

®

D945GSEJT

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-001	®	D945GSEJT	2009	2
-002	®	D945GSEJT	2009	5

FCC

**FCC**

(2) (FCC) 15 (1)

Intel Corporation, 5200 N.E. Elam Young Parkway, Hillsboro, OR 97124,  
1-800-628-8686

(FCC) 15 B

- 
- 
- 
- 

FCC

**(Canadian Department of Communications)**

B

(Radio Interference

Regulations)

Le présent appareil numérique n'émet pas de bruits radioélectriques dépassant les limites applicables aux appareils numériques de la classe B prescrites dans le Règlement sur le brouillage radioélectrique édicté par le ministère des Communications du Canada.

®

D945GSEJT

<http://www.intel.com/>

1-800-548-4725

\*

© 2009

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®

D945GSEJT

®

(PC)

(I.T.E.)  
PC

PC

1

2

3 BIOS

A BIOS

B

BIOS

BIOS

EMC



**D945GSEJT**

GB	1,073,741,824
GHz	
KB	1024
MB	1,048,576
Mbit	1,048,576
MHz	

---

# 1

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D945GSEJT

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# 1

®

D945GSEJT

1

## 1.

	Mini-ITX 20 0.79 x 170 6.7 x 170 6.7
	®™ N270
	<ul style="list-style-type: none"> <li>• 200 2 (DDR2) (SO-DIMM)</li> <li>• DDR2 533 MHz SO-DIMM 533 MHz DDR2 800 MHz DDR2 667 MHz</li> <li>• 2 GB</li> </ul>
	<ul style="list-style-type: none"> <li>• ® 945GSE Express</li> <li>• ® 82945GSE Express (GMCH)</li> <li>• ® 82801GBM I/O (ICH7-M)</li> </ul>
	Intel® Graphics Media Accelerator 950 ® 950 ® GMA 950 <ul style="list-style-type: none"> <li>• (VGA)</li> <li>• (DVI-D)</li> </ul>
	2 + 2 ® ® HD Audio RealTek* ALC662 <ul style="list-style-type: none"> <li>•</li> <li>• S/PDIF</li> <li>•</li> </ul>
	PCI* PCI Express*
	<ul style="list-style-type: none"> <li>• USB 2.0</li> <li>• ® Z-U130 USB</li> <li>• ATA (PATA) 44 ATA-100/66</li> <li>• ATA (SATA) 3.0 Gb IDE ACHI</li> <li>• SATA</li> </ul>
<b>I/O</b>	Winbond* W83627DGH-A I/O <ul style="list-style-type: none"> <li>•</li> <li>•</li> <li>• PS/2</li> </ul>
	<ul style="list-style-type: none"> <li>• Winbond I/O</li> <li>•</li> <li>•</li> <li>•</li> <li>•</li> <li>•</li> <li>•</li> </ul>

D945GSEJT

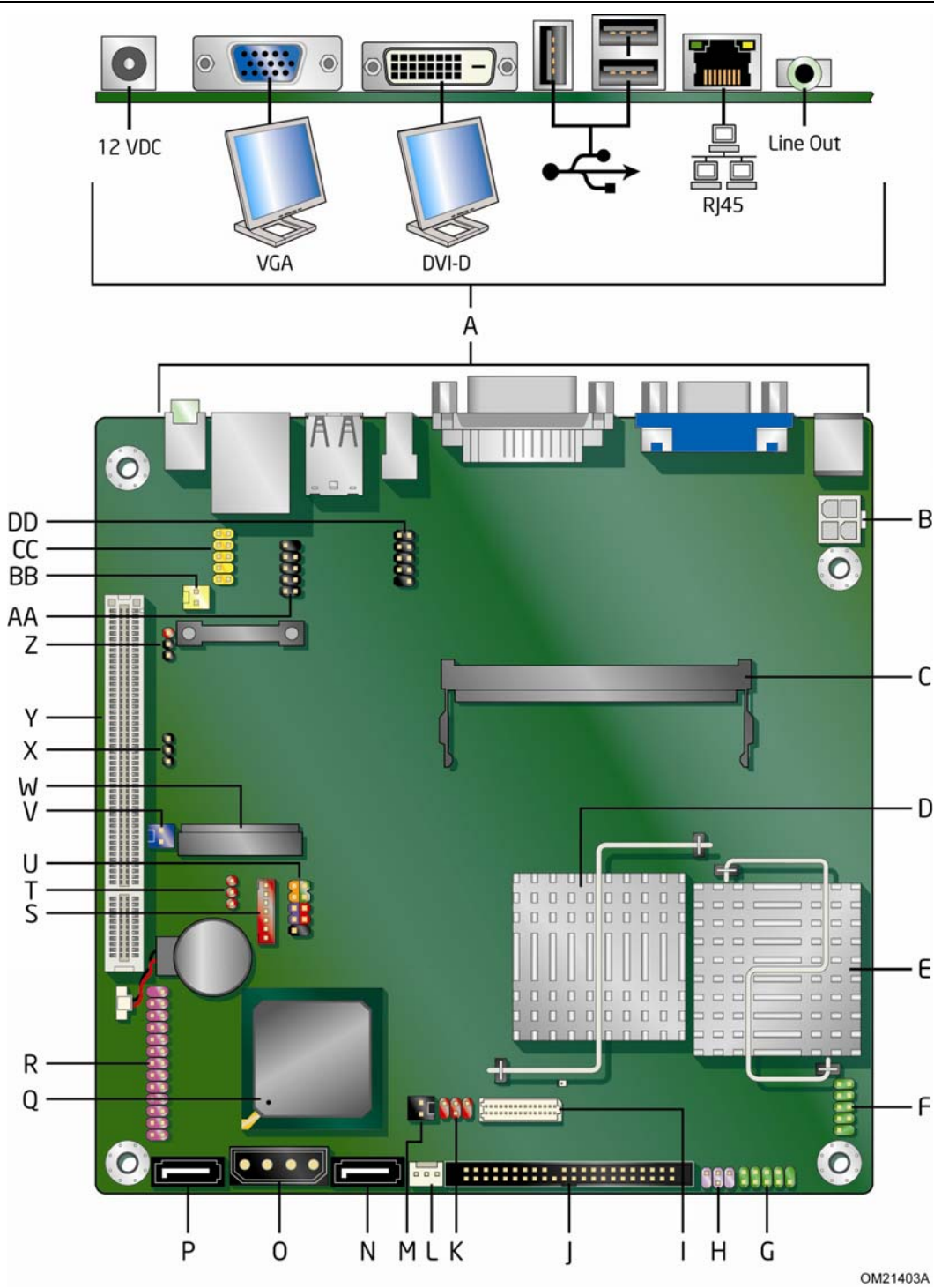
1.

