SUPERMICRO®

X9DRD-EF

QUICK REFERENCE GUIDE REV. 1.0A

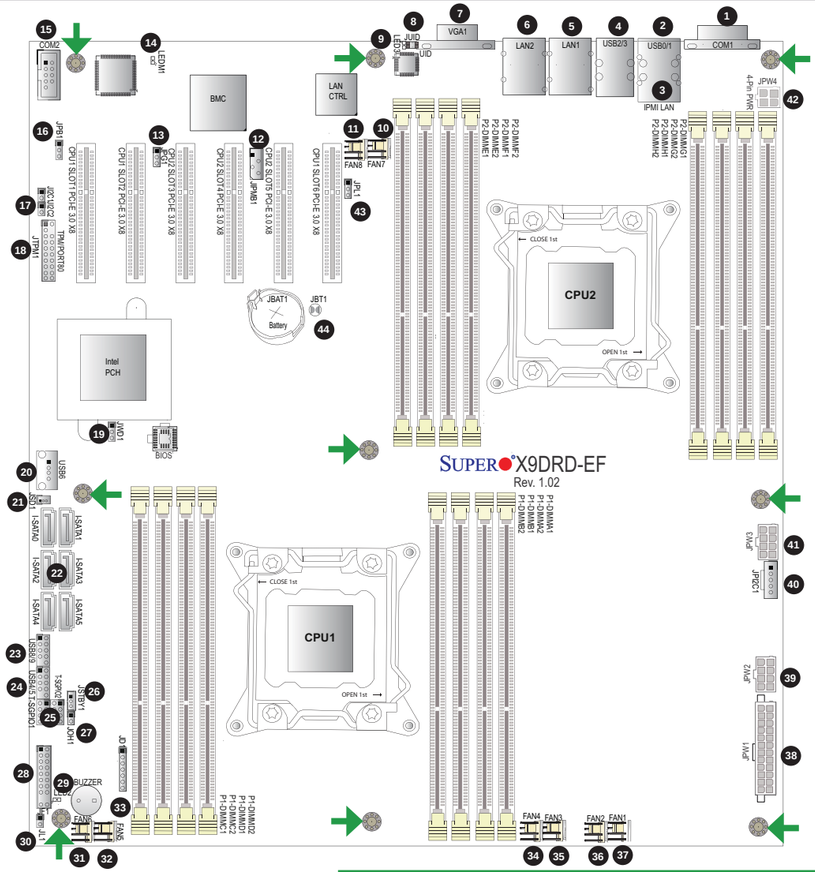
CONTACT INFORMATION

- www.supermicro.com (Email: support@supermicro.com)
- Manuals: http://www.supermicro.com/support/manuals
- Drivers & Utilities: ftp://ftp.supermicro.com
- Safety: http://www.supermicro.com/about/policies/safety_information.cfm

PACKAGE CONTENTS (Applies to single-pack only)

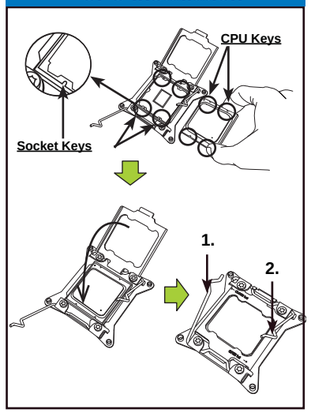
- One (1) Supermicro Motherboard
- Six (6) Serial ATA Cables
- One (1) I/O Shield

Motherboard Layout and Features

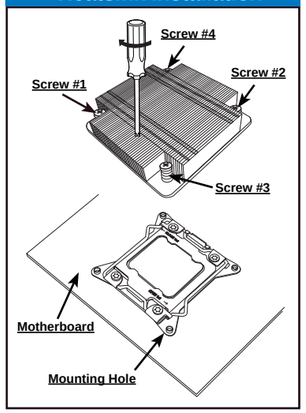


= mounting hole Note: Item numbers are listed in counterclockwise order.

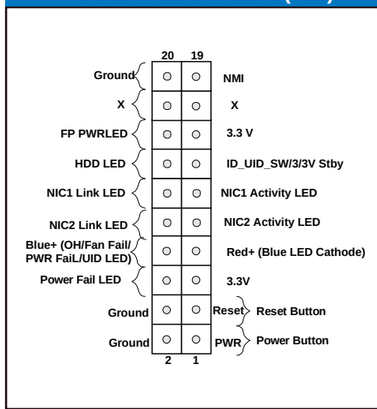
CPU Installation



Heatsink Installation



Front Panel Control (JF1)



Note: Graphics shown in this quick reference guide are for illustration only. Your components may or may not look exactly the same as drawings shown in this guide.

Jumpers, Connectors and LED Indicators

Jumpers

Jumper	Item #	Description	Default
JBT1	44	Clear CMOS	See Chapter 3 in User Manual
JI²C1, JI²C2	17	SMB to PCI-E Slots	Open (Disabled)
JPB1	16	BMC Enabled	Pins 1-2 (Enabled)
JPG1	13	VGA Enabled	Pins 1-2 (Enabled)
JPL1	43	GLAN1, GLAN2 Enable	Pins 1-2 (Enabled)
JWD1	19	Watch Dog Timer Enable	Pins 1-2 (Reset)

