IPXLP-MB
Motherboard layout reference
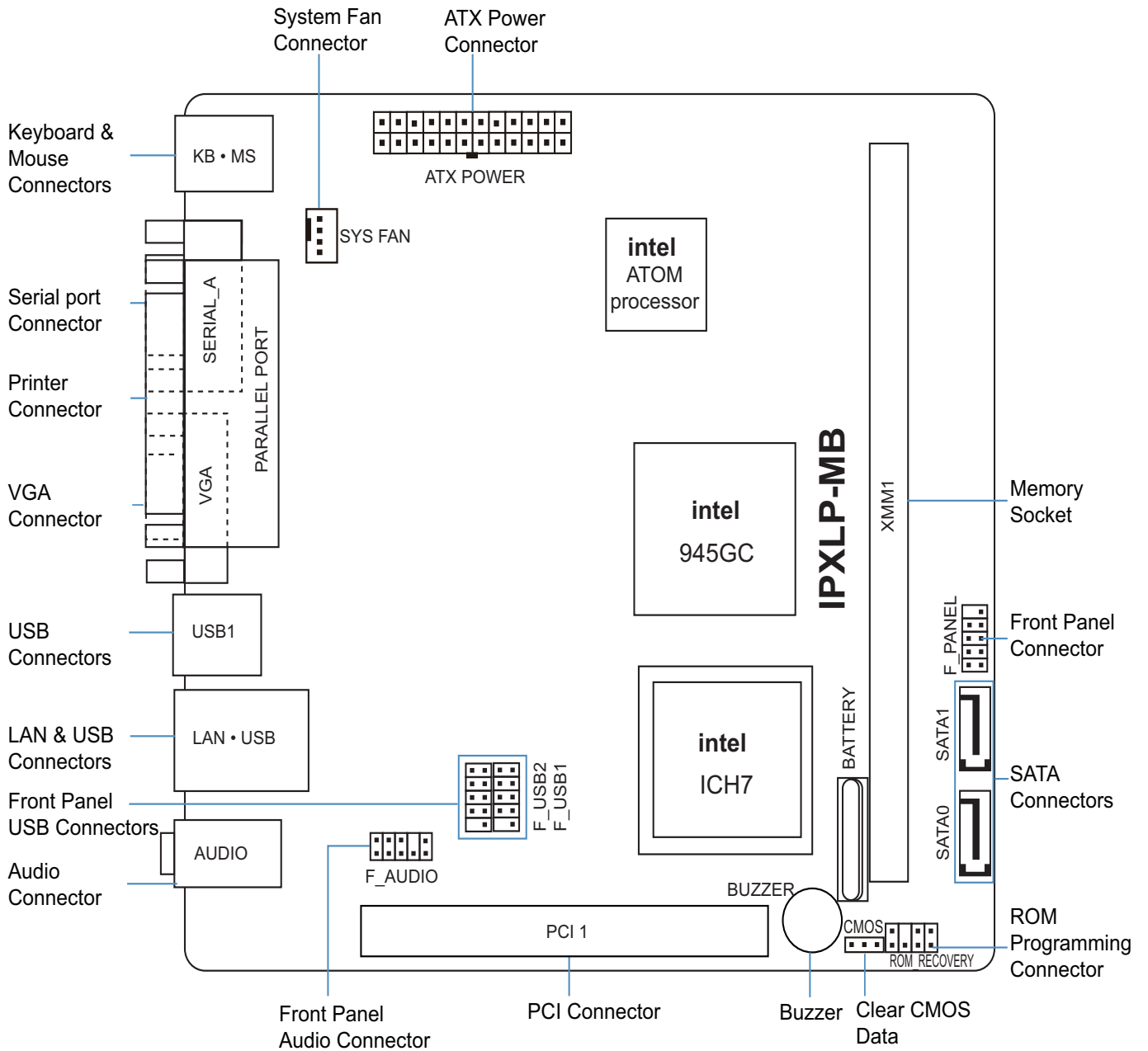
Contents

