FUJITSU

Data Sheet
FUJITSU ATX Mainboard D3348-B
Extended Lifecycle Series

Powered by the Intel® C612 series chipset, quad channel DDR4 2133/2400 SDRAM memory
(ECC support) and Intel® Xeon® / Intel® Core™ i7 processors (LGA2011-R3)
Designed & approved for 24/7 continuous operation

Chipset:
Intel® C612 Chipset

Processors:
Intel® Xeon® Processor E5-26xx [V3] series
Intel® Xeon® Processor E5-16xx [V3] series
Intel® Core™ i7 Processor 59xx series
Intel® Xeon® Processor E5-26xx [V4] series
Intel® Xeon® Processor E5-16xx [V4] series
Intel® CoreTM i7 Processor 69xx series
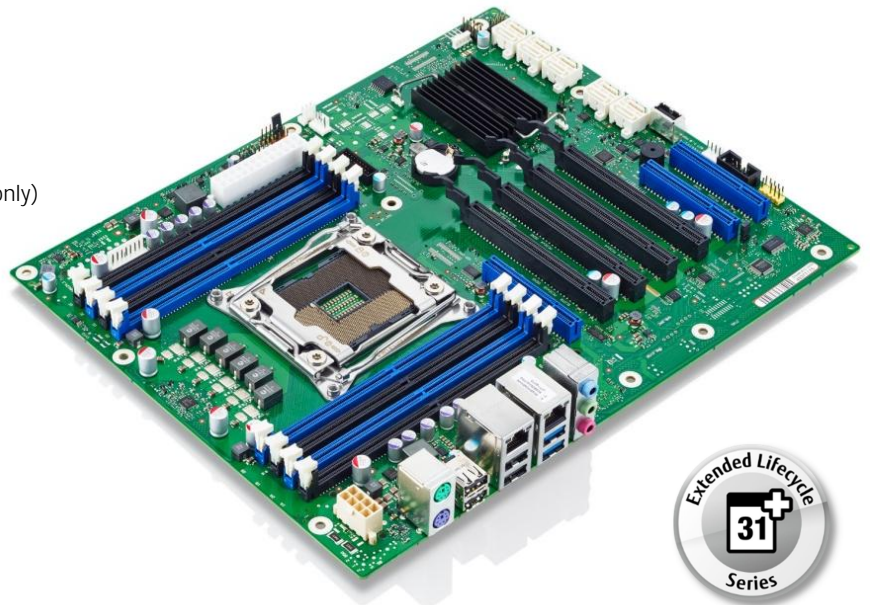Compatible with Intel® processors LGA2011-R3
(up to 160W TDP)

Memory:
DDR4 2133 SDRAM (quad channel)
DDR4 2400 SDRAM (quad channel)
RDIMM / LRDIMM / RDIMM 3DS with ECC Support (XEON only)
UDIMM (Core™ i7 only)
(memory type/speed and ECC depends on processor)
Up to 512GB (XEON) / 128GB (Core™ i7) memory

Product Features:
2 x PCIe x16 –generation 3 onboard
5.1 multichannel audio onboard
USB 2.0 and USB 3.0 onboard
Dual Intel GbE LAN supporting iAMT / vPro & Teaming
10 x Serial ATA III incl. RAID onboard
Trusted Platform Modul (Infineon) V1.2 / V2.0 onboard
BIOS-POST/-Boot & OS - HW Watchdog onboard
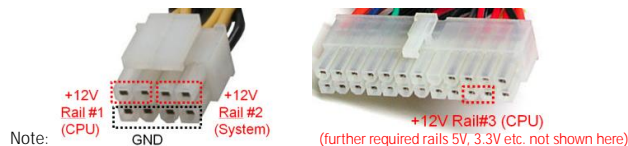Support for M.2 SSD modules via D3352 carrier board

Features and benefits

Board Size	ATX: 12" x 9.6" (305 x 244 mm)
Chipset	Intel® "Wellsburg" C612 Series Chipset

Memory
8 DIMM Sockets DDR4, max. 128 / 512GB, Single / Dual / Triple / Quad Channel, 2133MHz (CL15) / 2400MHz (CL17), single- / dual- / quad-rank RDIMM, RDIMM 3DS or LRDIMM (XEON only), resp. UDIMM (Core™ i7 only, max. 128GB), 1.2V/2.5V, 288-pin, ECC (RDIMM) / non-ECC (UDIMM).
Effective memory speed and ECC (XEON only) depends on installed processor

Processors
Intel® Xeon® processor E5-16xx / 26xx V3 series
Intel® Xeon® processor E5-16xx / 26xx V4 series (D3348-B2 only)
Intel® Core™ i7 Processor 59xx series [1]
Intel® Core™ i7 Processor 69xx series (D3348-B2 only) [1]
Socket R3 (LGA2011), max. 160W TDP, integrated Memory Controller
(For details on supported processors please refer to our website)

