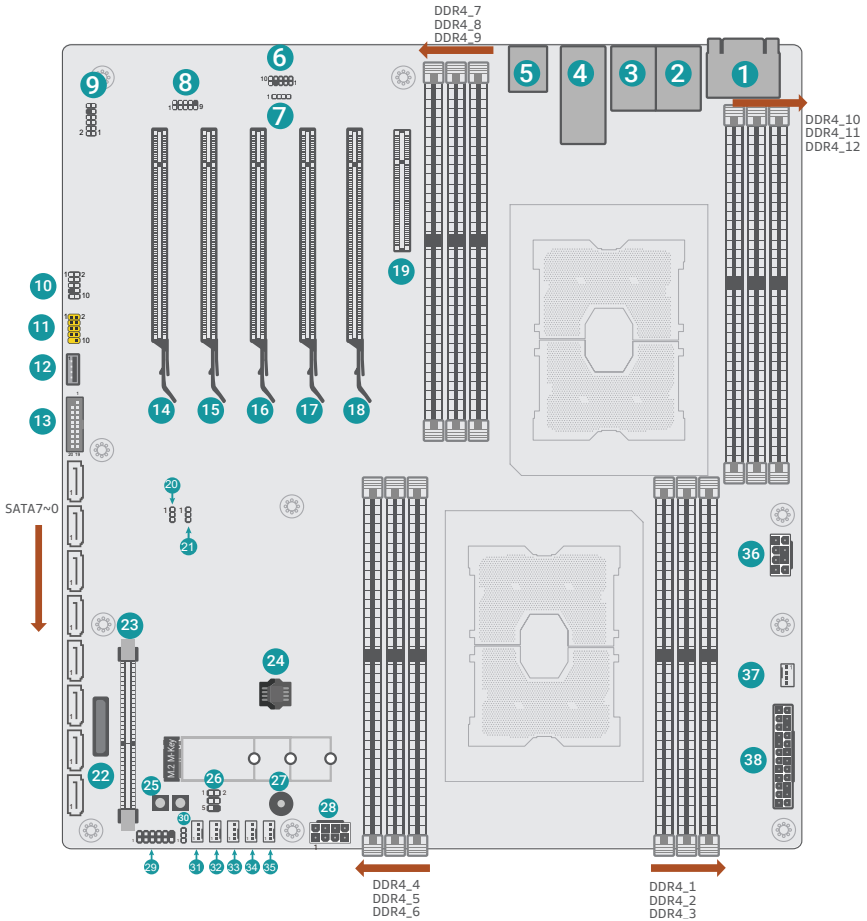


Board Layout

Top View



1	▲VGA	20	ME Firmware Update
	▼COM1	21	Clear CMOS Data
2	▲LAN	22	Battery
3	▼USB3.2 Gen1	23	BMC DDR4 SO-DIMM
4	10G LAN	24	SPI
5	MGMT	25	Reset Power
6	Front Audio	26	SMBus
7	Front Audio (Line In)	27	Buzzer
8	BMC UART	28	12V ATX Power
9	LPC (for Debug Port 80)	29	Front Panel
10	PS2	30	Flash Security Override
11	USB2_8/9	31	System Fan 4
12	USB2.0	32	System Fan 3
13	USB3_5/6	33	System Fan 2
14	PCIE 6	34	System Fan 1
15	PCIE 5	35	CPU Fan 1
16	PCIE 4	36	12V ATX Power
17	PCIE 3	37	CPU FAN 2
18	PCIE 2	38	ATX Power
19	PCIE 1		



Jumper Settings

21 Clear CMOS Data	JP15
Normal (default)	1-2 On
Clear RTC Registers	2-3 On

20 ME Firmware Update	JP16
Normal (default)	1-2 On
ME Force Update	2-3 On

30 Flash Security Override	JP8
Disable (default)	1-2 On
Enable	2-3 On

PIN Assignment

7 ► Front Audio - Line In (J53)

Pin	Assignment
1	LINE1-R
2	LINE1-JD
3	GND
4	LINE1-L

31 32 33 ► CPU and System Fans (J17, J20, J22, J46, J47, J48)

34 35 37

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

29 ► Front Panel (J24)

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

26 ▶ SMBus (J5)

Pin	Assignment	Pin	Assignment
1	3V3_AUX	2	GND
3	SMB_HOST_STBY_ LVC3_SCL	4	SMB_HOST_STBY_ LVC3_SDA
5	PU_PCH_TL5_ ENABLE_STRAP	6	---

6 ▶ Front Audio (J56)

Pin	Assignment	Pin	Assignment
1	GND	2	Mic2-L
3	N.C.	4	Mic2-R
5	Mic2-JD	6	Line2-R
7	--	8	GND
9	Line2-JD	10	Line2-L

8 ▶ BMC UART (J27)

Pin	Assignment	Pin	Assignment
1	MDCD1-	2	MRD1
3	MTD1	4	MDTR1-
5	GND	6	MDSR1-
7	MRTS1-	8	MCTS1-
9	MRI1-	10	---

11 ► USB2_8/9 (J29)

Pin	Assignment	Pin	Assignment
1	VCC	2	VCC
3	USB8_D-	4	USB9_D-
5	USB8_D+	6	USB9_D+
7	GND	8	GND
9	KEY	10	N.C.