May 2008

Specifications summary

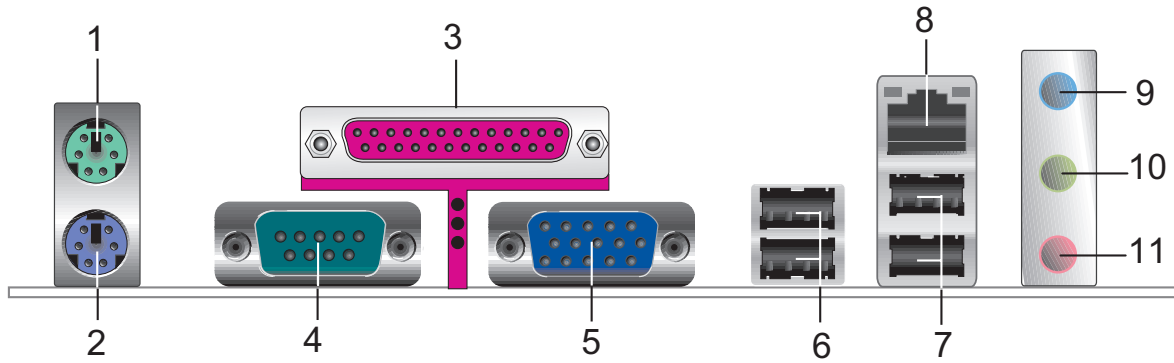|	
CPU	Intel Diamondville CPU front side bus supports 533 MHz TDP 8W/4W (Dual core/ Single core)
Chipset	Intel 945GC + Intel ICH7
Front Side Bus	533MHz
Memory	1x 240 pin DIMM sockets support up to 2GB non-ECC 1.8V DDR2 400/533 SDRAM (Functionality of registered dimms are not supported)
Expansion slots	1x PCI
Audio	Support Intel HD Audio Codec with Intel ICH7 embedded Audio controller that includes line-in, line-out (5.1 channel output), and microphone-in using Realtek Audio Codec ALC662-GR
PC Health Monitoring	Supports the following: -FAN: System FAN -Temperature: CPU
LAN	Realtek 8102E 10/100 Mbps PCI-E Ethernet controller
Graphics	Intel Graphics Media Accelerator 950
Storage connector	Intel ICH7 embedded 2 Serial ATA
Rear panel	1x PS/2 Keyboard port 1x PS/2 Mouse port 1x Printer port (optional) 1x COM port (optional) 1x VGA port 1x RJ-45 LAN port 4x USB 2.0 ports (support hot-plug function) 3x Audio Jacks
Internal connectors	1x Front panel connector 2x USB front panel connectors (max. 4 ports) 1x ATX power connector 1x Intel HD Audio front panel connector 1x System Fan connector 2x SATA connectors
BIOS features	4Mb SPI Flash ROM
Form factor	mini-ITX form factor 6.7 in. x 6.7 in.