Power Specification
24 Pin Power Connector + 8 Pin (12V) Power Connector required
Support for Soft-Off Power Supplies; 12V and 3.3V Supply Voltage on PCIe Slots
3.3V Auxiliary Supply Voltage on PCIe Slots (Wake-Up Function)
On board CPU Voltage Regulator, 5V / 2A Auxiliary Power
required for USB Wake-Up from Save-to-RAM, Save-to-Disk

Power Supply Requirements

Source	Voltage	Min. PS Load	Max.Voltage Tolerance	Mainboard Capacitive Load	Mainboard Max. Current (continuous)
Main Power Supply	+ 12 V_{CPU} (Rail#1)	0.5A [A]	± 5 %	1.000µF	~16A [A]
	+ 12 V_{CPU} (Rail#3)			1.000µF	
	+ 12 V_{Sys} (Rail#2)	0.2A	± 5 %	1.000µF	~19A [B]
	- 12V	0A	± 10 %	--	--
	+ 5V	0.2A	± 5 %	2.200µF	~ 25A [B]
	+ 3.3V	0.5A	± 5 %	1.200µF	~ 21A [B]
Aux	+ 5Vaux	0A	+5 % / -3%	2.200µF	~ 2A

A) Combined load for Rail1 & Rail3.   Note: Processor peak current = 32A (<250ms)!
B) Depends on system configuration (Main focus: 12V/3.3V: PCIe Slots; 5V: Memory/USB)

Note:
+12V Rail #1 (CPU)   GND   +12V Rail #2 (System)
+12V Rail#3 (CPU)
(further required rails 5V, 3.3V etc. not shown here)

+12V rails: Each +12V/GND PSU pin must support up to 10A continuous current for full system configuration. Single-rail 12V supply instead of three separate 12V rails is possible. See TechNotes document (FTP) for further details.

BIOS
AMI Aptio 5.x (UEFI) BIOS
modified and adapted by Fujitsu Technology Solutions; Recovery BIOS, BIOS and CPU Microcode Update, Quick Boot, Logo Boot, Quiet Boot, Plug & Play, DRAM and PCIe Auto Configuration, S.M.A.R.T. Support, Boot support for M.2 SSD (PCIe-based AHCI modules, PCIe-based NVME modules [NVME for D3348-B2 only])

Security Features
Recovery BIOS, System and BIOS Password, Boot Sequence Control, Serial/USB- Port Access Protection, Boot Sector Virus Warning, Write Protection for Flash BIOS, EraseDisk (optional BIOS Feature), Infineon Trusted Platform Module (TPM) V1.2-SLB9660 / V2.0-SLB9665.

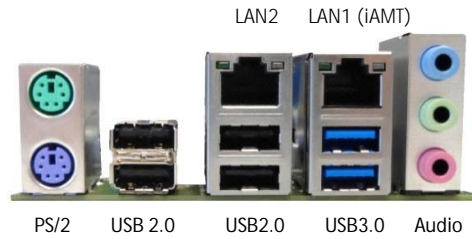| Features Mainboard Versions à	D3348-B1x	D3348-B2x
DDR4-2133 RDIMM (max. 128GB) / LRDIMM (max. 256)	x / x	x / -
DDR4-2400 RDIMM 3DS (max. 512GB)		x
UDIMM DDR4-2133 / DDR4-2400 (max. 128GB)	x / -	x / x
XEON E5-16xx/26xx V3 (Haswell) / V4 (Broadwell)	x / -	x / x
Core i7 – 59xx series (Haswell) / 69xx series (Broadwell)	x / -	x / x
Infineon TPM V1.2 / Infineon TPM V2.0	x / -	- / x

Audio
Realtek ALC671, 5.1 Multichannel, High Definition Audio

LAN
Intel i217LM / Intel i210AT Ethernet Controller with 10/100/1000 MBit/s, iAMT, Wake-on-LAN (WoL) by interesting Packets, Link Status Change and Magic Packet™, PXE Support, BIOS MAC Address Display, Teaming Support

Drives
10 x SATA III 600 Interfaces (up to 6GBit/s, NCQ); AHCI; RAID 0, 1, 5, 10.
Note: Two integrated controllers. #1 (SATA) = Port 0-5, #2 (sSATA) = Port 6-9