Connectors

Connector	Item #	Description
COM1, COM2	1, 15	Backplane COM Port1/Front Accessible COM2 Header
FAN1~4	37, 36, 35, 34	CPU/System Fan Headers
FAN 5~8	32, 31,10, 11	CPU/System Fan Headers
IPMI LAN	3	IPMI Dedicated LAN
I-SATA 0-5	22	Intel SATA Connectors 0-5 from the Intel PCH
JD1	33	Speaker/Power LED Indicator
JF1	28	Front Panel Control Header
JIPMB1	12	4-pin External BMC I²C Header (for an IPMI Card)
JL1	30	Chassis Intrusion
JOH1	27	Overheat LED Indicator
JPI²C1	40	Power Supply SMBbus I²C Header
JPW1	38	24-Pin ATX Main Power Connector
JPW2, JPW3	39, 41	12V 8-Pin Power Connectors
JPW4	42	12V 4-Pin Power Connectors
JSD1	21	SATA DOM (Device on Module) Power Connector
JSTBY1	26	+5V Standby Power Header
JTPM1	18	TPM (Trusted Platform Module)/Port 80
JUID	8	UID (Unit Identification) Switch
LAN1, LAN2	5, 6	Gigabit Ethernet Ports 1/2
T-SGPIO 1/2	25	Serial ATA (SATA) General Purpose I/O Header
USB 0/1, 2/3	2, 4	Back Panel USB 0/1, 2/3
USB 4/5, USB 8/9	24, 23	Front Panel Accessible USB Connections (4/5, 8/9)
USB 6	20	Type A USB Embedded Drive Connector
VGA	7	Backpanel VGA Port

LED Indicators

LED	Item #	Description	Color/State	Status
LED2	29	Standby PWR LED	Green: On	Standby PWR On
LED3	9	Rear UID LED	Blue: On	Unit Identified
LEDM1	10	BMC Heartbeat LED	Green: Blinking	BMC Normal

Note: Refer to Chapter 2 of the User Manual for detailed information on jumpers, connectors, and LED indicators.

Memory Support

This motherboard supports up to 512 GB of 240-pin Registered (RDIMM)/Load Reduced (LRDIMM) ECC or up to 128 GB of Unbuffered (UDIMM) ECC/Non-ECC DDR3 800/1066/1333/1600 MHz 4-channel (per CPU) memory in 16 DIMM slots.

Note: For memory optimization, use only DIMM modules that have been validated by Supermicro. For the latest memory updates, please refer to our website at http://www.supermicro.com/products/motherboard.

DIMM Installation

Insert the desired number of DIMMs into the memory slots, starting with P1-DIMMA1. For memory to work properly, follow the tables below for memory population order. Refer to the motherboard layout (at left) for the location of the DIMM slots.

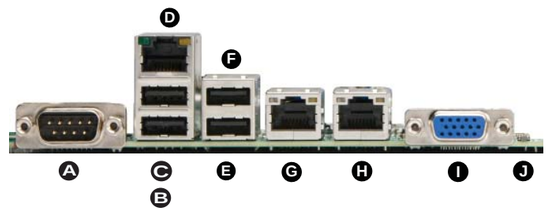
Processors and their Corresponding Memory Modules

CPU#	Corresponding DIMM Modules							
CPU 1	P1-DIMMA1	P1-DIMMB1	P1-DIMMC1	P1-DIMMD1	P1-DIMMA2	P1-DIMMB2	P1-DIMMC2	P1-DIMMD2
CPU2	P2-DIMME1	P2-DIMMF1	P2-DIMMG1	P2-DIMMH1	P2-DIMME2	P2-DIMMF2	P2-DIMMG2	P2-DIMMH2

Processor and Memory Module Population for Optimal Performance

Number of CPUs+DIMMs	CPU and Memory Population Configuration Table (For memory to work properly, please follow the instructions below.)
1 CPU & 2 DIMMs	CPU1 P1-DIMMA1/P1-DIMMB1
1 CPU & 4 DIMMs	CPU1 P1-DIMMA1/P1-DIMMB1, P1-DIMMC1/P1-DIMMD1
1 CPU & 5-8 DIMMs	CPU1 P1-DIMMA1/P1-DIMMB1, P1-DIMMC1/P1-DIMMD1 + Any memory pairs in P1-DIMMA2/P1-DIMMB2/P1-DIMMC2/P1-DIMMD2 slots
2 CPUs & 4 DIMMs	CPU1 + CPU2 P1-DIMMA1/P1-DIMMB1, P2-DIMME1/P2-DIMMF1
2 CPUs & 6 DIMMs	CPU1 + CPU2 P1-DIMMA1/P1-DIMMB1/P1-DIMMC1/P1-DIMMD1, P2-DIMME1/P2-DIMMF1
2 CPUs & 8 DIMMs	CPU1 + CPU2 P1-DIMMA1/P1-DIMMB1/P1-DIMMC1/P1-DIMMD1, P2-DIMME1/P2-DIMMF1/P2-DIMMG1/P2-DIMMH1
2 CPUs & 10-16 DIMMs	CPU1/CPU2 P1-DIMMA1/P1-DIMMB1/P1-DIMMC1/P1-DIMMD1, P2-DIMME1/P2-DIMMF1/P2-DIMMG1/P2-DIMMH1 + Any memory pairs in P1, P2 DIMM slots
2 CPUs & 16 DIMMs	CPU1/CPU2 P1-DIMMA1/P1-DIMMB1/P1-DIMMC1/P1-DIMMD1, P2-DIMME1/P2-DIMMF1/ P2-DIMMG1/P2-DIMMH1,P1-DIMMA2/P1-DIMMB2/P1-DIMMC2/P1-DIMMD2, P2-DIMME2/P2-DIMMF2/P2-DIMMG2/P2-DIMMH2

Back Panel IO Connectors



A. COM1
B. USB 0
C. USB 1
D. IPMI LAN
E. USB 2
F. USB 3
G. GLAN1
H. GLAN2
I. VGA
J. UID

Note: Refer to Chapter 2 of the User Manual for detailed information on memory support and CPU/motherboard installation instructions.

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