Motherboard layout

System Fan Connector

ATX Power Connector

Keyboard & Mouse Connectors

KB • MS

ATX POWER

SYS FAN

Serial port Connector

SERIAL_A

intel
ATOM
processor

Printer Connector

PARALLEL PORT

VGA Connector

VGA

IPXLP-MB

intel
945GC

Memory Socket

XMM1

USB Connectors

USB1

F_PANEL

Front Panel Connector

LAN & USB Connectors

LAN • USB

F_USB2 F_USB1

intel
ICH7

BATTERY

SATA1

SATA Connectors

Front Panel USB Connectors

AUDIO

F_AUDIO

SATA0

Audio Connector

BUZZER

CMOS

ROM Programming Connector

PCI 1

ROM_RECOVERY

Front Panel Audio Connector

PCI Connector

Buzzer

Clear CMOS Data

Rear panel connectors

1. **PS/2 mouse port (green).** This port is for a PS/2 mouse.
2. **PS/2 keyboard port (purple)**. This port is for a PS/2 keyboard.
3. **Parallel port.** This 25-pin port connects a parallel printer, a scanner, or other devices.
4. **Serial (COM) port.** This 9-pin COM port is for pointing devices and other serial devices.
5. **Video Graphics Adapter (VGA) port.** This 15-pin port is for a VGA monitor or other VGA-compatible devices.
6. **USB 2.0 ports 1 and 2.** These two 4-pin Universal Serial Bus (USB) ports are available for connecting USB 2.0 devices.
7. **USB 2.0 ports 3 and 4.** These two 4-pin Universal Serial Bus (USB) ports are available for connecting USB 2.0 devices.
8. **LAN (RJ-45) port.** This port allows connection to a Local Area Network (LAN) through a network hub. Refer to the table below for the LAN port LED indications.
9. **Line In port (light blue).** This port connects the tape, CD, DVD player, or other audio sources. In 4-channel and 6-channel, the function of this port becomes a Surround Speaker.
10. **Line Out port (lime).** This port connects a headphone or a speaker. In 4-channel or 6-channel, the function of this port becomes Front Speaker Out.
11. **Microphone port (pink).** This port connects a microphone. In 6-channel, the function of this port becomes Subwoofer/Center.

LAN port LED indications

Activity LED	
Status	Description
OFF	No link
BLINKING	Data activity
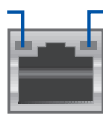
LAN port

Link LED	
Status	Description
OFF	No link
GREEN	Linked

Audio 2, 4, or 6-channel configuration

Port	Headset 2-channel	4-channel	6-channel
Light Blue	Line In	Surround Speaker	Line In
Lime	Line Out	Front Speaker Out	Front Speaker Out
Pink	Mic In	Mic In	Center/Subwoofer

Function Selectors

IPXLP-MB CLEAR CMOS USER DATA

Internal connectors

SYS_FAN

- GND
- +12V
- SYS_FAN_TACH
- SYS_FAN_PWM
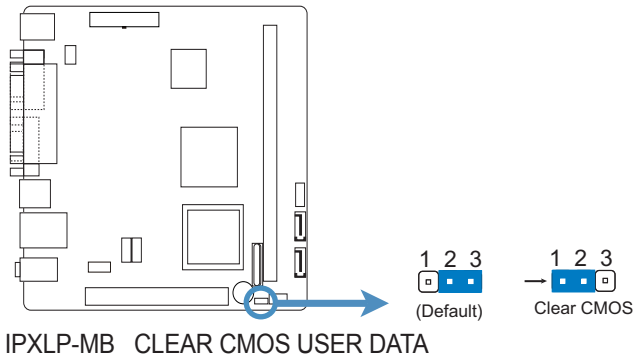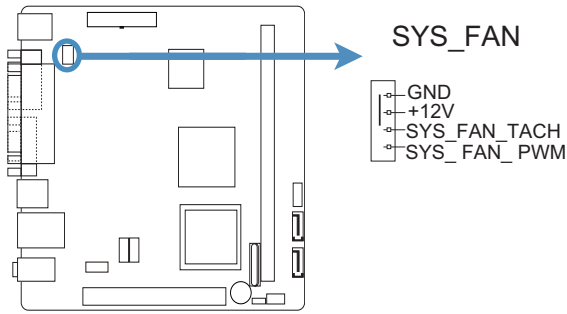
IPXLP-MB SYSTEM FAN CONNECTOR

ATX PWR

+3 Volts
+3 Volts
Ground
+5 Volts
Ground
+5 Volts
Power OK
+5V Stndby
+12 Volts
+12 Volts
+3 Volts