Special Features

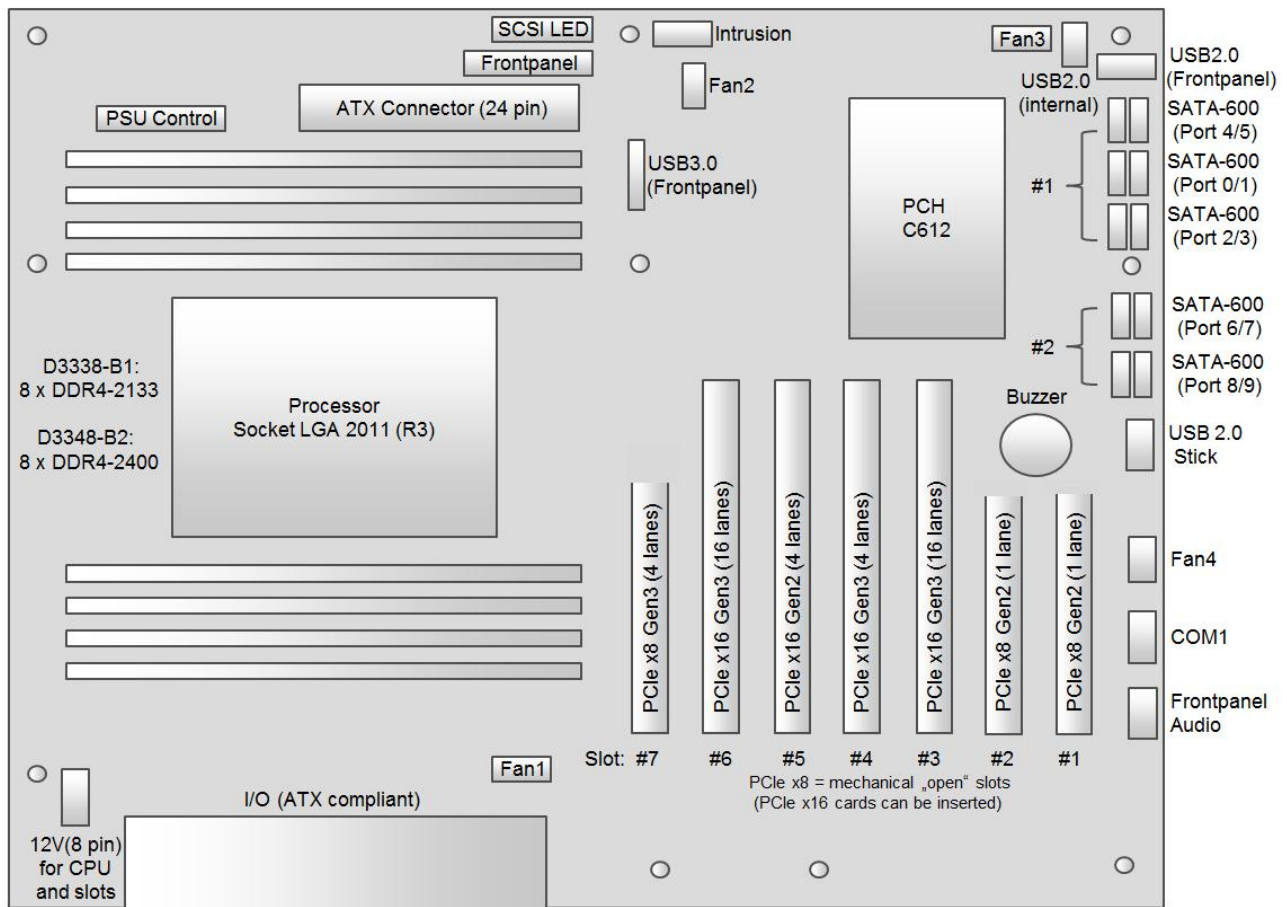|	
Silent Fan	Independent temperature related processor fan and system fan supervision and control
System Guard	View and adjust Silent Fan features
Silent Drives	Noise reduction for optical and hard disk drives
Recovery BIOS	Restores a corrupted BIOS
Desk Update	Easy driver update with Drivers&Utilities DVD
Multi Boot	Comfortable boot from any boot device
HDD Password	Access protection for disk drives
24/7 Operation	Mainboard is designed for continuous operation
Boot Watchdog	Full supervison of BIOS POST and Boot sequence