<b>BIOS</b>	<ul style="list-style-type: none"> <li>• <sup>®</sup> BIOS</li> <li>• (ACPI) SMBIOS</li> </ul>
<b>LAN</b>	<ul style="list-style-type: none"> <li>• 10/100/1000 Mb LAN RealTek*</li> <li>• 8111DL</li> </ul>
	<ul style="list-style-type: none"> <li>• -</li> <li>• 12 V</li> <li>• ATX12V 2 x 2</li> </ul>
	<ul style="list-style-type: none"> <li>• (ACPI)</li> <li>• USB PCI PCI Express PS/2 LAN</li> </ul>

D945GSEJT

...

D945GSEJT	<a href="http://www.intel.com/products/motherboard/D945GSEJT/index.htm">http://www.intel.com/products/motherboard/D945GSEJT/index.htm</a>
	<a href="http://support.intel.com/support/motherboards/desktop">http://support.intel.com/support/motherboards/desktop</a>
D945GSEJT	<a href="http://www.intel.com/products/motherboard/D945GSEJT/index.htm">http://www.intel.com/products/motherboard/D945GSEJT/index.htm</a>
	<a href="http://www.intel.com/products/desktop/chipsets/index.htm">http://www.intel.com/products/desktop/chipsets/index.htm</a>
BIOS	<a href="http://downloadcenter.intel.com/">http://downloadcenter.intel.com/</a>
	<a href="http://www.intel.com/support/go/buildit">http://www.intel.com/support/go/buildit</a>



1. D945GSEJT

## D945GSEJT

### 2. D945GSEJT

A	
B	12 V (2 x 2)
C	SO-DIMM
D	82945GSE GMCH
E	N270
F	(COM 2)
G	(COM 1)
H	PS/2
I	
J	PATA 44
K	
L	
M	
N	SATA 0
O	SATA
P	SATA 1
Q	82801GBM I/O (ICH7-M)
R	
S	
T	
U	
V	LED
W	PCI Express
X	BIOS
Y	PCI
Z	S/PDIF
AA	USB
BB	
CC	
DD	USB Z-U130 USB

D945GSEJT

N270



SO-DIMM      <sup>®</sup> SDRAM      SO-DIMM      SPD      (SPD)

BIOS

200      DDR2 SO-DIMM

- 533 MHz      DDR2 SO-DIMM
- (SPD)
- ECC
- 2 GB

## <sup>®</sup> 945GSE Express

945GSE Express

- (DMI)      82945GSE Express
- (GMCH)      82801GBM I/O      (ICH7-M)

GMCH      DMI      Intel<sup>®</sup> Graphics  
Media Accelerator 950      <sup>®</sup> 950      <sup>®</sup> GMA 950

ICH7      I/O      945GSE Express  
<http://www.intel.com/design/chipsets/embedded/945gse/>



GMCH

## 945GSE

### ® GMA950

GMA950

- 166 MHz
- 3-D
- DX9\* 2.0  
Alpha
- 3D  
1.3 GigaPixel  
16 32  
85 Hz 1600 x 1200 x 32 3D  
EXT\_Shadow OpenGL\* 1.4
- 2D  
8 16 32  
256 BLT
- MPEG2  
30 DVD
- Intel® Zoom Utility ®

### 2-D/3-D

- 256 MB RAM 32 MB RAM
- 512 MB RAM 64 MB RAM
- 1 GB RAM 128 MB RAM
- 2 GB RAM 224 MB RAM

### (VGA)

VGA

75 Hz

2048 x 1536 (QXGA)

## (DVI)

DVI-D  
DVI

DVI  
DVI 1.0

1600 x 1200 (UXGA)



- <Ctrl+Alt+F1> VGA
- <Ctrl+Alt+F4> DVI

### Microsoft\* 32

- Microsoft Windows Vista\* Home Basic
- Microsoft Windows Vista Business
- Microsoft Windows\* XP Home
- Microsoft Windows XP Professional

### Linux

- SUSE\* Linux Enterprise Desktop
- Red Hat\* ENTERPRISE LINUX\*
- Ubuntu

D945GSEJT 2 + 2

Realtek ALC662

- AC '97
- 
- S/PDIF 3
- 2 1.5 W/ 8
- 
- 



# (I/O)

I/O

- 
- 
- IRQ PCI (ECP) IRQ (EPP)
- PS/2
- 
- PCI

## Bootloader

LAN Pre-Execution Environment PXE gPXE  
 (<http://etherboot.org/>)  
 gPXE PXE TCP HTTP  
 DNS iSCSI <http://etherboot.org/>  
 gPXE



gPXE Intel® Express Installer Drivers

## LAN

- LAN
- 82801GBM ICH7-M
  - 10/100/1000 Mbit LAN Realtek 8111D
  - LED RJ-45 LAN

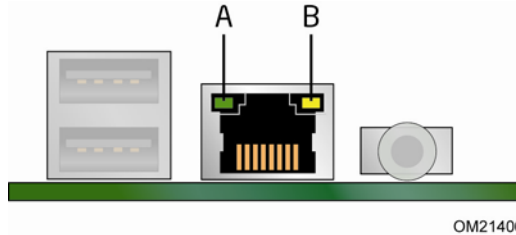
- LAN
- CSMA/CD
  - LAN
  - PCI

ACPI  
LAN

LAN <http://downloadcenter.intel.com/>

# LAN LED

LAN RJ-45 LAN LED 2 LED



## 2. LAN LED

3 LAN LED

## 3. LAN LED

LED	LED	LED	
(A)			LAN
			LAN
			LAN
(B)			10 Mbit
			100 Mbit
			1000 Mbit

# USB 2.0

USB 2.0 USB 2.0 USB 2.0 Z-U130  
 USB 2.0 USB 1.1 USB 1.1 USB 1.1  
 USB 2.0 USB 2.0 USB 1.1 USB 2.0 BIOS  
 USB 2.0 USB 2.0



USB USB FCC B USB

ATA

- PATA
- SATA

**PATA**

ICH7-M PATA PATA 2.5 44 2.5 3.5 PATA  
PATA

- I/O (PIO)
- 8237 DMA
- DMA
- ATA-66
- ATA-100



ATA-66 ATA-100 PATA ATAPI CD-ROM ATA

BIOS (LBA) (ECHS)  
BIOS

**SATA**

IDE ACHI ATA 3.0 Gb SATA

- PCI PCI PCI
- PCI Express

# BIOS

BIOS

(POST) BIOS Setup

PCI IDE

BIOS

# ATA

ATA

ATA

BIOS

BIOS Setup

BIOS Setup

# PCI/PCI Express

PCI/PCI Express

BIOS

PCI/PCI Express

PCI/PCI Express

IRQ DMA

I/O

BIOS Setup

BIOS

BIOS Setup

BIOS Setup

•

Setup

Setup

<Enter>

Setup

•

Setup

Setup

•

46 " "