+3 Volts
-12 Volts
Ground
PSON#
Ground
Ground
Ground
-5 Volts
+5 Volts
+5 Volts
Ground
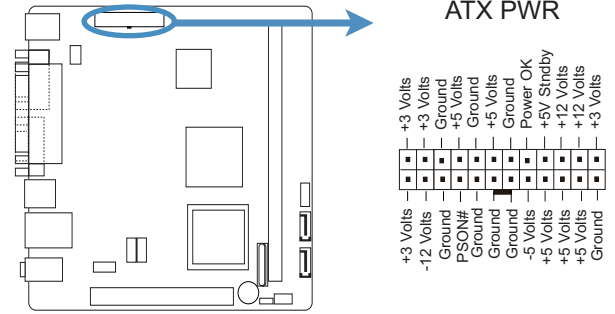
IPXLP-MB ATX POWER CONNECTOR

F_PANEL

PLED | PWRBTN

- GND
- PWR
- PLED (−)
- PLED (+)

Reset — Reset
Ground
HDLED (−)
HDLED (+)

+HDLED | RESET

IPXLP-MB FRONT PANEL CONNECTOR

SATA1

- GND
- RSATA_RXP1
- RSATA_RXN1
- GND
- RSATA_TXN1
- RSATA_TXP1
- GND

SATA0

- GND
- RSATA_RXP2
- RSATA_RXN2
- GND
- RSATA_TXN2
- RSATA_TXP2
- GND
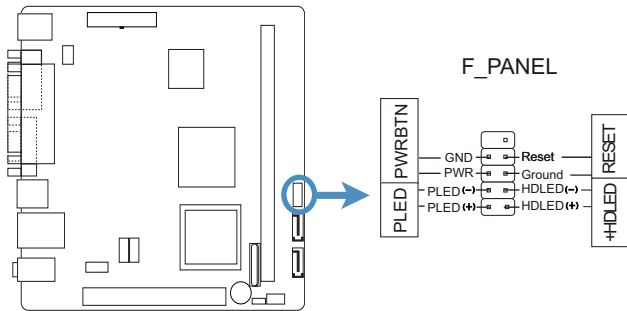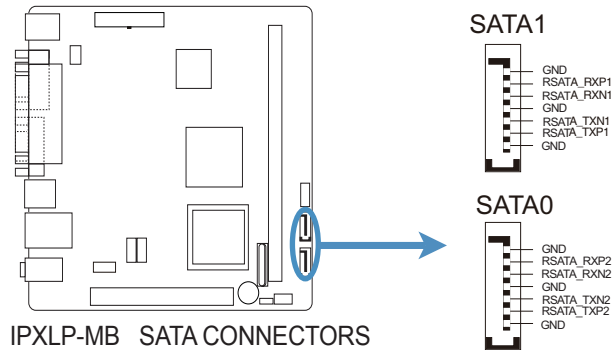
IPXLP-MB SATA CONNECTORS

ROM Recovery

SPI_CS#
SPI_MOSI
SPI_MISO
SPI_CLK

SPI_CS#
3VSB
GND
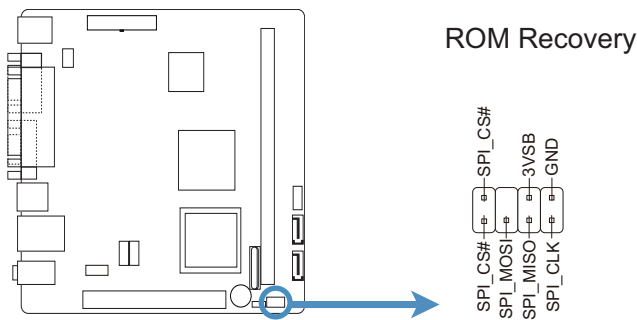
IPXLP-MB ROM PROGRAMMING CONNECTOR

F_USB2

SBV — SBV
USB6- — USB7-
USB6+ — USB7+
GND — GND
— NC

F_USB1

SBV — SBV
USB5- — USB4-
USB5+ — USB4+
GND — GND
— NC

IPXLP-MB USB CONNECTORS

F_AUDIO

MIC2_L
MIC2_R
LIN2_R
GND
LIN2_L

GND
AUDIO_PRES#
MIC2_RTU
LIN2_RTU

IPXLP-MB FRONT PANEL AUDIO CONNECTOR

IPXLP-MB motherboard layout reference