Common Features	D3348-B
Board Size / Chipset	ATX / Intel C612
Stereo Audio / 5.1 Multichannel Audio	- / ü
Buzzer / int. Speaker Support	ü / ü
Dual LAN Gbit / 100 Mbit / 10 Mbit	ü / ü / ü
LAN ASF 2.0 / DASH 1.1 / AoL / Boot / iAMT 9.1 / vPro	- / ü / - / ü / ü / ü
SATA / ATA / RAID / eSATA Support	ü / - / ü / ü
FireWire™ / USB 2.0 / USB 3.0	- / ü / ü
FAN controlled&monitored PSU [2] / CPU / AUX1 / AUX2 / AUX3 [3]	ü / ü / ü / ü / ü
TEMP monitored CPU / Onboard Sensors	ü / ü
Special Features	
Silent Fan / Silent Fan LT / System Guard / Silent Drives	ü / - / ü / ü
Recovery BIOS / Desk Update / Multi Boot	ü / ü / ü
HDD Password / USB Security / EraseDisk [4]	ü / ü / ü
Logo Boot Option / Intel On Screen Branding	ü / ü
BIOS POST- / BIOS Boot- / OS- HW Watchdog	ü / ü / ü
Operating Mode 24-7 / 8-5 (hrs per day - days per week)	ü / -
Mainboard operating temperature range (chassis inside)	10℃ – 50℃
Support for M.2 SSD module (via M.2 carrier board D3352)	1 or 2 modules
Internal Connectors	
DIMM Sockets (DDR4 2133 or DDR4 2400)	8
PCI Express x16: 16lanes-gen3 / 4lanes-gen3 / 4lanes-gen2	2 / 1 / 1
PCI Express x8: 4 lanes-gen3 [5] / 1 lane-gen2 [5] / PCI Slots	1 / 2 / 0
SATA (600) / SATA (300) / ATA (100) / Floppy	10 / 0 / 0 / 0
S/PDIF / FireWire™ / Audio Input / Frontpanel HD Audio (9-Pin)	- / - / - / 1
USB 2.0 channels / USB 3.0 channels / socket for USB2.0 stick	4 / 2 / 1
Serial (FIFO, 16550 compatible) / SMBus (Temperature)	1 / -
FAN PSU [2] / CPU / AUX1 / AUX2 / AUX3 [3]	1 / 1 / 1 / 1 / 1
Intrusion (Case Open) / LCD Status Display Support	1 / -
Parallel (EPP/ECP) Pin Connector	-
Power 24 Pin (BTX) / 8 Pin (additional 12V Supply)	1 / 1
External Connectors	
VGA Sub D / DVI	- / -
Audio Mic. In / Line in / Line out	1 / 1 / 1
LAN (RJ-45) / PS/2 Mouse / PS/2 Keyboard	2 / 1 / 1
FireWire™ / Serial (RS232) / Parallel (EPP/ECP)	- / - / -
USB 2.0 / USB 3.0	4 / 2

1) Note: D3348-B1: Core™ i7 -5820K not supported.D3348 -B2: Core i7-680xx is NOT supported.
2) Not supported by standard Power Supplies
3) FAN PSU and FAN AUX3 must not be used simultaneously
4) Optional BIOS Feature (License required)   5) PCIe x16 card can be inserted (open connector)

External Connectors

LAN2   LAN1 (iAMT)

PS/2   USB 2.0   USB2.0   USB3.0   Audio

Connector / Socket Diagram

- SCSI LED
- Frontpanel
- Intrusion
- Fan3
- Fan2
- PSU Control
- ATX Connector (24 pin)
- USB2.0 (Frontpanel)
- USB2.0 (internal)
- USB3.0 (Frontpanel)
- SATA-600 (Port 4/5)
- SATA-600 (Port 0/1)
- SATA-600 (Port 2/3)
- #1
- PCH C612
- SATA-600 (Port 6/7)
- #2
- SATA-600 (Port 8/9)
- D3338-B1: 8 x DDR4-2133
- D3348-B2: 8 x DDR4-2400
- Processor Socket LGA 2011 (R3)
- Buzzer
- USB 2.0 Stick
- PCIe x8 Gen3 (4 lanes)
- PCIe x16 Gen3 (16 lanes)
- PCIe x16 Gen2 (4 lanes)
- PCIe x16 Gen3 (4 lanes)
- PCIe x16 Gen3 (16 lanes)
- PCIe x8 Gen2 (1 lane)
- PCIe x8 Gen2 (1 lane)
- Fan4
- COM1
- Frontpanel Audio
- Slot: #7 #6 #5 #4 #3 #2 #1
- Fan1
- I/O (ATX compliant)
- PCIe x8 = mechanical „open" slots (PCIe x16 cards can be inserted)
- 12V(8 pin) for CPU and slots

Further industrial products offered by Fujitsu

- Connectors
- KVM Switches
- Relays
- Touch Panels
- Thermal Printers
- Wireless Modules

24 Volt Kiosk Printers   Multi-Input Touch Panels

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- Software
- Network

Product Support Services with different service levels agreements are recommended to safeguard each product and ensure smooth IT operation.

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Fujitsu green policy innovation

www.fujitsu.com/global/about/environment/
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