- (ACPI)
- 

+5 V LED  
LAN

USB  
PS/2  
PME#  
WAKE#

### ACPI

ACPI

ACPI

ACPI

15

3

44

**+5 V**

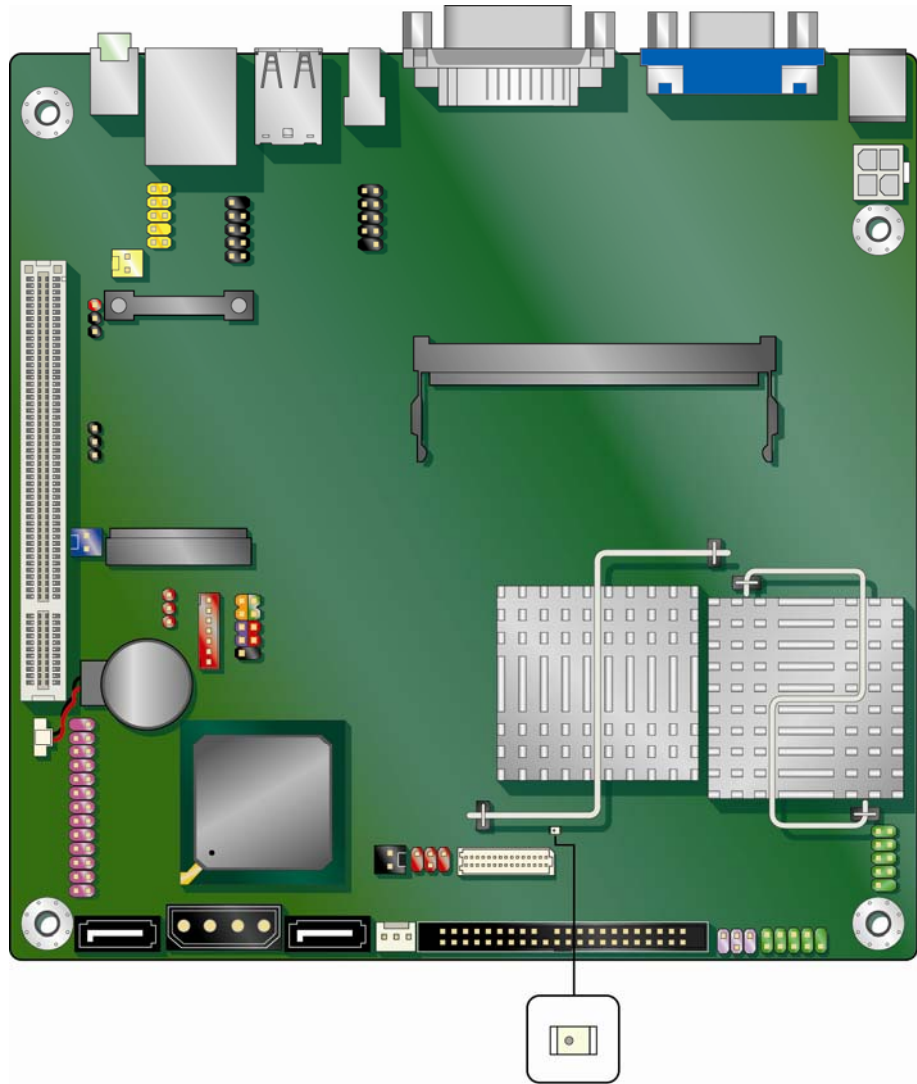
**LED**



DIMM

PCI

3



OM21405A

3.

<http://www.intel.com/products/motherboard/D945GSEJT/index.htm>  
Specification

D945GSEJT  
Technical Product

ACPI S3

RAM

ACPI S3  
LED

PCI

PCI 2.3

### (LAN)

LAN

ACPI

LAN  
LAN

- Ping
- Magic Packet

LAN

### USB

USB

ACPI S1 S3



USB

USB

USB

### PS/2

PS/2

ACPI S1 S3 S4 S5

ACPI S4 S5

PS/2

### PME#

PCI

PME#

ACPI S1 S3 S4 S5

### WAKE#

PCI Express

WAKE#

ACPI S1 S3 S4 S5

**4. ENERGY STAR**

ENERGY STAR				(TEC)
v4.0		(Cat A)	LAN	
v4.0				
v5.0				" "
v5.0				Cat A
v5.0		(Cat B)	LAN	
v5.0				

ENERGY STAR

<http://www.intel.com/go/energystar>

- e-Standby
- (EuP)

CMOS RAM

D945GSEJT

# 2

---

- I/O
- 
- 
- SATA
- LAN
- Z-U130 USB
- 
- 
- BIOS
- 
- 



- 
- 
- (ESD)

