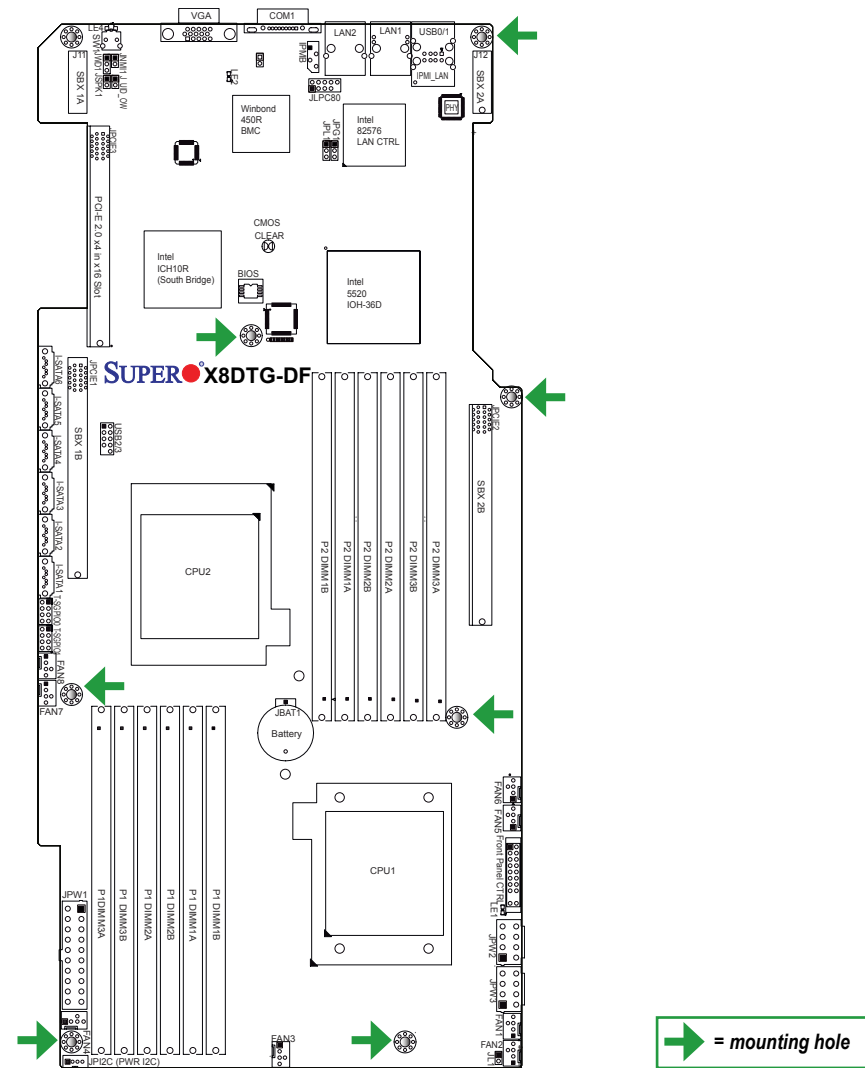


Motherboard Layout and Features



Jumpers, Connectors and LED Indicators

Jumpers

Jumper	Description	Default Setting
JBT1	CMOS Clear	Pins 1-2 (Reset)
JPG1	VGA Enable	Pins 1-2 (Enabled)
JPL1	LAN1/2 Enable	Pins 1-2 (Enabled)
J_UID_OW	Red LED OW (Pins 7-8 of JF1)	Off (Overwrites)
JWD1	Watch Dog	Pins 1-2 (Reset)

Connectors

Connector	Description
COM1	COM1 Serial Port
FAN 1-8	System/CPU Fan Headers
IPMB	IPMB (SMB I ² C) Header (for IPMI)
JF1	Front Panel Connector
JL1	Chassis Intrusion
JLPC80	JLPC80 Connector
JNMI1	NMI (Non-Maskable Interrupt) Header
JPSK1	Internal Speaker/Buzzer Header
JPW1	12V 20-pin Power Connector
JPW2/JPW3	12V 8-pin PCI-Exp. Power Connectors
LAN1/2	Gigabit Ethernet (RJ45) Ports
(IPMI dedicated) LAN	LAN (RJ45) Port for IPMI 2.0
PCI-E Slot	PCI-Express 2.0 x4 in x 16 slot (JPCIE3)
PWR I ² C (JP1 ² C)	Power SMB (System Management Bus) I ² C Header
SATA1 ~ SATA6	(Intel South Bridge) SATA Ports
SBX 1A/2A Slots	PCI-E slots GPU for (Graphics Processing Unit) support (J11/J12)
SBX 1B/2B Slots	PCI-E slots for GPU support (JPCIE1/JPCIE2)
SW1	Unit Identifier Switch
T-SGPIO-0/T-SGPIO-1	Serial General Purpose Input/Output Headers
USB0/1, USB 2/3	Universal Serial Bus (USB) Ports 0/1, 2/3
VGA	Video Port

LED Indicators

LED	Description
LE1	Onboard Standby PWR warning LED Indicator
LE2	BMC LED Indicator
LE4	(Rear) Unit Identifier (UID) LED Indicator