10 ► PS2 (SOJ1)

Pin	Assignment	Pin	Assignment
1	PS2_KCLK	2	PS2_MCLK
3	PS2_KDAT	4	PS2_MDAT
5	GND	6	GND
7	NC	8	GND
9	BVCC	10	BVCC

9 ► LPC_for Debug Port 80 (J4)

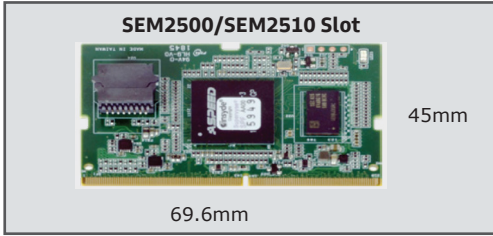
Pin	Assignment	Pin	Assignment
1	CLK	2	LAD1
3	RST#	4	LAD0
5	Frame#	6	3V3
7	LAD3	8	GND
9	LAD2	10	---
11	SERIRQ	12	N.C.

13 ▶ **USB3_5/6 (J54)**

Pin	Assignment	Pin	Assignment
1	PWR	2	D2+
3	SSRX1-	4	D2-
5	SSRX1+	6	GND
7	GND	8	SSTX2+
9	SSTX1-	10	SSTX2-
11	SSTX1+	12	GND
13	GND	14	SSRX2+
15	D1-	16	SSRX2-
17	D2+	18	PWR
19	N.C.	20	--



SEM2500 Golden Finger Pin Define



Pin	Assignment	Pin	Assignment
1	GND	26	GND
2	GND	27	GND
3	8211_BMC_RXCK	28	8211_BMC_TXCLK
4	8211_BMC_RXD0	29	8211_BMC_TXD2
5	GND	30	GND
6	GND	31	GND
7	8211_BMC_RXCTL	32	BMC_USB2_P
8	8211_BMC_RXD1	33	8211_BMC_TXD3
9	GND	34	BMC_USB2_N
10	GND	35	GND
11	8211_BMC_MDC2	36	GND
12	8211_BMC_RXD2	37	NCSI_BMC_MAC1_CRSDV
13	8211_BMC_MDIO2	38	NCSI_BMC_MAC1_TXEN
14	GND	39	GND
15	GND	40	GND
16	8211_BMC_RXD3	41	NCSI_OSC_CLK50M
17	8211_RGMII_BMC_CLK	42	NCSI_BMC_MAC1_TXD0
18	GND	43	GND
19	GND	44	GND
20	N.C.	45	NCSI_BMC_MAC1_RXD0
21	8211_BMC_TXD0	46	NCSI_BMC_MAC1_TXD1
22	GND	47	GND
23	GND	48	GND
24	8211_BMC_TXCTL	49	NCSI_BMC_MAC1_RXD1
25	8211_BMC_TXD1	50	VGA_IBMC_BLUE

Pin	Assignment	Pin	Assignment
51	GND	76	CLK_100M_IBMC_PE_N
52	GND	77	GND
53	BMC_USB1_P	78	GND
54	VGA_IBMC_GREEN	79	LPC_LAD0_IO0
55	BMC_USB1_N	80	IRQ_BMC_PCH_SMI_LPC_N
56	GND	81	GND
57	GND	82	GND
58	VGA_IBMC_RED	83	LPC_LAD0_IO1
59	VGA_IBMC_DDCCLK	84	FM_PCH_BMC_THERMTRIP_N
60	GND	85	GND
61	GND	86	GND
62	VGA_IBMC_HSYNC	87	LPC_LAD0_IO2
63	VGA_IBMC_DDCDAT	88	BMC_SMB_SCL1
64	GND	89	GND
65	GND	90	GND
66	VGA_IBMC_VSYNC	91	LPC_LAD0_IO3
67	CLK_24M_33M_LPC	92	BMC_SMB_SDA1
68	GND	93	GND
69	GND	94	GND
70	LPC_LFRAME_N	95	P3E_PCH_TO_BMC_C_P
71	IRQ_LPC_SERIRQ_N	96	BMC_SMB_SCL2
72	GND	97	P3E_PCH_TO_BMC_C_N
73	GND	98	GND
74	CLK_100M_IBMC_PE_P	99	GND
75	RST_PLTRST_N	100	BMC_SMB_SDA2