- 
- 
- 
- 
- 

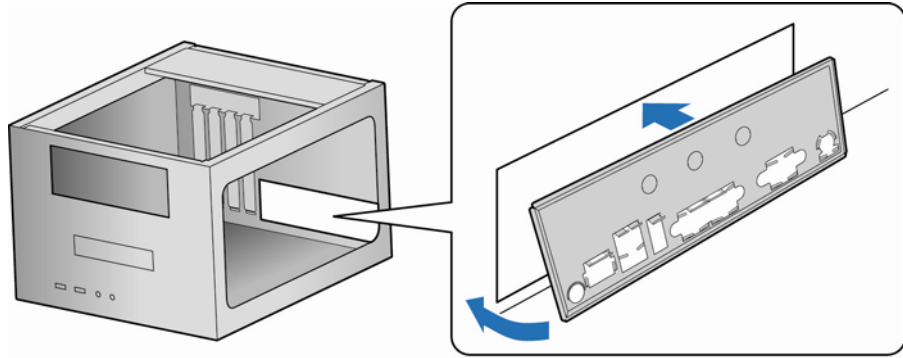
B

# I/O

I/O

I/O

4



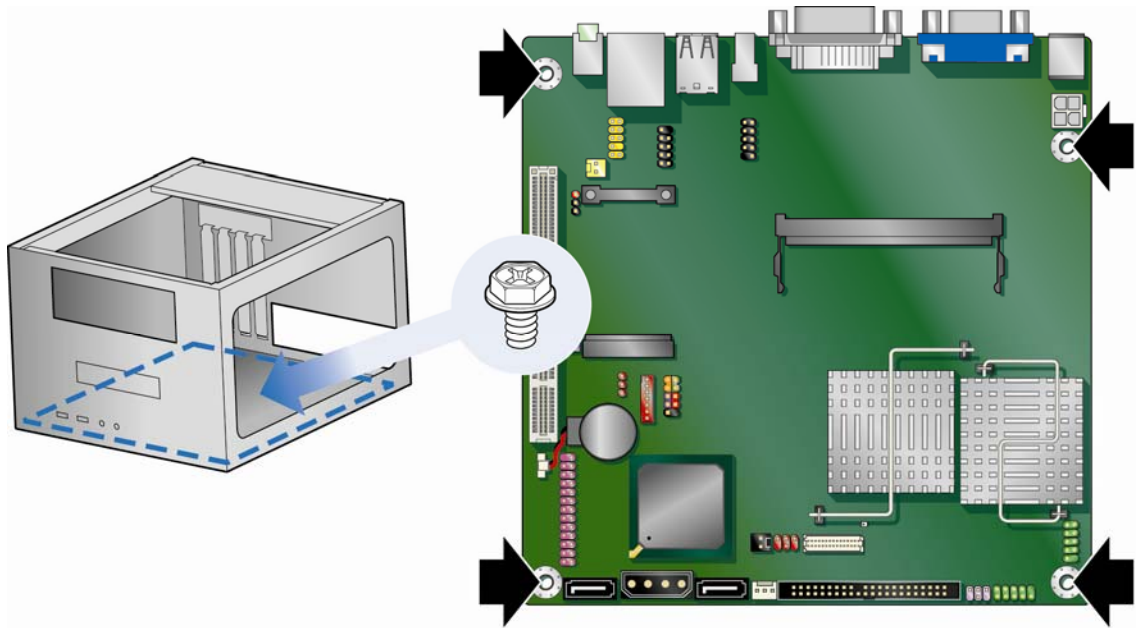
OM21407A

4. I/O



5

D945GSEJT



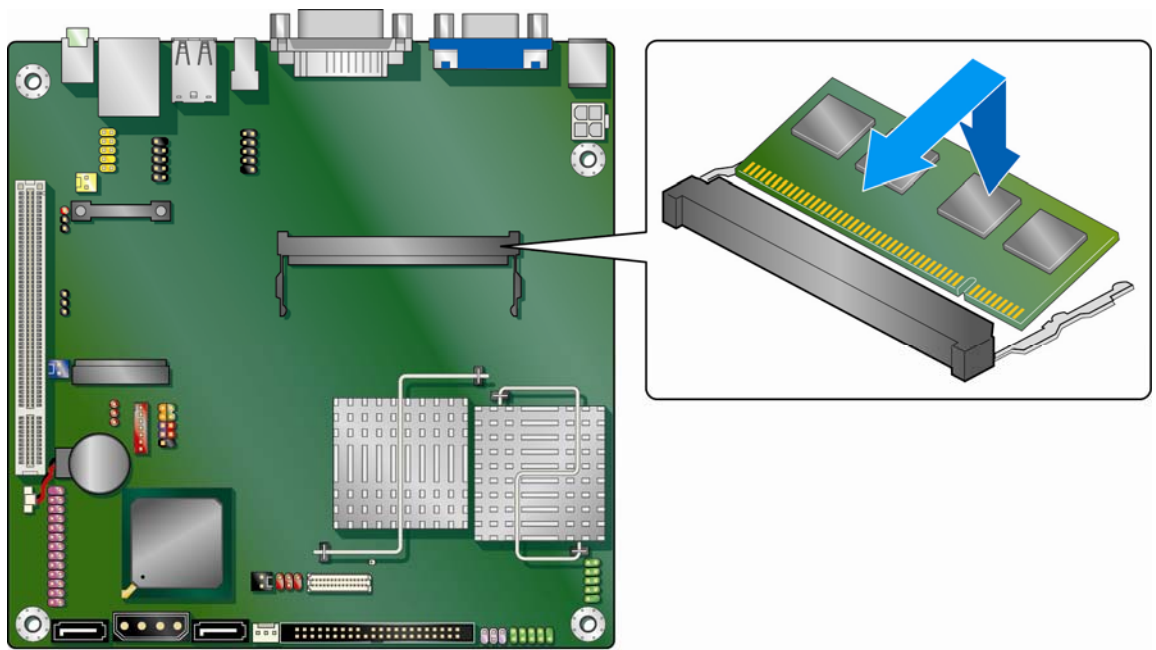
OM21408A

5.