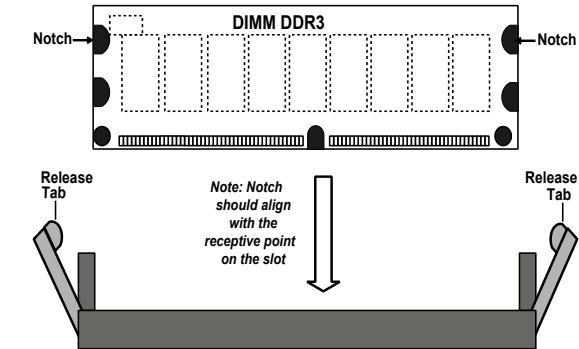
Memory Support

The X8DTG-DF supports up to 96 GB of Registered ECC or up to 24 GB of Unbuffered ECC/Non-ECC DDR3 1333/1066/800 MHz Memory in 12 DIMMs.

Note: With Unbuffered ECC/Non-ECC Memory, a maximum of 2 GB of memory is supported per DIMM slot.

DIMM Memory Installation

Insert the desired number of DIMMs into the memory slots, starting with P1 DIMM1A.



Memory Population for Optimal Performance -For a motherboard with One CPU (CPU1) installed

0	Branch 0	Branch 1	Branch 2
3 DIMMs	P1 DIMM1A	P1 DIMM2A	P1 DIMM3A
6 DIMMs	P1 DIMM1A	P1 DIMM1B	P1 DIMM2B

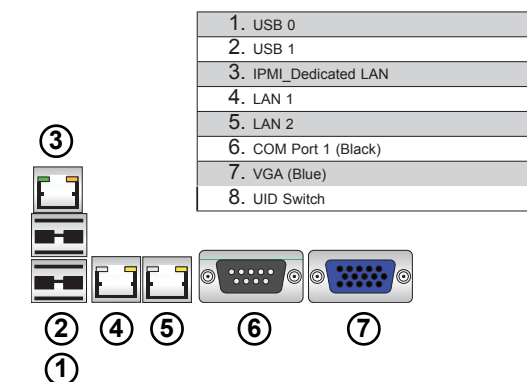
Memory Population for Optimal Performance -For a motherboard with One CPU (CPU2) installed

	Branch 0	Branch 1	Branch 2
3 DIMMs	P2 DIMM1A	P2 DIMM2A	P2 DIMM3A
6 DIMMs	P2 DIMM1A	P2 DIMM1B	P2 DIMM2B

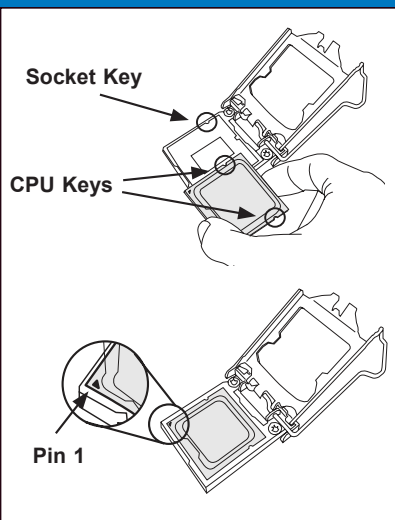
Memory Population for Optimal Performance -For a motherboard with Two CPUs installed

	CPU1			CPU2		
	Branch 0	Branch 1	Branch 3	Branch 0	Branch 1	Branch 3
6 DIMMs	1A	2A	3A	1A	2A	3A
12 DIMMs	1A	1B	2A	2B	3A	3B

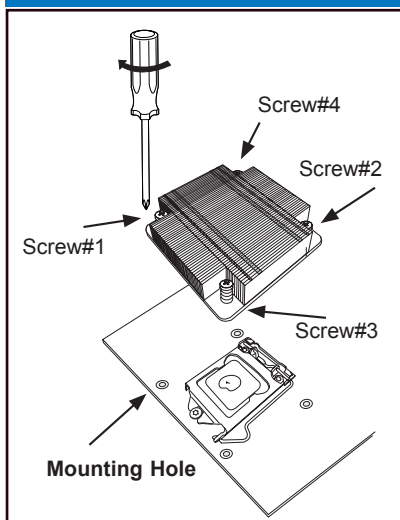
Back Panel I/O Connectors



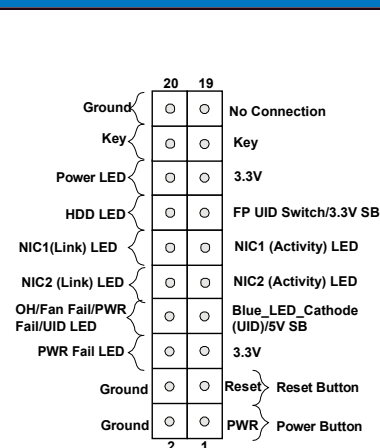
CPU Installation



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.

Note: Refer to Chapter 1 of the User Manual for detailed information on jumpers, connectors, and LED indicators.

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