Pin	Assignment	Pin	Assignment
101	FM_SLPS4_N	126	BMC_GPIOA2
102	GND	127	BMC_GPIOA1
103	GND	128	BMC_GPIOA3
104	PCIE_BMC_RST_N	129	3V3SB
105	FM_SLPS3_N	130	3V3SB
106	GND	131	BMC_GPIOQ4
107	GND	132	BMC_GPIOQ6
108	P3E_BMC_TO_PCH_C_P	133	BMC_GPIOQ5
109	MISC_IBMC_SRST_N	134	BMC_GPIOQ7
110	P3E_BMC_TO_PCH_C_N	135	3V3SB
111	N.C.	136	3V3SB
112	N.C.	137	N.C.
113	SPI_BMC_CS_N	138	ADC8_POWER
114	SPI_BMC_MOSI	139	ADC1_POWER
115	SPI_BMC_CLK	140	ADC9_POWER
116	SPI_BMC_MISO	141	3V3SB
117	3V3SB	142	3V3SB
118	3V3SB	143	ADC2_POWER
119	SPI_PCH_CS_N	144	ADC10_POWER
120	SPI_PCH_DO	145	ADC3_POWER
121	SPI_PCH_CK	146	ADC11_POWER
122	SPI_PCH_DI	147	3V3SB
123	3V3SB	148	3V3SB
124	3V3SB	149	ADC4_POWER
125	BMC_GPIOA0	150	ADC12_POWER

Pin	Assignment	Pin	Assignment
201	GND	226	GND
202	GND	227	GND
203	BMC_SMB_SDA6	228	RS232_BMC_RXD
204	BMC_SMB_SDA5	229	FAN_PWM0
205	GND	230	GND
206	GND	231	GND
207	BMC_SMB_SCL7	232	FAN_PWM3
208	BMC_SMB_SCL8	233	FAN_PWM1
209	GND	234	GND
210	GND	235	GND
211	BMC_SMB_SDA7	236	FAN_PWM4
212	BMC_SMB_SDA8	237	FAN_PWM2
213	GND	238	GND
214	GND	239	GND
215	RS232_BMC_CTS	240	FAN_PWM5
216	RS232_BMC_DTR	241	FAN_TACH0
217	GND	242	FAN_PWM6
218	GND	243	GND
219	RS232_BMC_DCD	244	GND
220	RS232_BMC_RTS	245	FAN_TACH1
221	RS232_BMC_DSR	246	FAN_PWM7
222	GND	247	GND
223	GND	248	GND
224	RS232_BMC_TXD	249	FAN_TACH3
225	RS232_BMC_NRI	250	FAN_TACH2

Pin	Assignment	Pin	Assignment
151	ADC5_POWER	176	GND
152	ADC13_POWER	177	IRQ_BMC_PCH_NMI
153	3V3SB	178	PGPPA_SB_EN
154	3V3SB	179	FM_NMI_EVENT_N
155	ADC6_POWER	180	GND
156	ADC14_POWER	181	GND
157	ADC7_POWER	182	FM_SMI_ACTIVE_N
158	ADC15_POWER	183	PVCCIO_CPU0
159	3V3SB	184	GND
160	3V3SB	185	GND
161	N.C.	186	PRESENT1
162	N.C.	187	PECI_BMC
163	3V3SB	188	GND
164	P3V_BAT	189	GND
165	1V15SB_PWRGD	190	PRESENT2
166	RERST_BTN_OUT_N	191	BMC_SMB_SCL4
167	GND	192	GND
168	GND	193	GND
169	FP_LED_STATUS_GREEN_N	194	BMC_SMB_SCL3
170	FP_LED_STATUS_AMBER_N	195	BMC_SMB_SDA4
171	GND	196	GND
172	GND	197	GND
173	PWRBTN_OUT_N	198	BMC_SMB_SDA3
174	FM_BMC_PCH_SCL_LPC_N	199	BMC_SMB_SCL6
175	GND	200	BMC_SMB_SCL5

Pin	Assignment
251	GND
252	GND
253	FAN_TACH4
254	FAN_TACH5
255	N.C.
256	FAN_TACH6
257	5VDU
258	12V
259	5VDU
260	FAN_TACH7



Note:

The optional DDR4 SO-DIMM socket for the SEM2500/SEM2510 module supports additional IPMI management, BMC, and VGA output.



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