D945GSEJT

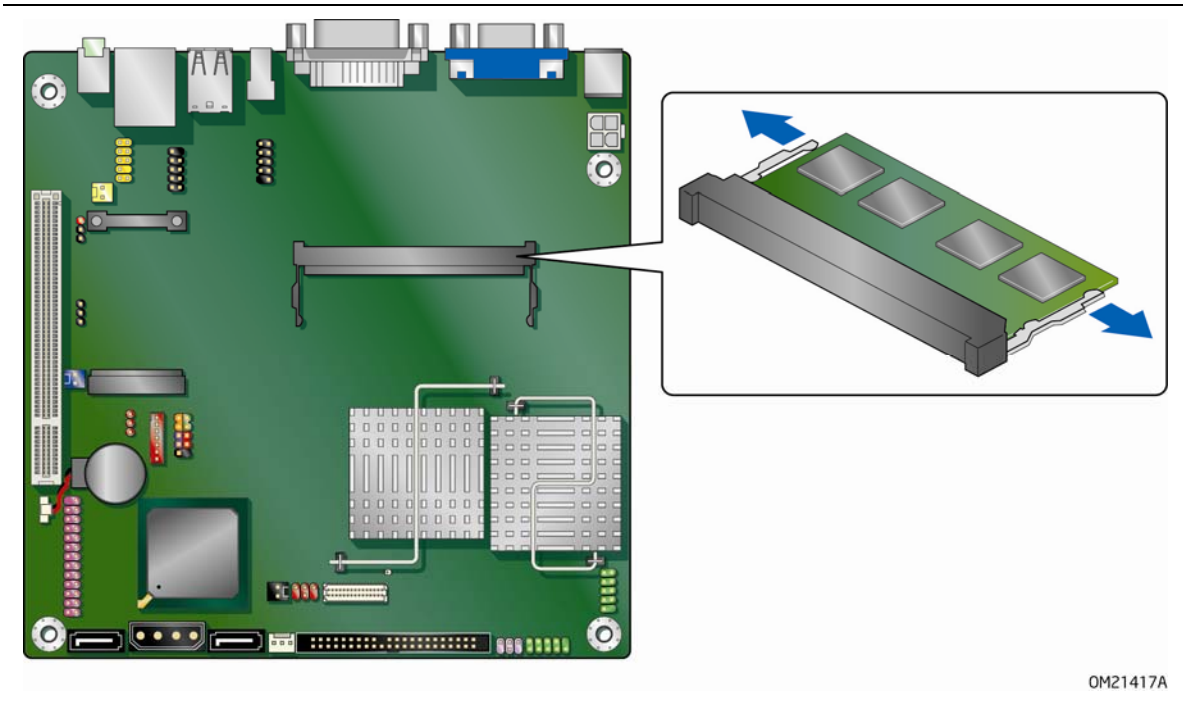


(SPD)	SO-DIMM	SDRAM	
	200	DDR2 SO-DIMM	2 GB
1.	25 "	6	
2.	SO-DIMM	DIMM	
	SO-DIMM	SO-DIMM	



OM21409A

6.



OM21417A

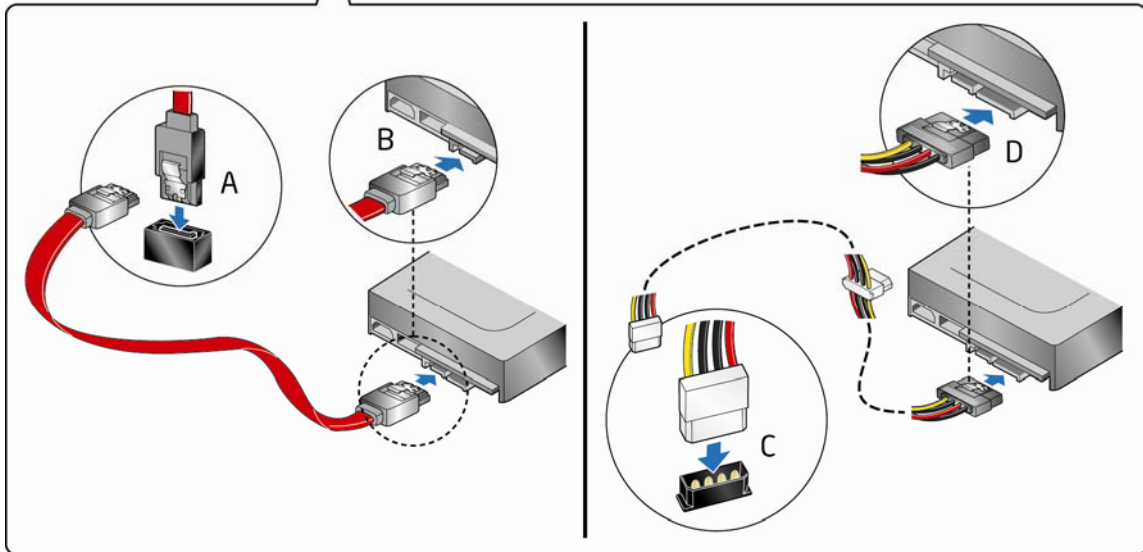
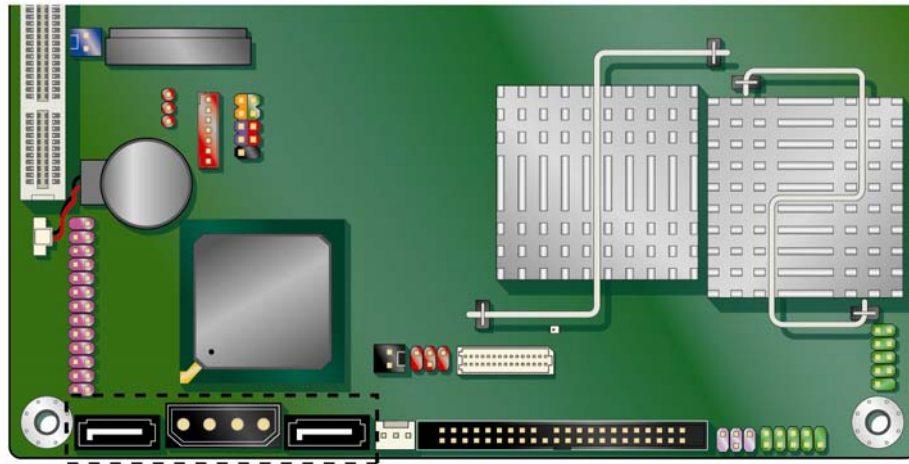
7.

## SATA

D945GSEJT

SATA

- 1 x 4
  - SATA 15 SATA
  - 1 x 4
- SATA
1. 25 " "
  2. SATA SATA 8 A
  3. SATA SATA 8 B
  4. 4 8 C
  5. SATA 8 D SATA



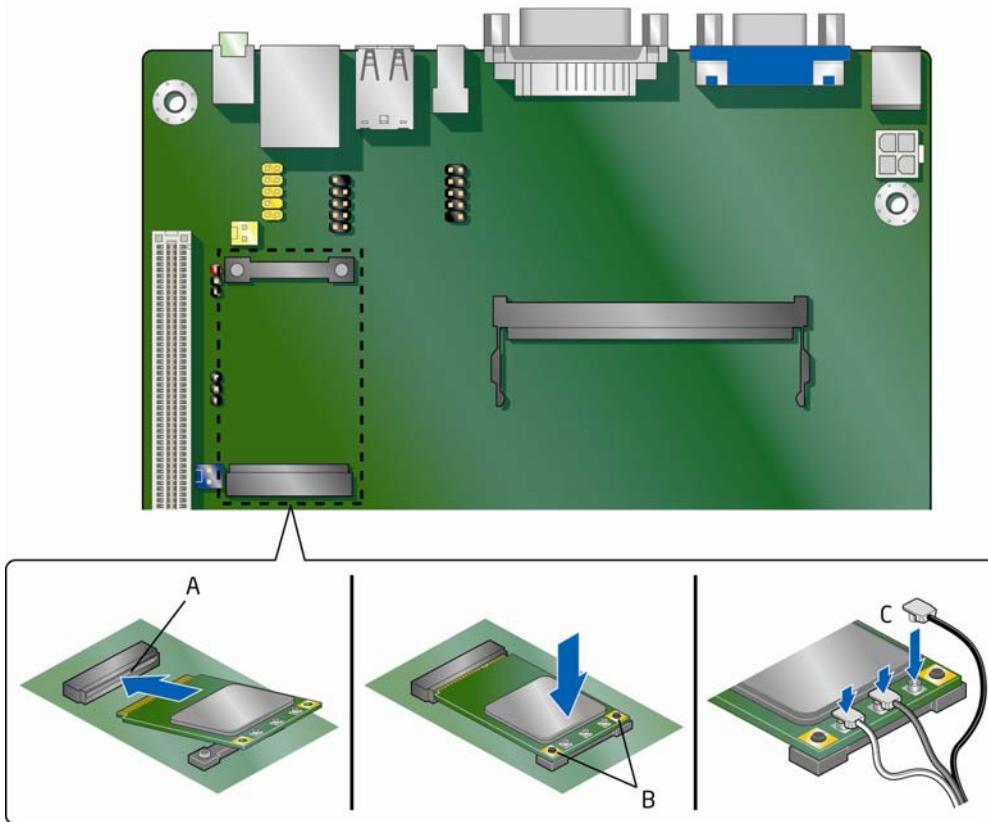
OM21411A

## 8. SATA

# PCI Express

# LAN

- |    |             |     |             |     |
|----|-------------|-----|-------------|-----|
|    | LAN         |     | PCI Express |     |
|    |             | LAN |             | 9   |
| 1. | 25 "        | "   |             |     |
| 2. | PCI Express |     | 1 W         |     |
| 3. | LAN         |     | PCI Express |     |
|    | 9 A         |     |             |     |
| 4. | 9 B         |     |             |     |
| 5. |             | LAN |             | 9 C |
|    | I/O         |     |             | I/O |



OM21414

## 9. LAN

# ® Z-U130 USB

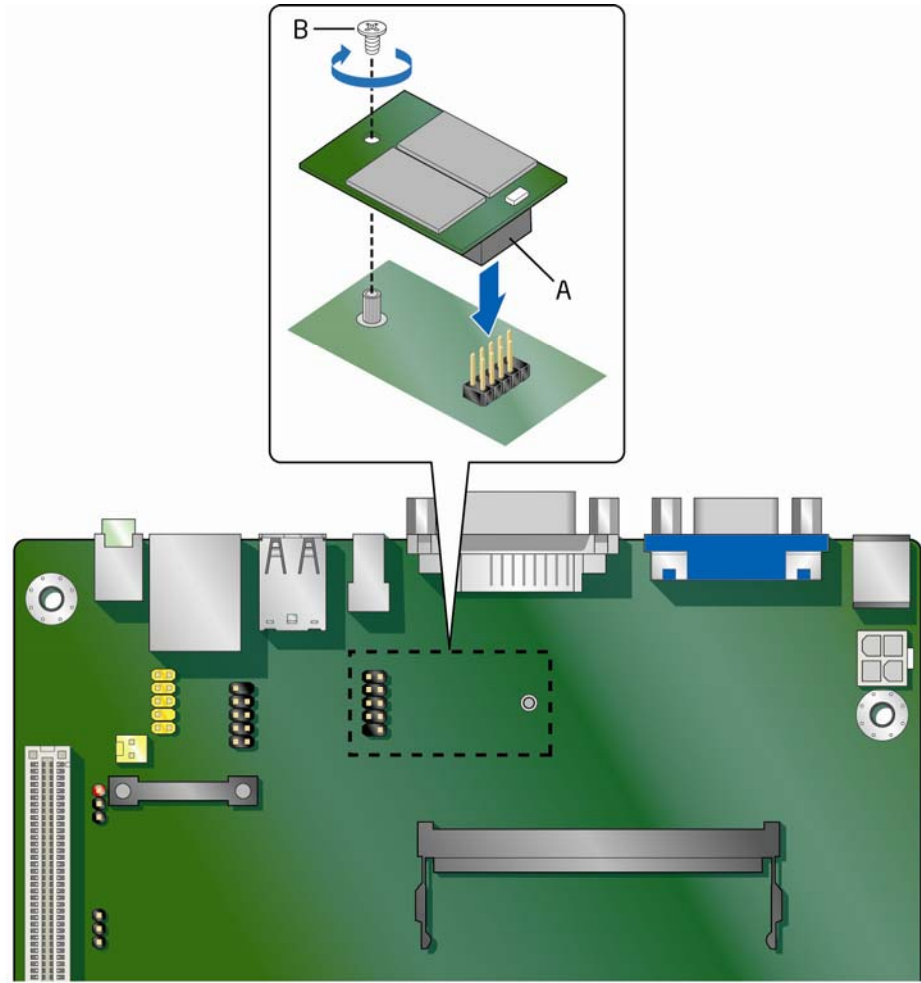
Z-U130 USB

1 DD

USB 2.0

Z-U130 USB

1. 25 " "
2. 10 A USB 2.0
3. 10 B



OM21410

10. Z-U130 USB



**5.**

A	+12 V	(ATX12V)
B		(COM 2)
C		(COM 1)
D	PS/2	
E		
F	PATA	44
G		
H		
I		
J	SATA	
K	SATA	
L		
M		
N		
O		
P		LED
Q	PCI Express	
R	PCI	
S	S/PDIF	
T	USB	
U		
V		
W	USB	Z-U130 USB

6      21                      11      5

**6.                                      COM 1      COM 2**

1	DCD (Data Carrier Detect)	2	RXD# (Receive Data)
3	TXD# (Transmit Data)	4	DTR (Data Terminal Ready)
5	Ground	6	DSR (Data Set Ready)
7	RTS (Request To Send)	8	CTS (Clear To Send)
9	RI (Ring Indicator)	10	Key

**7. PS/2**

1	Data	2	Key
3	Ground	4	+5V
5	Clock	6	Key

**8. PATA 44**

1	#Reset	2	GND
3	Data 7 7	4	Data 8 8
5	Data 6 6	6	Data 9 9
7	Data 5 5	8	Data 10 10
9	Data 4 4	10	Data 11 11
11	Data 3 3	12	Data 12 12
13	Data 2 2	14	Data 13 13
15	Data 1 1	16	Data 14 14
17	Data 0 0	18	Data 15 15
19	GND	20	Key
21	DMA Request DMA	22	GND
23	#IOW	24	GND
25	#IOR	26	GND
27	IO Chrdy	28	Cable Select
29	DMA Acknowledge DMA	30	GND
31	IRQ14	32	#IOCS16
33	Addr 1	34	Passed Diagnostics
35	Addr 0	36	Addr 2
37	#CS0 (1F0-1F7)	38	#CS1 (3f6-3f7)
39	#Active (LED driver) LED	40	GND
41	+5V_DC (logic)	42	+5V_DC (motor)
43	GND	44	Type (GND = ATA)

**9.**

1	Control
2	+12 V
3	Tach

**10.**

1	Intruder#
2	Ground

**11. SATA**

1	+12 VDC	+12 V
2	Ground	
3	Ground	
4	+5 VDC	+5 V

**12.**

		<b>ECP</b>	<b>EPP</b>
1	STROBE#	STROBE#	WRITE#
2	AUTOFD#	AUTOFD#, HOSACK	DATASTB#
3	PD0	PD0	PD0
4	FAULT#	FAULT#, PERIPHREQST#	FAULT#
5	PD1	PD1	PD1
6	INT#	INT#, REVERSERQST#	RESET#
7	PD2	PD2	PD2
8	SLCTIN#	SLCTIN#	ADDRSTB#
9	PD3	PD3	PD3
10	GROUND	GROUND	GROUND
11	PD4	PD4	PD4
12	GROUND	GROUND	GROUND
13	PD5	PD5	PD5
14	GROUND	GROUND	GROUND
15	PD6	PD6	PD6
16	GROUND	GROUND	GROUND
17	PD7	PD7	PD7
18	GROUND	GROUND	GROUND
19	ACK#	ACK#	INTR
20	GROUND	GROUND	GROUND
21	BUSY	BUSY#, PERIPHACK	WAIT#
22	GROUND	GROUND	GROUND
23	PERROR	PE, ACKREVERSE#	PE
24	GROUND	GROUND	GROUND
25	SELECT	SELECT	SELECT
26	KEY	KEY	KEY

**13. LED**

1	LED LED (+)
2	Ground

**14. S/PDIF**

1	Ground
2	S/PDIF out S/PDIF
3	VCC (5V)

**15.**

1	+
2	-

**16.**

1	[Port 1] Left channel 1	2	Ground
3	[Port 1] Right channel 1	4	PRESENCE# (Dongle present)
5	[Port 2] Right channel 2	6	[Port 1] SENSE_RETURN 1 SENSE_RETURN
7	SENSE_SEND (Jack detection)	8	Key
9	[Port 2] Left channel 2	10	[Port 2] SENSE_RETURN 2 SENSE_RETURN

**17. AC '97**

1	MIC	2	AUD_GND
3	MIC_BIAS	4	AUD_GND
5	FP_OUT_R	6	FP_RETURN_R
7	AUD_5V	8	KEY
9	FP_OUT_L	10	FP_RETURN_L

**18. USB**

1	+5 VDC +5 V	2	+5 VDC +5 V
3	D-	4	D-
5	D+	6	D+
7	Ground	8	Ground
9	KEY	10	No Connect

**19. USB Z-U130 USB**

1	+5 VDC +5 V	2	+5 VDC +5 V
3	D-	4	D-
5	D+	6	D+
7	Ground	8	Ground
9	KEY	10	LED#

- PCI Express 1.2
- PCI 2.3
- PCI
- SMBus PCI SMBus PCI
- SMBus A40
- SMBus A41
- PCI PCI
- A11 33 MHz PCI
- B10 PCI PREQ#2
- B14 PCI Grant GNT#2

D945GSEJT

- 12 V - (ID) 2.5 (OD) 5.5 12 V
- 12 V - GND ATX12V 2 x 2 20
- ATX12V

**20. ATX12V**

1	Ground	2	Ground
3	+12 V	4	+12 V



12 V

60 W (12 V/5 A)  
D945GSEJT



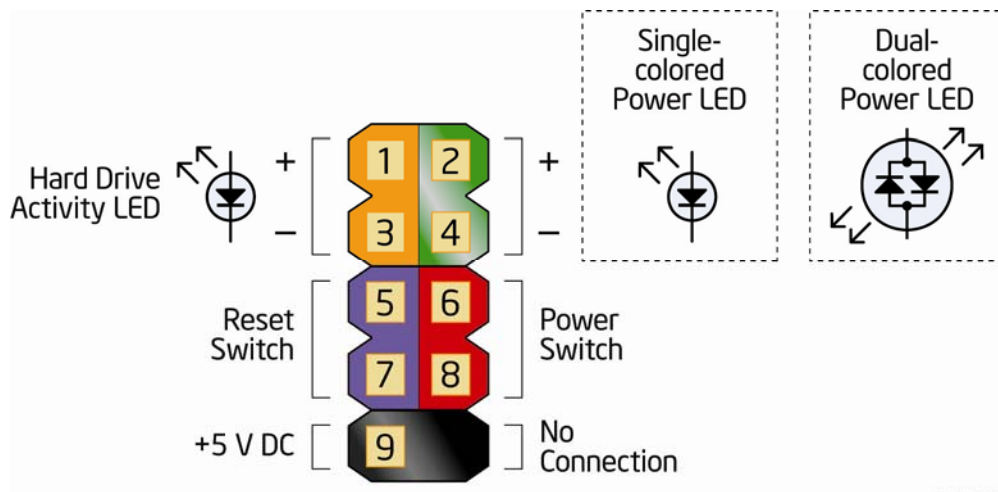
12 V D945GSEJT  
2 x 2  
12 V 2 x 2  
12 V 2 x 2

21

12

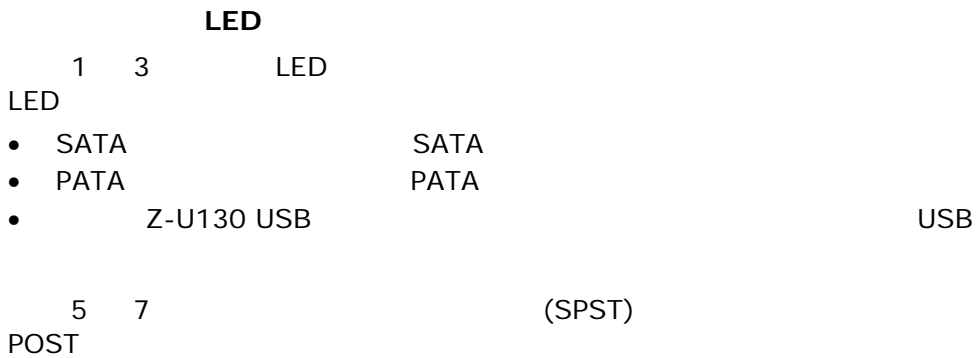
21.

LED				LED			
1	HD_PWR		LED +5 V	2	HDR_BLNK_GRN		LED
3	HDA#		LED	4	HDR_BLNK_YEL		LED
5	Ground			6	FPBUT_IN		
7	FP_RESET#			8	Ground		
9	+5 V			10	N/C		



OM20176

12.



**LED**

2 4

LED

22

LED

**22.**

**LED**

LED	
	(S5/S4)
	(S3)
	(S0/S1)

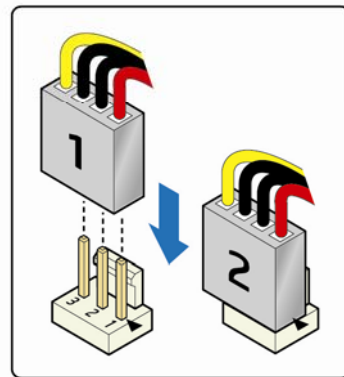
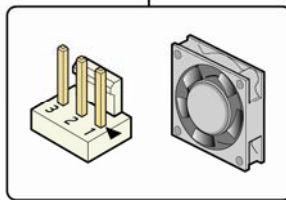
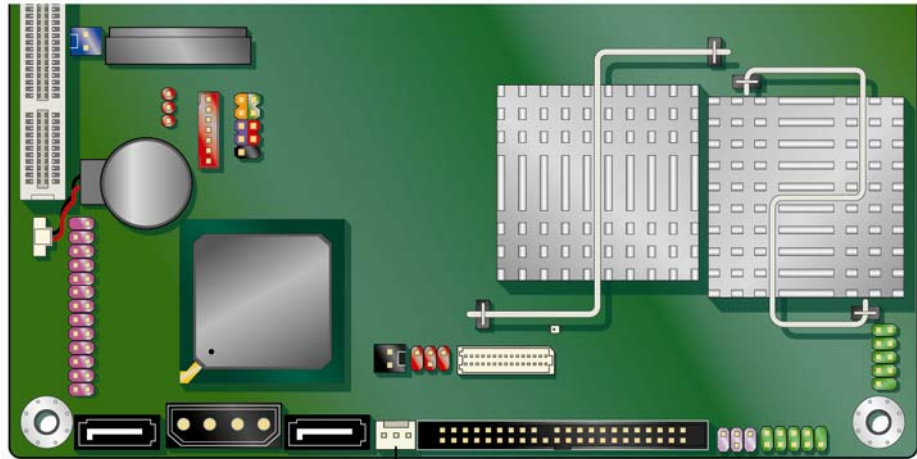


22

LED  
LED

BIOS Setup





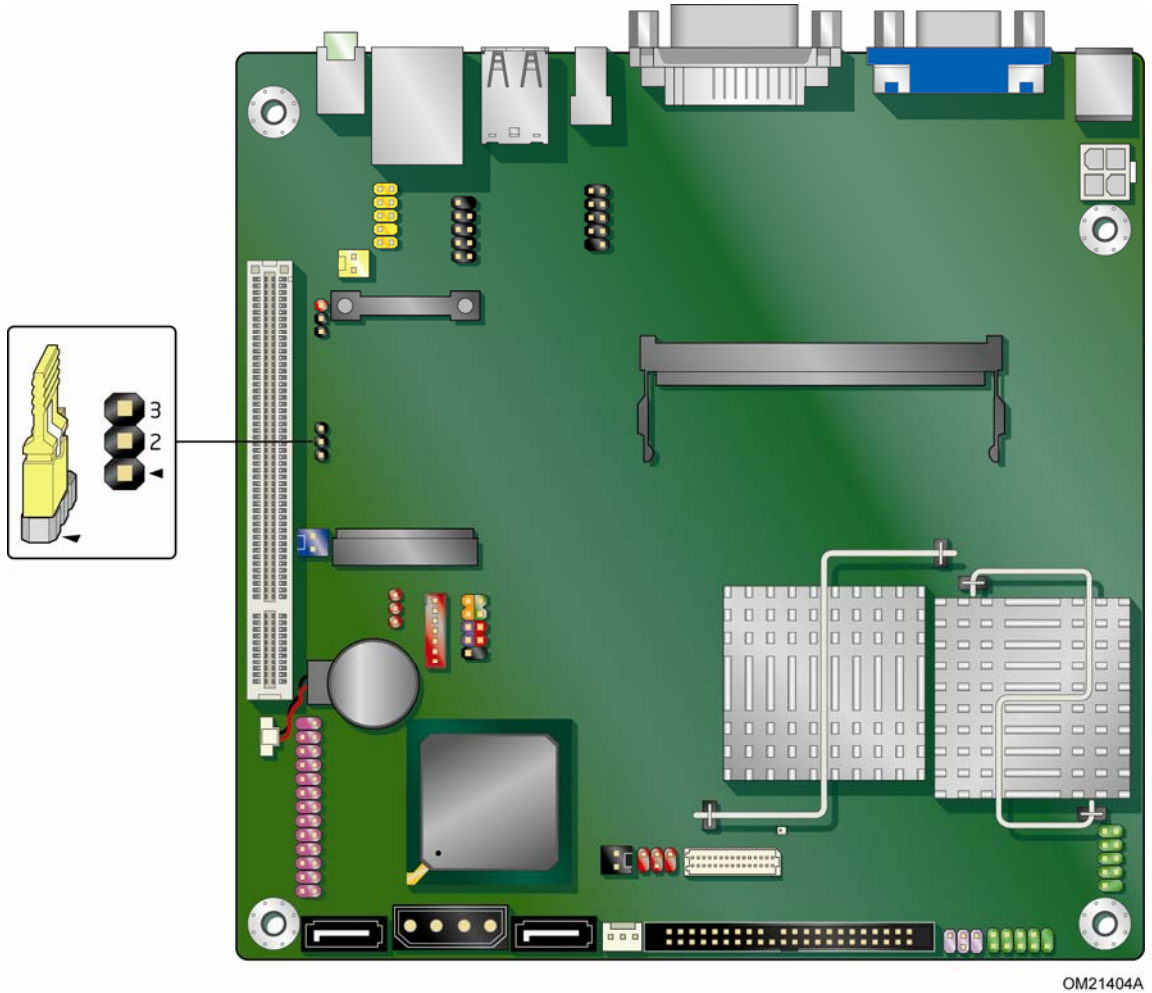
QM21412A

# BIOS



16

BIOS



## 16. BIOS

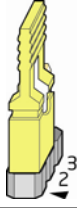
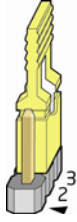
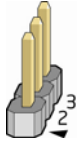
BIOS

23

16

BIOS

**23. BIOS Setup**

	(1-2)	BIOS		
	(2-3)	(POST)	BIOS	Maintenance
		BIOS	BIOS	

1. 25 " "

2.

3.

4. 16 B

5. 2-3



6.

7. Setup Maintenance

8. Clear Passwords <Enter> Setup  
 Yes <Enter> Setup  
 Maintenance















































